SPORT BRIGHTON APP REDESIGN



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Neel Amin / Sport Brighton App Redesign

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Introduction

This document serves as a rational and proof of process for the redesigned Sport Brighton mobile application. The full redesign is available at: https://xd.adobe.com/view/77637773-869c-4102-ab3f-38d97869024e-2230/

The Problem

Overview

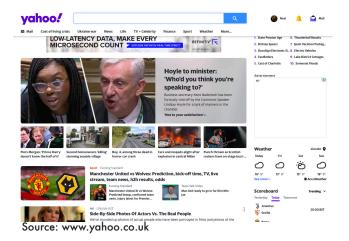
The Sport Brighton app gives students and teachers the opportunity to book gym memberships, book tennis court/ football pitch, Swim bookings and more for a small fee. It has only a few thousand downloads however a lot of students either dont't know of the app or just dont like the UI and UX hence don't download it,. It is relatively new (released Nov 2022) and available on both ios and play store with also option for the website. There are currently many drawbacks to the app with inconsistent organization, bad design, branding issues, slow and more. It currently has a rating of 2.2 on Play store and 3 on ios. This project is intended to justify a redesign through testing and evaluation, visual change recommendations and validate those changes with more testing.



Introduction

App Idea Research

To start off I looked at range of apps and website I could redesign and below are some of them:



My first website idea to redesign was Yahoo as I didn't enjoy the UX. However after looking at online research data Yahoo is rated positively more than 70% by users.



Source: www.mirror.co.uk

The Mirror also has a bad UX as there is a lot going on and I was considering re-designing it. I feel it needs to be streamlined with better architecture.



Source: www.craiglist.co.uk

Criaglist was also another website which I looked into however it is also well received by a lot of the users. I also felt it mostly targetted towards US audience.



Source: Sport Brighton App

Sport Brighton is a app which I used to book a sports activity (football) and really struggled with. It was the same case with a lot of my friends. I also recently joined the gym and felt it would be good if I could redesign the app hence I decided to go with it.

Defining the problem

Background Investigation

Evaluation Techniques

Usability Testing

It involves observing users as they interact with product or system to evaluate its easy of use and user experience. This method has several benifits including the way it allows users to interacts with the app as they would in a normal situation and help find the main pain points of the app. It helps improve user experience and gives actionable insights. It does have a few drawbacks as it can be time-consuming, can't be done with too many people (qualitative) and may not capture how users interact in real-world due to interview conditions. The tasks in usability test are realistic activities which user perform in real life which hels give accurate data to how they would interact using the app. This testing method could be done in person or online.

Tasks and Severity

This evaluation is helping 'developers' about what to fix. The one used here and most commonly know is Jakob Nielson's variation. This method has several benifits including the way in which it allows testers to consider severity of usability problems beyond those they would have done on thier own. This would work will with the usability testing where I can do task and severity after the usability testing to get more in-depth data of problems and severity of current app. A score can also be given to see how serious the problem is which helps give a numerical figure.

$$100 - \left(\frac{100(P1 + P2 + P3 + P4)}{64}\right) = \% \text{ score}$$

SUS

This is a (System Usability Scale) questionnaire a standardized tool to access usability of product or system. It consists of 10-item scale each with five point scale ranging from strongly agree - strongly disagree. These questions help analyse things like easy of use, learnability, efficiency, and user satisfaction. This proves useful helpful to find strong intercorrelations between all of the items however its main drawback, according to Brooke (brooke) non-native english speakers had trouble understanding one of the statements and some reported survey was difficult to score. It is quick way to gather feedback on usability of the system and can be done on a wide range of users. Its other drawbacks include limited scope as its general, can be biased towards positive response and is not qualitative data. Formula below:

2.5 ((Odd Iteam - 1) + (5 - Even item)) = px
$$\frac{U1+U2+U3+U4}{4} = \% \text{ score}$$

Jakob Nielsons Heuristics Method

Also known as Nielsen's Ten Usability Heuristics (Nielson), is a widely used set of guidelines for evaluating the usability of user interfaces. These heuristics were developed by Jakob Nielsen, a prominent usability expert, and are based on years of research and practical experience. They follow 10 heuristics which include visibility of system, Match between system and real world, user control and 5

Background Investigation Cont.

freedom, consistency and standards, error preventions, recognition rather than recall, flexibility and efficiency, aesthethic and minimal design, help recover from error and help and documentation. It covers a range of issues which is a great advantage and is easy to use too. It helps identify major issues which need to be solved however it has limited depth and it all depends on the user response. It can also be subjective and may not capture usability issues which are specific to context of use. (Nielson 1994)

Product Reaction Cards

This method is when user describes a design/product based on a list of 118 words. They were introduced by Joey Benedeck and Trish Milner in thier 2002 paper. The words can be modified however would take a long time to read and analysis. They are easy to understand and also give quick feedback compare to other methods. It is user-focused as its related to user interacting with the app and also is cheap to do. Its main drawback is that provides limited feedback as it does not go in depth into usability issues. It can be bias and due to them taking a long time people might not provide accurated response due to them getting bored.

Questionnaire

Questionnaire method involves collecting information from participants about thier experiences using a product or service. It is done by a set of predetermined questions although it is a popular formative method and gives fundamental data. Its main advantages it can gather qualitative and quantitative data but may not be accurate and people may not understand the questions.

Chosen Techniques

Formative Testing

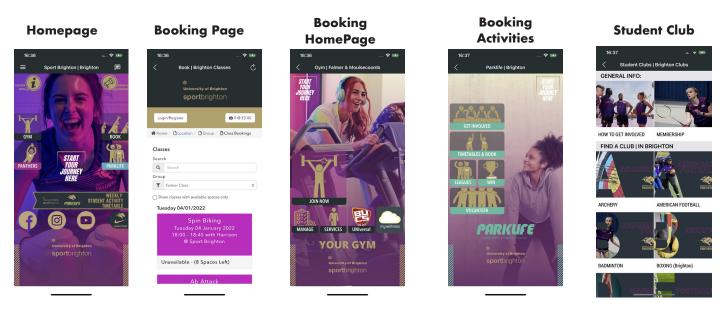
The methods chosen for formative testing of Sport Brighton were usability testing, then questionnaire, task and severity and SUS. These were chosen as they can provide a range of data to find the current issues of the app and solve them. Once the usability testing is done the user would be provided with a questionnaire with SUS questions and also the task and severity. It helps give a overall look at the app once participant has used it.

Summative Testing

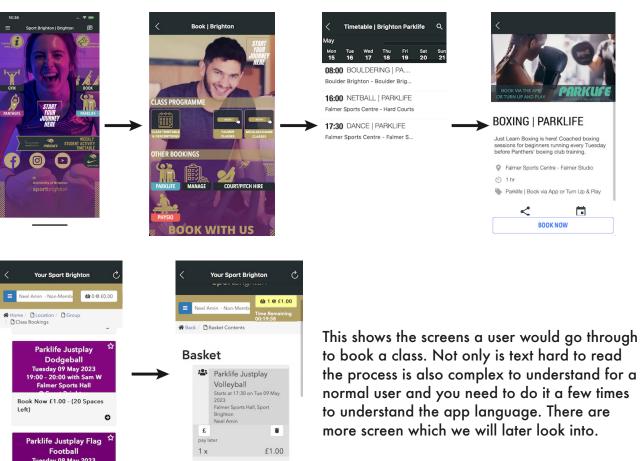
After the Sport Brighton app is redesigned usability testing, Tasks and severity, SUS and heuristics were used to see if the original problems were resolved. Doing these testing methods gave good comparative data as well as qualatative data I can use to further imporve the app. Task and severity and SUS will help give a numerical percentage which will show the improvement whereas doing the heuristics will allow me to see where the improvements are needed. The questionnaire method will only be done for the formative as usually its only used for formative testing to get more user data and dont believe it would be helpful for summative. Hence instead of it I descide to go with Nielsons Heuristics method with a severity score for a more indepth analysis.

Original Design

The images below show the current screens from the sport brighton app. These are are main homscreen for all the tasks which include being able to book classes, sports pitch, sports sessions, gym membership etc. There are more screen below which also show the screens when performing a primary task.



Booking a class



Pay All Now

Continue Shopping

the process is also complex to understand for a normal user and you need to do it a few times

Evaluation Procedure

The evaluation includes at least 3 rounds of assessment, this was done for original app and the updated app.

Location & Dates

The usability test, questionnaire and SUS will be done in the university Library (formative) and summarative test in a controlled environment. For summative testing users will do usability test, SUS after the test is finished and be given a heuristics evaluation to do in thier own home.

Formative Usability, SUS & Questionnaire: 21 Feb, 2023 - 3rd March, 2023

Summative Usability & SUS: 1st May, 2023 - 10nt May, 2023

Test Facility

As mentioned earlier formative testing will be done in the uni library as its easier for the users. It will be done before easter holidays so that users dont have to travel in. The summative testing will be done in a controlled environment (accomodation meeting room). The heuristics will be given to people after the usability so that they can do it at home.

Tasks

For both the testing methods (formative and summative) for usability testing, users will be given similar tasks for old app vs new app so that its easier to judge the improvement. The tasks will have to be done in one session (Bruun.C, Gad.C, 2014) but would only take 10-15 min (max) to complete.

The formative test will be done on the users phone where they will be asked to download the Sport Brighton app and login. The summative test would be done on my laptop on Adobe XD which most people will know how to use due to thier backgrounds.

Post-Test Heuristics (Summative)

As stated earlier for the Summative testing users will be give a heuristics form to fill out at thier homes. The form will have the hi-fi prototype link, with tasks and nielsons heuristic form where they can write comments for each heuristics and also rate how the app did it (0 positve to 4 negative).

Forms will be available to see in the appendix. I will be testing the same 4 people for formative and summative so that its easier to see the improvement the app made. Out of the 4, 2 use the sport brighton app and 2 dont but use another gym based app.

Formative Testing

Participants

All participants who were involved were 4 University of Brighton Students. Out of the 4 participants 2 had used a app once before and the remaining 2 had never used the app. The participants chosen also use GYM services to help get more accurate feedback.

Usability Testing

	User 1						
	Task	Time Taken (min)	Task Completion	Difficulty			
1	Open the app on your device and book Mens football (Parklife) pitch for 23 March 16:00 (add to cart)	1.01	Yes	Difficult			
2	Book yoga class for Monday 20 March 2023, 19:45-20:45 (add to cart)	46 sec	Yes	Moderate			
3	Book a Gym Membership (monthly payments) (add to cart)	1.53	No	Very Difficult			
4	In timetable find Pilates Class for 21 March 2023 18:30 and email it to me	53 sec	Yes	Moderate			

Total 4.33 min



For usability testing a user was given 4 tasks and above is the data received. This user had used the app before however still failed a task as he hadnt done that task before. This user regularly uses gym services and football classes.

	User 2							
	Task	Time Taken (min)	Task Completion	Difficulty				
1	Open the app on your device and book Mens football (Parklife) pitch for 23 March 16:00 (add to cart)	1.21	Yes	Difficult				
2	Book yoga class for Monday 20 March 2023, 19:45-20:45 (add to cart)	1.53	No	Very Difficult				
3	Book a Gym Membership (monthly payments) (add to cart)	2.38	No	Very Difficult				
4	In timetable find Pilates Class for 21 March 2023 18:30 and email it to me	50 sec	Yes	Moderate				

Total 6.42 min



This user doesnt use the brighton gym buy gym elsewhere so it was good to get feedback and see how the user interacts with this app. The user failed 2 tasks and didnt like the interface nor the design of the current app.

Formative Testing Cont

	User 3								
	Task	Time Taken (min)	Task Completion	Difficulty					
1	Open the app on your device and book Mens football (Parklife) pitch for 23 March 16:00 (add to cart)	1 min	Yes	Difficult					
2	Book yoga class for Monday 20 March 2023, 19:45-20:45 (add to cart)	48 sec	Yes	Moderate					
3	Book a Gym Membership (monthly payments) (add to cart)	1 min 20 sec	No	Very Difficult					
4	In timetable find Pilates Class for 21 March 2023 18:30 and email it to me	30 sec	Yes	Moderate					

Total 3.38 min

This user is also another student who uses the uni gym. User was quickest to do all the tasks however still failed a task and found the app complex to used.

	User 4							
	Task	Time Taken (min)	Task Completion	Difficulty				
1	Open the app on your device and book Mens football (Parklife) pitch for 23 March 16:00 (add to cart)	2 min	No	Very Difficult				
2	Book yoga class for Monday 20 March 2023, 19:45-20:45 (add to cart)	1.30	Yes	Moderate				
3	Book a Gym Membership (monthly payments) (add to cart)	2.20	No	Very Difficult				
4	In timetable find Pilates Class for 21 March 2023 18:30 and email it to me	50 sec	Yes	Moderate				

Total 6.40 min

This user does not use the uni gym but the external gym. He really struggled using the app and failed 2 tasks. Total time (for all users) was 21.33 min which is avg of 5.3 min per user.

SUS

The following represents SUS results from the testing. The full questionnaire is in the appendix. The SUS was carried out right after the usability testing was completed so that users remember the app interface and data is accurate.

Question 1	1	1		2	1	3	1	4	1	5
Question 2		1		2		3	2	4	2	5
Question 3	1	1	2	2	1	3		4		5
Question 4		1	2	2		3	2	4		5
Question 5		1	3	2	1	3		4		5
Question 6		1		2		3	2	4	2	5
Question 7	1	1	3	2		3		4		5
Question 8		1		2		3		4		5
Question 9		1	3	2	1	3		4		5
Question 10		1		2	1	3	2	4	1	5

We got a average score of 28 13%

From the SUS questionnaire we go a score of 20 for user 1, 30 for user 2, 30 for user 3 and 32.5 user 4. We added and devided the score to get a average of 28.13% which shows that app needs huge improvements. To help get accurate result a website was used to calculate SUS score and then percentage was calculated.

Formative Testing Cont

Tasks & Severity

Question	1
Question	2
Question	3
Question	4

0		1	2	2	2	3		4
0	1	1		2	2	3	1	4
0		1		2	1	3	3	4
0	2	1	1	2	1	3		4

We got a average score of 30% approx.

For the task severity we used asked users to rate the severity of each of the 4 tasks and used the formulae (explained earlier) to calculate a avg score of approx 30%.

Questionnaire

After the usability testing (and before the SUS) a brief questionnaire was asked to get some data on users e.g age, knowledge etc.

Question 1: What is your gender?

Question 2: What is your age?

•	Woman	1	18-24	2
•	Man	3	25-34	1
•	Non-binary	0	_	0
•	Prefer not to say	0		0
			75+	0

Question 3: How comfortable are you using technology?



Question 4: Do you use any fitness/gym apps?



Formative Testing Cont

Questionnaire Cont.

Question 5: If you answered yes on question 4 - please name which other apps similar to Sport Brighton App you have used/ are currently using

"Strava" "Pure Gym"

Question 6: Are you member of the Brighton Sports Gym?



Question 7: Have you used the app before?



Question 8: If yes for the previous one what did you previously used it for?

•	Book a gym membership	1
•	Book a facility (football pitch, ba	0
•	Checked News	С
•	Booked Classes	С
•	Not used it before	3

Question 9: How satisfied were you with the app?



This questionnaire gave basic data on what kind of users use the app, whether they like it and if they would use it in the future. Though it does not give us detailed data its still useful as though 2 of the participants are enrolled in the gym neither use the app (both used it once and deleated) which shows app needs a redesign and mabye a new feature to attract users.

Testing Recommendations

UX - Structural

From the testing I found out a lot negative feedback for the overall UX of the app. It was one of the reasons why we had a few failed tasks as users could not find the pages. This was especially the case when booking a Gym membership: to currently book a membership the user has to press a banner which most users missed during testing and to add the membership you have to press 'Add xtra' compare to 'new membship' which none of the users could find. This also applies when booking a class/pitch/sports where users has to go through multiple pages and users felt frustrated. This was especially the case when logging in as you have to login in multiple times e.g when booking a class to when booking a pitch. It was recommend the structure be changed so that all language is clear to understand and remove unnecessary screens.

- Add a nav bar (some pages)
- Better Home page
- Redesigned Gym page (to add membership)
- Better page to book classes
- Remove unnecessary Pages
- New Login Page

UI - Design

Colours

From the testing I found out a lot of the colours dont work and need a change. The theme of the uni is purple and brown so I dont want to change it but improve it so that the text is readable. Some the the pages such as the booking one used a hot pink which one of the user hated so that will be changes. A gradient may be added to improve the overall colours which should also keep the University Of Brighton colour scheme.

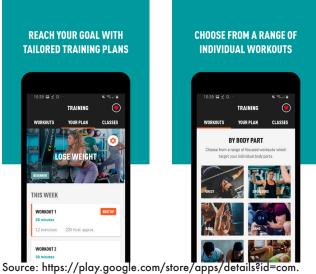
Overall Visual Elements

Most of the feedback from testing suggested all the pages had too much going on and was hard to read. The icons were also not received positively and recommendation was to change some of this to make the page look minimal, too the point with updated design like current Gym apps e.g PureGym.

Section 2: Re-Design

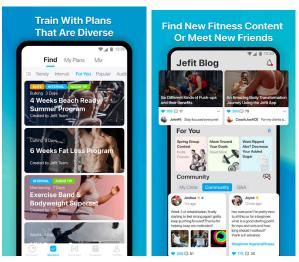
Design Inspiration

Pure Gym



Source: https://play.google.com/store/apps/details@id=compuregym&h|=en&g|=US

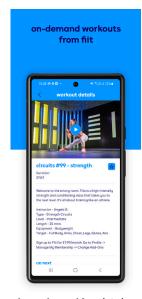
Gym Workout Plan & Log Tracker



Source: https://play.google.com/store/apps/details?id=je.fit&hl=en&ql=US

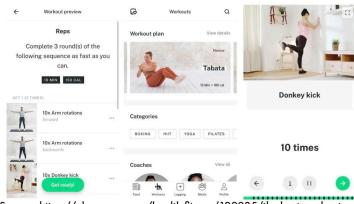
The Gym





Source: https://play.google.com/store/apps/details?id=com.netpulse.mobile.thegymgroup&hl=en_GB&gl=US

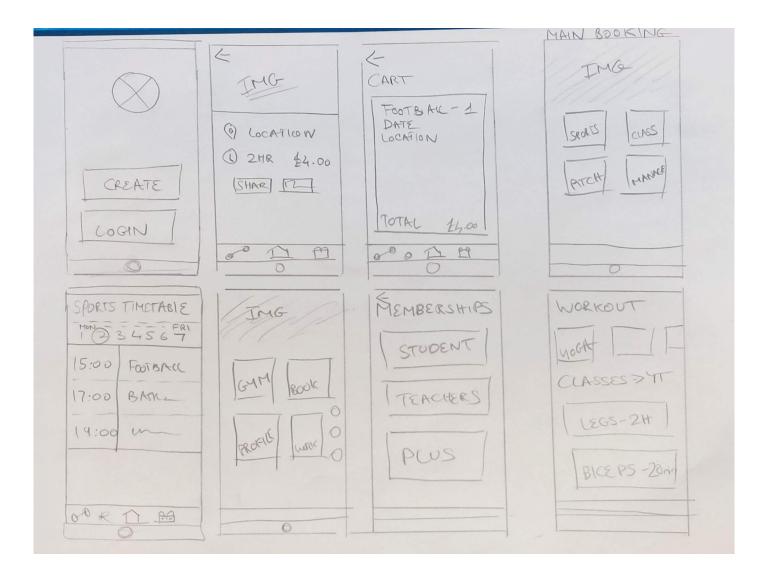
8fit



Source: https://uk.pcmag.com/health-fitness/129935/the-best-workout-apps-for-2020

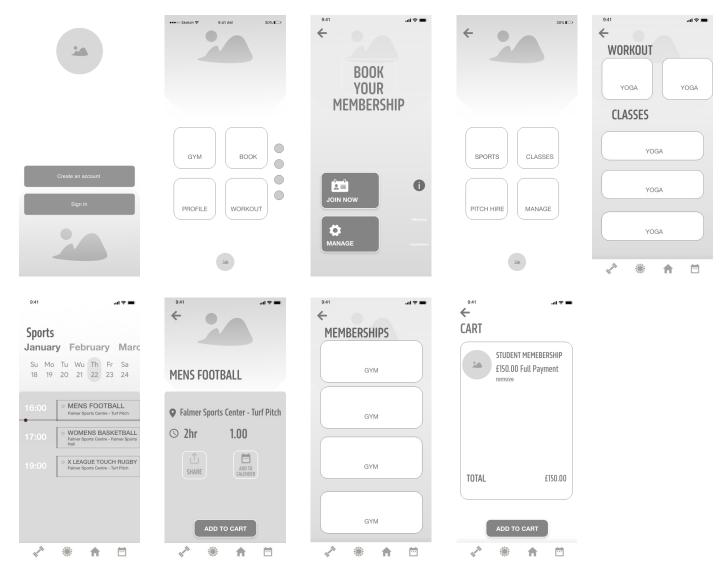
I looked at a range of app interfaces e.g puregym, the gym etc. This was to get inspiration for the redesign. A lot of the app have similar interfaces especially the workout page and timetable page. I too a bit of inspiration from each. The timetable was done well on the gym app, also good workout page on the gym workout. I also plan to add a nav bar on some pages e.g 8fit/ the gym. Thought the branding will be similar to the current one it will help stand out from the rest and also be a good challenge.

Low-fi Prototype

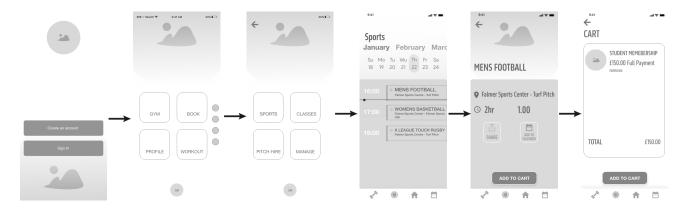


I started the design by sketches to show the app design. The above is the one which I thought would work the best and will start to develop this.

Digital Lo-fi Wireframe



These show the digital wireframes concepts for the Sport Brighton App. They show the main screens I plan to do which include a login, homescreen, booking home screen, timetable, activity showcase, cart, gym memberships, workouts etc. A nav bar was also added with access to main pages.



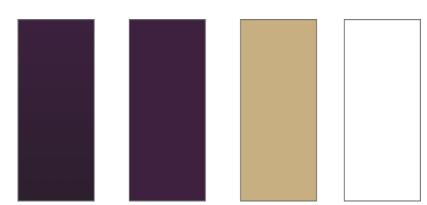
This shows a process which a user may go through to book a activity. It has been made easier than before especially with the visibility.

Color Scheme

Current Colours - Primary



Updated Scheme - Primary



From the testing we found out the current colours were really bright which made the text hard to read. Hence adding a gradient helped improve the visibility and also works well with the image. The cream/l.brown was also made lighter as it worked better.

Secoundary Color Scheme (Updated)



Though the app didnt use these colours intially I felt it would be good to add them on the timtable to represent the different sports/activities. As this app is catered towards the younger audience it will help give it a modern feel. These colours may be used on more place in the future if it is well received.



Logo

Variations



University of Brighton

sportbrighton





Intially I made a white version of the app to go on all the pages but plan to just go with the brown version as a lot of icons used in the app will be the same colour and it will help keep the whole app more consistent.

Typography

Primary Typography

October Compressed - Bold

otiobei compiessed boid	Abcberg
October Compressed - Medium	ABCDefg
October Compressed - Light	ABCDefg

I got the inspiration to use this type from the app itself where I saw something similar. I found a similar looking yet better font. I feel this shows the sport element well and also has good readability.

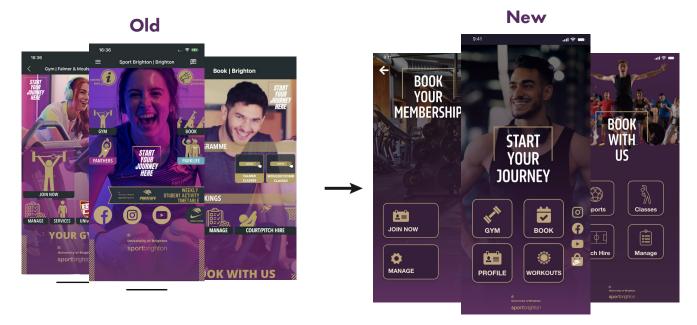
Secoundry Typography

Helvetica Neue - Bold	ABCDefg
Helvetica Neue - Medium	ABCDefg
Helvetica Neue - Regular	ABCDefg

This is a basic font however it will used in places such as info, text in the timetable (location) etc. I feel it also has good readability.

Old vs New Design

From the formative testing all pages needed a redesign to make the tasks easier to complete hence it was all done. Below are main screens showcasing the before and after which shows the improvement. It still uses intial colour theme and image in back design theme however updated to current standards with better visibility.



Old Homepage



New Homepage



The old homepage from the formative feedback received negative feedback due it lack of visibility, bad design, bad layout etc. Hence it was redesigned to be made more minimal with clear visibility.

Old Booking Main screen



New Booking Main screen



This shows the before and after of the main booking screen to get into the timetable and book for things like classes, sports sessions and pitch hire. The icons were all over the place with no proper architect hence it was just moved to the middle. Unnecassary icons were removed e.g selecting location as on the next page it shows the location and its not required.

Old vs New Design Cont.

Old Join Membership page



New Join Membership page

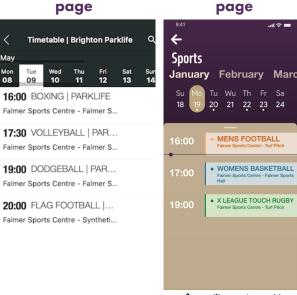


New Sports

Timetable

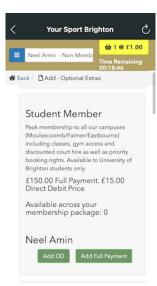
This is the old vs new main gym membership page. Though it didnt require a major redesign I changed it a bit to match with the redesign. All icons are still there but due to the changed colour and gradient the icons and type is easier to read.

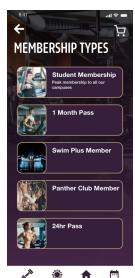
Old Sports Timetable page



The timetable to book classes didnt need a full overhall but just a change. I used the updated colours and made it easier to read the different activities with different colours.

Old Membership Types page New Membership
Types page





The next page to book the membership was confusing and a lot of testing users failed doing the task hence it was updated to make it more minimal and with better visibility. A nav bar was also added as required from testing feedback.

Old Book Sports page New Book Sports page



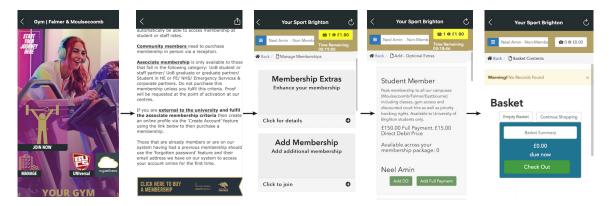


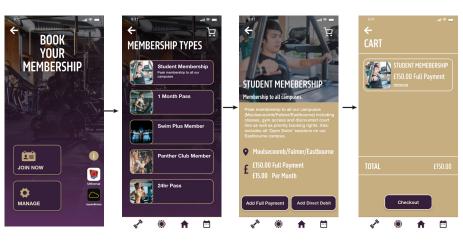
This page was also updated with new redesign. I felt text such as the location was hard to read hence made it easier to read. The Book Now was changed to add to card as people understood that language better found from intial testing.

21

Interface Improvement

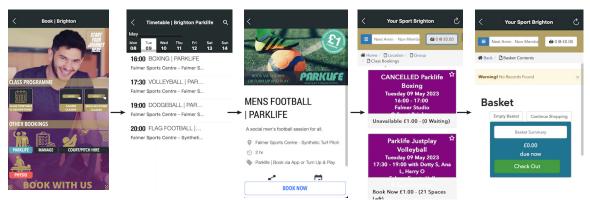
Booking Student Gym Membership

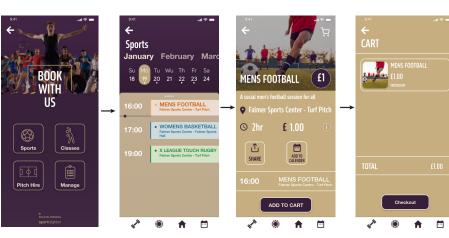




The booking gym membership was a task from testing which a lot of people failed at as the current one goes to the booking page, then a reading page where u have to click on the banner to go on the next page. Once you do that you have to go into membership extras to get a membership instead of add membership. Hence my design is more to the point and the reading page has been added to as a 'i' pop up incase people want to read it.

Booking Sports Activity

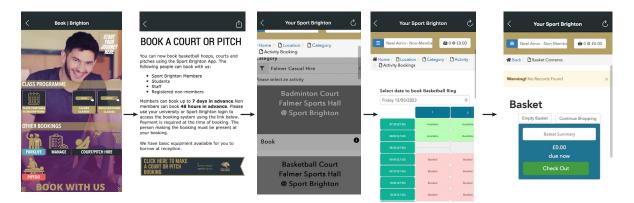




The booking process for sports activities was also streamlined with 4 screens instead of 5/6 (not including payment page). The main issue was with the old one once you find your sports from the timetable and go to book now you have to find the booking again and then add it to card. Users also didnt like the intial colours especially the bright pink as it reduced the text visibility.

Interface Improvement Cont.

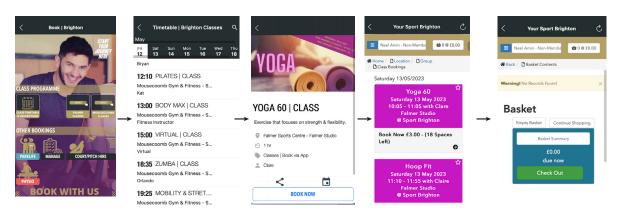
Booking Sports Pitch





The court booking needed a lot of changes as intial version was outdated and really hard to use. New images were used to show each of the sports pitch and having a drop down to show date avaibility makes the UX a lot better than before. Colors were also used in the select date (red and green) to show avaibility.

Booking Yoga Class





This process is similar to previous ones to keep it consistent however it is greatly impoved from previous version which took users to another booking page after selecting the class. In case of avaibility the class would just be gone once there are now classes available to avoid confusion.

Changes Summary

Overall

New navigation bar

Updated home screen

New login page

Updated Membership Page

Updated Booking (Main) Page

New Workout Classes Page

Change in Color Palette

New cart page

Home Page

Updated home screen

New gradient color

New background image

New button layout

New icons

Membership Page

New navigation bar

Updated home screen

New membership type pages

New icons

Pop out info button (main screen)

New booking page with updated buttons and text.

Classes Page

New navigation bar

Updated Layout

New background image

New colours

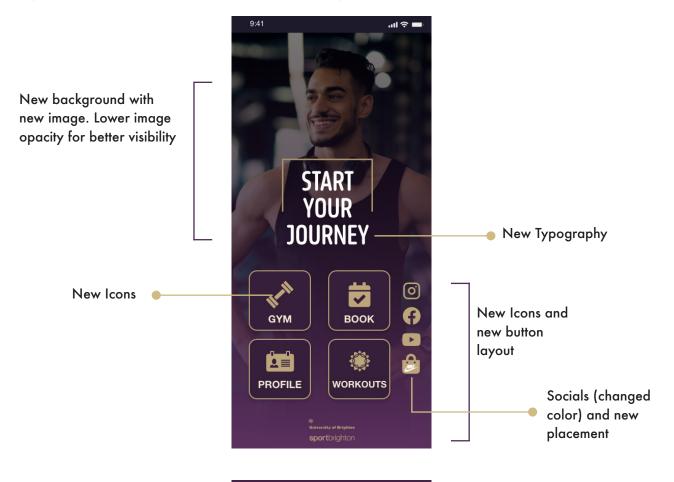
New Icons

Updated calender (new moving months and dates)

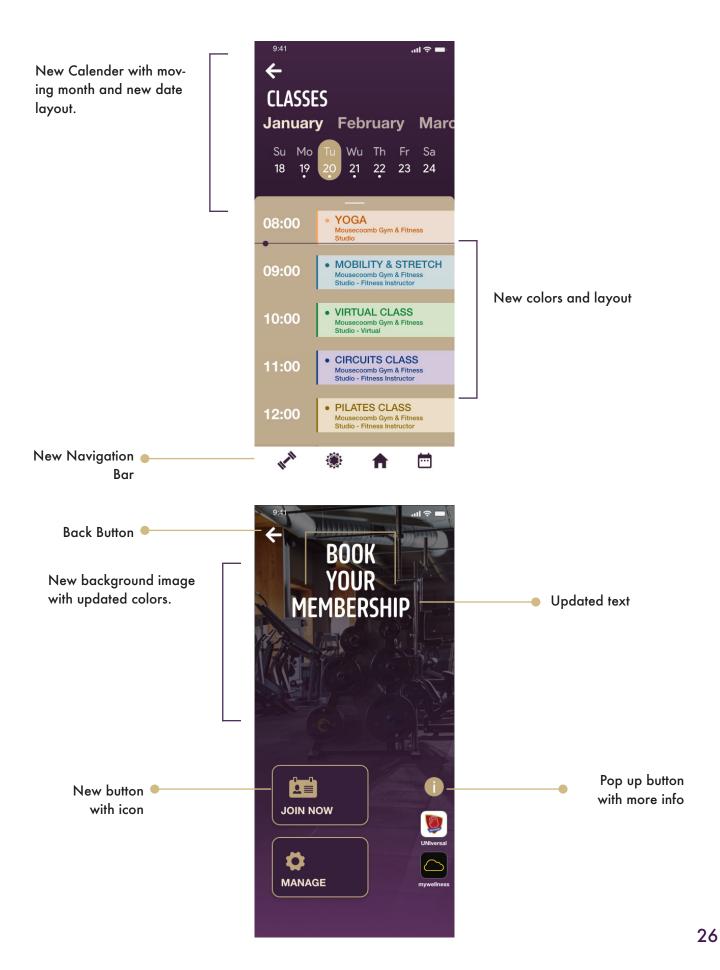
New booking page (for classes)

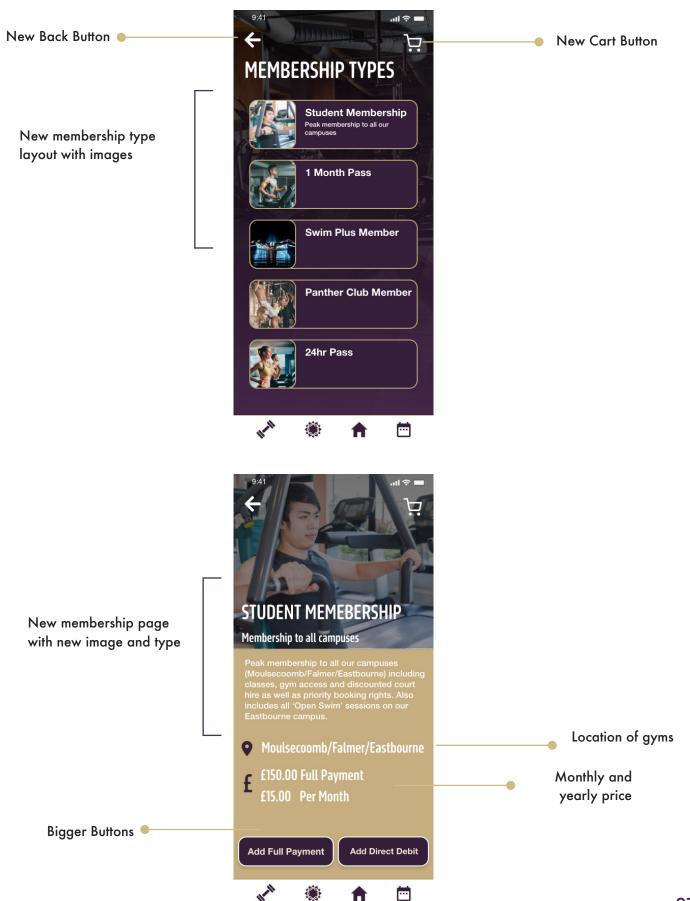
Final Screens

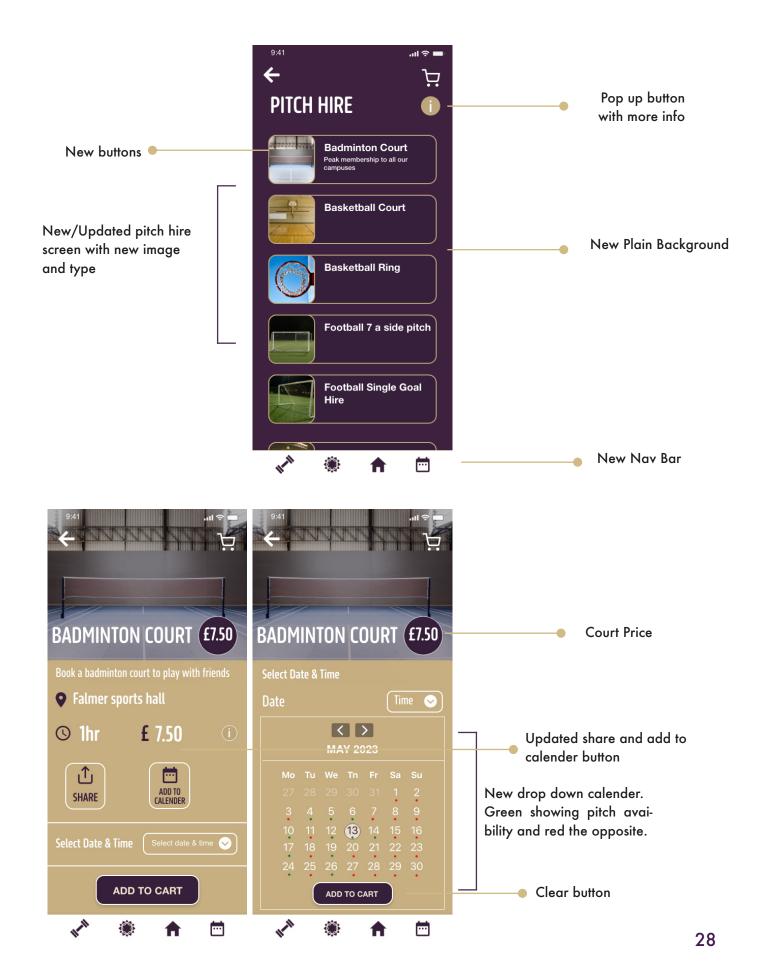
Following pages show some screens in more depth. For the full prototype click here: https://xd.adobe.com/view/77637773-869c-4102-ab3f-38d97869024e-2230/

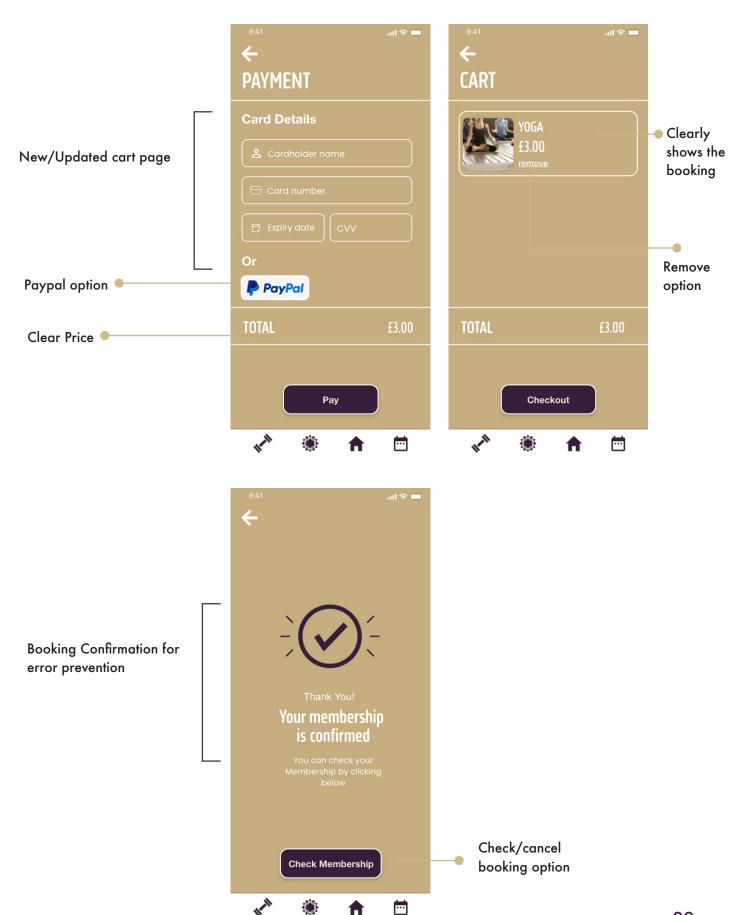






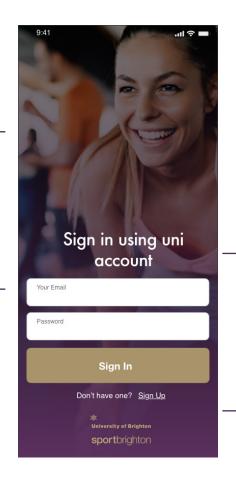






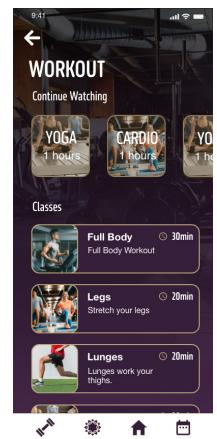
New Screens

The current app constantly asks users to log-in every page hence a login page was made which users can login once they open the app.



Use uni email and password to login

New workout page where users can learn how to do Gym based activities. These can be linked to youtube videos and more will be developed in the future.



Section 3: Summative Testing

Summarative Testing

Usability Testing

All participants (4) involved in this usability testing were the same ones as before which helps give a more accurate and comparative data. All the tasks were also similar if not the same as before e.g booking football, gym membership and class. One of the task did change however the privous task was just sharing a class whereas current one has more of a function as its booking a pitch which more users would do on a daily/weekly basis. I also believe these tasks cover the main functions of the app.

	User 1								
	Task	Time Taken (min)	Task Completion	Difficulty					
1	Open the app on your device and book Mens football 19 Jan 16:00 and pay	25 sec	Yes	Easy					
2	Book yoga class for Thursday 22nd 08:00 and pay	20 sec	Yes	Easy					
3	Book a Student Gym Membership (yearly) and pay	30 sec	Yes	Moderate					
4	Book a badminton court on 13th May and pay	25 sec	Yes	Easy					

Total 1.40 min



This user is the user who uses a similar gym app and said the app was "a lot better than before", "I love the colors" "Could have nav bar in more places". The user really enjoyed using the app compare that before and didnt fail any task. I observed him doing all the tasks and all of them were completed without any struggle due to the improved visibility.

User 2								
	Task	Time Taken (min)	Task Completion	Difficulty				
1	Open the app on your device and book Mens football 19 Jan 16:00 and pay	26 sec	Yes	Easy				
2	Book yoga class for Thursday 22nd 08:00 and pay	15 sec	Yes	Easy				
3	Book a Student Gym Membership (yearly) and pay	15 sec	Yes	Easy				
4	Book a badminton court on 13th May and pay	14 sec	Yes	Easy				

Total 1.10 min



This user also managed to complete all the tasks and said "its really easy to use this app" and "I would use this app in the future if I join the uni gym". There were no improvement suggestions made from the user as he didnt struggle with anything.

Usability Testing Cont.

	User 3								
	Task	Time Taken (min)	Task Completion	Difficulty					
1	Open the app on your device and book Mens football 19 Jan 16:00 and pay	37 sec	Yes	Moderate					
2	Book yoga class for Thursday 22nd 08:00 and pay	18 sec	Yes	Easy					
3	Book a Student Gym Membership (yearly) and pay	13 sec	Yes	Easy					
4	Book a badminton court on 13th May and pay	14 sec	Yes	Easy					

Total



This was the user who had used the app previously (before formative test) and felt this "was a lot better and its easier to do tasks" and "I would use this". He also said he likes the new colors and images used throughout. Overally this user also didnt struggle with any tasks and I observed the more he used the app the more comfortable he got.

	User 4								
		Task	Time Taken (min)	Task Completion	Difficulty				
1		Open the app on your device and book Mens football 19 Jan 16:00 and pay	46 sec	Yes	Moderate				
2		Book yoga class for Thursday 22nd 08:00 and pay	11 sec	Yes	Easy				
3		Book a Student Gym Membership (yearly) and pay	13 sec	Yes	Easy				
4		Book a badminton court on 13th May and pay	14 sec	Yes	Easy				

Total 1.24 min

This user also uses the old version of the app and said "love the new login page which good compare to before" and "like the new ux of the membersip page". He suggested some changes for some of the text however said its huge upgrade from before and doesnt require many changes as all tasks are wasy to do once you go through the app.

The total time to complete all tasks (all users) was 5min 36sec which compare to previous testing (21.33min) is huge improvement. The main feedback was it was quicker to use the app once they got to learn what each of the pages do. My testing was done in a controlled environment and most users said "Easy and straightforward to use, big improvement from previous version". I received a few recommendations such as nav bar in more pages changes to some of the headings etc. To better improve the app and learn of the changes required I gave all the users a heuristics to fill up at home with the same tasks and the link to the prototype. Overally this testing outcome was postive as it showed big improvement from before with tasks being completed more than 60% quicker and this could improve in the future. Some things I observed was that users go through the screens quickly and miss small details e.g avaibility in calender however this would be used more efficiently once the app is live and so are the features.

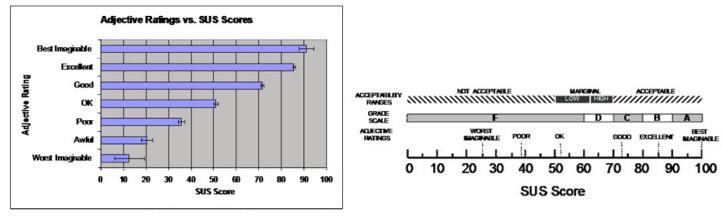
SUS Questionnaire

The following represents the Sus questionnaire which was the same as before tested on the same users to get accurate data which we can compare. The Sus will be found in the appendix. The 10 questions were rated on a 5 point likert scale. We also calculated a average sore same as before for all 4 users.

Question 1	-	1	-	2	-	3	-	4	4	5
Question 2	2	1	2	2	-	3	-	4	-	5
Question 3	-	1	-	2	-	3	-	4	4	5
Question 4	3	1	1	2	•	3	-	4	-	5
Question 5	-	1	-	2	-	3	1	4	3	5
Question 6	3	1	1	2	-	3	-	4	-	5
Question 7	-	1	-	2	-	3	-	4	4	5
Question 8	4	1	-	2	-	3	-	4	-	5
Question 9	-	1	-	2	-	3	1	4	3	5
Question 10	3	1	1	2	-	3	-	4	-	5

We got a average score of 93.75%

From the SUS questionnaire we got a score of 85 for user 1, 97.5 for user 2, 95 for user 3 and 97.5 user 4. We added and divided the score to get a average of 93.75% which shows that app has made a huge positive improvement. It has improved more than 60% (28% previously) which is really good and this should motivate more people to use the app.



Mean SUS score ratings corresponding to the seven adjective ratings (error bars +/- one standard error of the mean). A BANGOR

The grading rating help us give a grade to the before and after SUS score.

Before 28% = Worst imaginable/ Poor = F

New 93.75% = Best Imaginable/ Excellent = A

This shows due to the redesign the app is a lot better then the previous one found from various testing and though this may change if more users are tested it still shows big improvement compare to before.

Tasks and severity

Question 1
Question 2
Question 3
Question 4

3	0	1	1	2	3	4
4	0		1	2	3	4
3	0	1	1	2	3	4
4	0		1	2	3	4

We got a average score of 97% approx.

Though I thought task and severity didn't give me more data then I gained from the SUS I still carried it on to see if the score improved. The summartive results for tasks and severity came to be 97% which again shows a improvement from the 30%. Though I got similar results from SUS hence I also did heuristics later for more indepth results.

Heuristics Testing

As suggested earlier we used Jakobs Nielsens 10 general principles for interaction design to continue to the Summative testing. After SUS and usability was completed users were given this form to complete (full form in appendix) where they judge the app against the heuristics and also give a severity score from 0-4 (o being good - 4 being bad). (Nielson 1994)(2020)

Severity scale

- 0 = I don't agree that this is a usability problem at all
- 1 = Cosmetic problem only: need not be fixed unless extra time is available on project
- 2 = Minor usability problem: fixing this should be given low priority
- 3 = Major usability problem: important to fix, so should be given high priority
- 4 = Usability catastrophe: imperative to fix this before product can be released

Explanation of heuristics

- 1. Visibility of system status:
- Always keep users informed about what is going on.
- Provide appropriate feedback within reasonable time.
 - 2. Match between system and the real world
- Speak the users' language, with words, phrases and concepts familiar to the user, rath er than system-oriented terms.
- Follow real-world conventions, making information appear in a natural and logical order.
 - 3. User control and freedom
- Users often choose system functions by mistake.
- Provide a clearly marked "out" to leave an unwanted state without having to go through an extended dialogue.
 Support undo and redo.
 - 4. Consistency and standards

Section 3: Summative Testing

- Users should not have to wonder whether different words, situations, or actions mean the same thing.
- Follow platform conventions.

5. Error prevention

• Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

6. Recognition rather than recall

- Make objects, actions, and options visible.
- User should not have to remember information from one part of the dialogue to another.
- Instructions for use of the system should be visible or easily retrievable whenever appropriate.

7. Flexibility and efficiency of use

- Accelerators—unseen by the novice user—may often speed up the interaction for the expert user so that the system can cater to both inexperienced and experienced users.
- Allow users to tailor frequent actions.

8. Aesthetic and minimalist design

- Dialogues should not contain information which is irrelevant or rarely needed.
- Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

9. Help users recognize, diagnose, and recover from errors

- Expressed in plain language (no codes).
- Precisely indicate the problem.
- Constructively suggest a solution.

10. Help and documentation

• Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation.

Below are all the response I received using the above definations.

User 1

Heuristics	Severity	Recommendations
1) Visibility of system status	0	Well done – no comment. The app is appealing, you can't get wrong with the navigation.
2) Match between system and the real world	1	The app works like other common apps, and gave to the improvement lot's of great point – because I a succeed to complete each task in a short time In the 3rd task when I was need to book a yearly membership I tempted to press on another button of management - cause I thought from there I can see my membership(mange my account).
3) User control and freedom	0	Easy to navigate to all pages due to nav bar and back buttons.
4) Consistency and standards	0	The design is consistent and by that the app itself appealing to the user.
5) Error prevention	0	Things in cart can be deleated which is really good.
6) Recognition rather than recall	0	Easy to recongnize all page and remember the navigation especially with the nav bar.
7) Flexibility and efficiency of use	1	Could have nav bar in more places if required.
8) Aesthetic and minimalist design	1	Personally I don't have any visual impermanent condition and I found the text readable and in the right size. Maybe consider to check if the color are suitable for blind color people to make it more accessible.
9) Help users recognize, diagnose, and recover from errors	0	The back button was a great thing to put to prevent errors, and the topic on each page after you press the button on nav bar – for example book, Gym etc
10) Help and documentation	1	

User 2

Heuristics	Severity	Recommendations
1) Visibility of system status	0	Visual elements are easy to use. Card details input fields are readable and visble
2) Match between system and the real world	0	App works like other apps in the market e.g puregym and is good.
3) User control and freedom	0	Easy to navigate between pages with nav bar and new home screen with clear icons.
4) Consistency and standards	0	Design is consistent throughout with icons and colors
5) Error prevention	0	Can go in manage bookings to delete/update bookings so good.
6) Recognition rather than recall	0	Easy to recongnize navigations between pages.
7) Flexibility and efficiency of use	0	n/a
8) Aesthetic and minimalist design	0	Great design better than before.
9) Help users recognize, diagnose, and recover from errors	1	The back button was a great thing to put to prevent errors, and the topic on each page after you press the button on nav bar – for example book, Gym etc
10) Help and documentation	1	Could add in future.

User 3

Heuristics	Severity	Recommendations
1) Visibility of system status	0	Clear icons, type and images. Really good visibility no need of improvement
2) Match between system and the real world	0	Icons and Infographics used are similar to the ones we see in real world application.
3) User control and freedom	0	N/A
4) Consistency and standards	1	Design elements are consistent throughout the application. Navigation bar throughout the application would have been good.
5) Error prevention	0	Information architecture is such that it makes the application error prone.
6) Recognition rather than recall	0	N/A
7) Flexibility and efficiency of use	0	N/A
8) Aesthetic and minimalist design	1	Design is minimalistic but the calendar has some minor usability issues.
9) Help users recognize, diagnose, and recover from errors	1	As mentioned earlier could have nav bar in more places but works well and good to have back button on all pages. Also good to delete from cart.
10) Help and documentation	1	N/A

Heuristics Analysis

We found valuable data from doing the heuristics. All the sevierity score was positive as most of it was 0-1 which is no problems/minor ones which I plan to improve. This include things like nav bar in more place, highlighting the page people or on, Improving calender function, gym app button etc. This will help make the app more user-centered and the testing method was useful to do.

Updated Design

This shows the updated design which we found by carrieng out a range of testing. Though most of the feedback was positive and big improvement there were a few minor suggestions received.

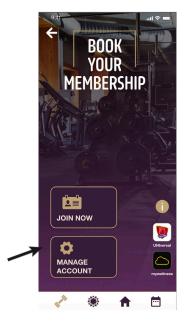
A user suggested highlighting which page you are on which I did by adding the brown colour/ This was on the main pages on not sub pages to avoid confusion.





Improving the calender function which was more towards the actual function not on design was also improved. Intially the box didnt have a active function but now once you click on the select box the calender appears. Some functions are limited as its a prototype but real version would be more interactive.

Some user felt the language for the secound button could be changes so I made it manage accound instead of manage. The intial language confused the users as they thought manage was to get a membership, the change should help clear the confusion.



Conclusion

Legal and Guidelines

When redesigning the app I also considered legal aspects of app design as well as guidelines set by app store. This include data privacy - GDPR, the app doesnt require much private data and comes all under the university of brighton. Guidelines set by android and ios was also researched and followed which stated apps must have clean design (which ours does), no offensive content and designe and good usability. Our app also doesnt contain any deceptive content or use of dark pattern. One thing we may look into future is better accessibility for users with disabilities where more function will be added. The app doesnt have any ads which is also good.

Future Features

With time the app will improve and some of these features could include things like calories tracking, activity tracking, showing user the amount of times they visit the gym, showing how many people are using the gym to avoid large crowds, more tutorial videos etc. These are some features which other gym apps use and it would make the app even more better if included.

Conclusion

Overall I am happy with the overall redesign for the Sport Brighton App. The formative to summative were also really positive with all scores imporving more than 60%. The feedback received was also very positive with only a few minior updates required, which are now done. I do believe the task and severity testing method wasnt required however it still showed improvement. The questionnaire could also have been improved by adding more questions however I got all the data I needed from the various methods and develop a good redesign which improved the architecture of the whole app. I believe the design was the strongest part of this project as I kept with the initial guidelines and colours. I believed a full re-design would have lost its identity but am happy with how it looks now. I also wanted more animations and moving elements however there were constraints from the app and it wasn't required.

The full redesign is available at: https://xd.adobe.com/view/77637773-869c-4102-ab3f-38d97869024e-2230/

Section 4 : References

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The Gym. App images: https://play.google.com/store/apps/details?id=com.netpulse.mobile.thegymgroup&hl=en&gl=US

Jefit.Inc. Gym Workout Plan & Log tracker. App images available: https://play.google.com/store/apps/details?id=je.fit&hl=en&gl=US

Urbanite.Inc, 8fit workout and meal planner. App images available: https://play.google.com/store/apps/details?id=com.eightfit.app&hl=en&gl=US

www.Yahoo.co.uk

www.mirror.co.uk

www.craiglist.org

Icons - Shutterstock. https://www.shutterstock.com/ (paid subscription)

Images in app - Shutterstock. https://www.shutterstock.com/ (paid subscription)

Software - Adobe XD (paid subscription)

Logo - University Of Brighton. https://www.brighton.ac.uk/index.aspx

Section 5: Appendix

Tasks and Severity - Formative

After completing usability testing please rate each task from below ratings (one per task).

1 Open the app on your device and book Mens football (Parklife) pitch for 23 March 16:00 (add to cart)

0 = I don't agree that this is a usability problem at all
1 = Cosmetic problem only: need not to be fixed unless extra time is available on project
2 = Minor usability problem: fixing this should be given low priority
3 = Major usability problem: important to fix, so should be given high priority
4 = Usability catastrophe: imperative to fix this before product can be released

2 Book yoga class for Monday 20 March 2023, 19:45-20:45 (add to cart)

0 = I don't agree that this is a usability problem at all
1 = Cosmetic problem only: need not to be fixed unless extra time is available on project
2 = Minor usability problem: fixing this should be given low priority
3 = Major usability problem: important to fix, so should be given high priority
4 = Usability catastrophe: imperative to fix this before product can be released

3 Book a Gym Membership (monthly payments) (add to cart)

0 = I don't agree that this is a usability problem at all
1 = Cosmetic problem only: need not to be fixed unless extra time is available on project
2 = Minor usability problem: fixing this should be given low priority
3 = Major usability problem: important to fix, so should be given high priority
4 = Usability catastrophe: imperative to fix this before product can be released

4 In timetable find Pilates Class for 21 March 2023 18:30 and email it to me

0 = I don't agree that this is a usability problem at all
1 = Cosmetic problem only: need not to be fixed unless extra time is available on project
2 = Minor usability problem: fixing this should be given low priority
3 = Major usability problem: important to fix, so should be given high priority
4 = Usability catastrophe: imperative to fix this before product can be released

Tasks and Severity - Summative

After completing usability testing please rate each task from below ratings (one per task).

1 Open the app on your device and book Mens football 19 Jan 16:00 and pay

0 = I don't agree that this is a usability problem at all
1 = Cosmetic problem only: need not to be fixed unless extra time is available on project
2 = Minor usability problem: fixing this should be given low priority
3 = Major usability problem: important to fix, so should be given high priority
4 = Usability catastrophe: imperative to fix this before product can be released

2 Book yoga class for Thursday 22nd 08:00 and pay

0 = I don't agree that this is a usability problem at all
1 = Cosmetic problem only: need not to be fixed unless extra time is available on project
2 = Minor usability problem: fixing this should be given low priority
3 = Major usability problem: important to fix, so should be given high priority
4 = Usability catastrophe: imperative to fix this before product can be released

3 Book a Student Gym Membership (yearly) and pay

0 = I don't agree that this is a usability problem at all
1 = Cosmetic problem only: need not to be fixed unless extra time is available on project
2 = Minor usability problem: fixing this should be given low priority
3 = Major usability problem: important to fix, so should be given high priority
4 = Usability catastrophe: imperative to fix this before product can be released

4 Book a badminton court on 13th May and pay

0 = I don't agree that this is a usability problem at all
1 = Cosmetic problem only: need not to be fixed unless extra time is available on project
2 = Minor usability problem: fixing this should be given low priority
3 = Major usability problem: important to fix, so should be given high priority
4 = Usability catastrophe: imperative to fix this before product can be released

SUS

This SUS questionnaire was given after the usability and tasks and severity testing. It was done for formative and summative testing (in microsoft forms)

I would like to use this system frequently (if improved) *
○ Strongly Agree
○ Agree
○ Neutral
Disagree
○ Strongly disagree
I found the system complex to use *
○ Strongly Agree
○ Agree
○ Neutral
○ Disagree
Strongly disagree
I found the system easy to use *
○ Strongly Agree
○ Agree
O Neutral
○ Disagree
Strongly disagree
I think that I would need the support of a technical person to be able to use this system. *
I think that I would need the support of a technical person to be able to use this system. * Strongly Agree
○ Strongly Agree
Strongly Agree Agree
Strongly Agree Agree Neutral

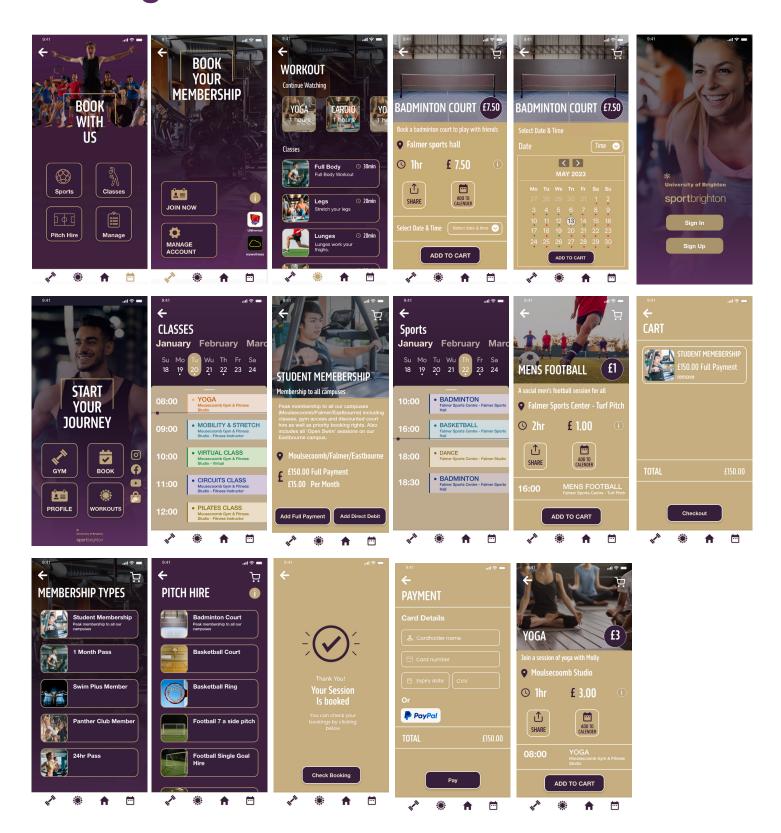
SUS Cont.

I found the various functions in this system were well integrated. *
○ Strongly Agree
○ Agree
○ Neutral
○ Disagree
○ Strongly disagree
I thought there was too much inconsistency in this system. *
○ Strongly Agree
○ Agree
○ Neutral
○ Disagree
Strongly disagree
I would imagine that most people would learn to use this system very quickly. *
○ Strongly Agree
○ Agree
○ Neutral
○ Disagree
Strongly disagree
I found the system very cumbersome to use. *
○ Strongly Agree
○ Agree
○ Neutral
Strongly disagree

SUS Cont.

I felt very confident using the system *
Strongly Agree
Agree
O Neutral
○ Disagree
Strongly disagree
I needed to learn a lot of things before I get going with the system. *
Strongly Agree
Agree
O Neutral
○ Disagree
Strongly disagree
Submit

All Pages





Title of Study Sports Brighton App Redesign

Neel Amin IDM22

Introduction and what is the purpose of the study/project?

My name is Neel Amin and I am an MSc User Experience Design student at the University of Brighton. I am carrying out this research as part of my coursework projects; it is entirely for educational purposes. The purpose of this is to redesign the Sport Brighton app which is currently used by many students and teachers from the university. It enables users to start gym memberships, book swimming pool, book football/tennis courts, amend booking, book classes, check news (events) and more. The app has only been launched a few months ago however has a 2.2 rating on Play store and has really bad user interface and UX. The aim is to redesign the app, so it is easier to use and attracts more people to download it as it has really useful functions and motivate the existing users to use it more. I also plan to add/update some of its features e.g., new forum/discussion page where users can interact with each other.

Invitation paragraph

I would like to invite you to take part in my research study. Before you decide, I would like you to understand why the research is being done and what it would involve for you. To this end, please read this document so that you are clear as to the implications of your participation in the study. This will take you several minutes. I am happy to answer any questions that you may have.

Why have I been invited to participate?

You have been invited to participate in this study as I would like to establish your experience of the Sport Brighton app because you use/have used the facilities and will find the app a great addition to the experience. You have also been chosen as you have previously used other similar apps in the past and it will help gain more insight to how this app could be re-designed.

Do I have to take part?

Your participation is voluntary, and there is no obligation to take part. If you are a student a decision not to take part will not have any negative consequences in terms of your study, work, or other academic activities

What will happen to me if I take part?

The study will take no longer that 1 hour to complete and you are required to participate only once. You will be taking part in an usability testing as an interview, undertaking a heuristic evaluation, and completing a questionnaire at the end.

Audio visual recordings will be made / Photos will be taken. These data are for analytical purposes. Bitmap images may be taken from the video and presented as figures when writing up my major project. These figures will be for illustrative purposes only.

To reduce the risk of Covid infection during the face to face data collection, please do not attend if you have Covid symptoms or have tested positive. Hand sanitiser will be provided.

Will I be paid for taking part?

You will not be paid for your participation and therefore I would like to thank you for both your time and consideration during this study.

What are the potential disadvantages or risks of taking part?

Participating in this study is very low risk. If, during the study, you feel fatigued, tired or require a comfort break please tell me and you can take an immediate break.

What are the potential benefits of taking part?

There will be no direct benefit to you as a participant. The data that I am gathering from you is purely for educational purposes in the context of my study.

Will my taking part in the study/project be kept confidential?

To help maintain the confidentiality all our participants, the data that I gather from your participation will be anonymised and given a reference e.g., participant 1. Demographic data such as gender or age will be summarised e.g., 5 males and 5 females between the age of 18 to 35. You will not be personally referred to when I analyse, evaluate, and write up the study for inclusion in my coursework.

All figures presented in my coursework that contain images of participants will have the faces of these participants redacted i.e., a black box replacing the face.

All collected data will be stored on my secure University of Brighton One Drive during analysis. Only my supervisor and I will have access to the data. The data will remain on my University One Drive until I complete my studies. On completion of my studies all data will be deleted.

- Please follow this link to the University's Research Privacy Notice for further information on data protection. https://unibrightonac.sharepoint.com/:b:/s/public/ERAnx7fZSR9Lv6MRZ1KwpMMBcOSYGp30CAwkTzb
- If you are reading a hard copy of this document, the QR Code below also provides a link to the University's Research Privacy Notice for further information on data protection.



bzHLDNQ?e=4gH9GQ).

What will happen if I don't want to carry on with the study?

You are free to withdraw from the study at any time until the end of the data collection session. Any information that I have gathered e.g., consent form, or data captured e.g., response to tasks, will be shredded and or deleted.

 After the data collecting session, you may ask for your data to be removed for up to [14] days. After that, your data will be anonymised and collated, and it will not be possible to remove the data of an individual participant anymore.

What will happen to the results of the project?

The results of the study will be written up for inclusion in my coursework projects. If you want to see my finished dissertation please contact me though my email address below and I will send it to you as pdf document.

Contact details

Researcher: [Neel Amin] [N.Amin2@uni.brighton.ac.uk]
Supervisor: [Sanaz Fallahkhair] [s.fallahkhair@brighton.ac.uk]

What if I have a question or concern?

Please contact Dr Friederike Günzel (<u>f.k.gunzel@brighton.ac.uk</u>) School of Architecture, Technology and Engineering Research Ethics and Integrity Lead.

Who has reviewed the study?

Participant Forms



University of Brighton

Participant Consent Form

Title of Project: Sport Brighton App Redesign	
Name of Researcher: Neel Amin	
	Please initial or tick box
I have read and understood the information sheet for the above study and have had the opportunity to consider the information and ask questions.	✓
The researcher has explained to my satisfaction the purpose, principles and procedures of the study and any possible risks involved.	✓
I am aware that I will be required to take part in an interview.	✓
I am aware that I will be required to take part in a questionnaire.	
I am aware that I will be required to take part in a heuristic evaluation.	V
I am aware that I will be required to take part in an usability testing	✓
	✓
I understand that my participation is voluntary and that I am free to withdraw from the study at any time without giving a reason and without incurring consequences from doing so.	✓
I understand how the data collected will be used, and that any confidential information will normally be seen only by the researchers and will not be revealed to anyone else.	✓
[For face-to-face research] The researcher has explained to me the measures that will be in place to reduce the risks associated with Covid-19 and I agree to follow these.	✓
I agree to take part in the above study.	✓
20/03/23	
Name of Participant, Date, Signature	
Neel Amin 14/03/23 Neel Amin	

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Name of Researcher, Date, Signature

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Neel Amin 14/03/23 Neel Amin	

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Name of Researcher, Date, Signature



Participant Consent Form

Title of Pro	iect: Sport	Brighton	App	Redesia	'n
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Name of Researcher, Date, Signature

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Cirianan anaran 6/5/23	
Name of Participant, Date, Signature	
Neel Amin 2/5/23 Neel Amin	



Participant Consent Form

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6/5/23	
Name of Participant, Date, Signature	



Participant Consent Form

Title	of	Project:	Sport	Brighton	Apı	p Redesign
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Neel Amin 2/5/23 Neel Amin	
Name of Researcher, Date, Signature	



Participant Consent Form

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