

## Coursework 2

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### Part One – Heuristic Evaluation

#### Heuristics Used

How easy is it to work out the function of the device?

How easy is it to tell what actions are possible with the device and at that moment?

How easy is it to perform the action?

How easy is it to tell if the system is now in the desired state?

Does the app have clearly marked exits?

#### Tasks Chosen

Start navigation to the 'Epic Burger Place' restaurant (the name of a restaurant at the festival)

Find a list of rock concerts, then add one to your schedule

Max 200 words (10 marks)

#### Heuristic Evaluation

##### **Task 1: Start navigation to the Epic Burger Place restaurant**

To navigate to the restaurant, the user will need to press the 'Map' button in the navbar, click on the restaurant, then click the purple Navigate button.

##### **How easy is it to work out the function of the device?**

From the home screen, the navigation feature is not immediately obvious. However, this is OK because if every possible task was shown on the Home screen, the user would be overloaded with information.

While at a festival, a user might want to find out where a certain restaurant is. From the home screen, the obvious choice is to click the Map button. From here, the user can look at the map to try and find the restaurant. To navigate there, the user needs to click on the restaurant, then click the navigation button, but the user may never think to click on the restaurant. If they have experience with Google Maps (very likely since the user base is young and has experience with phones), they might know to click on the place to navigate to it, but it is not immediately obvious that this exists in the app.

##### **How easy is it to tell what actions are possible with the device and at that moment?**

As previously stated, it may not be obvious while on the map screen that the user can navigate.

### **How easy is it to perform the action?**

If the user knows how to navigate to a location, the action is very easy to perform. The hardest part is finding the desired location on the map in the first place; however, there is a search button if the user knows the name of the restaurant, and if not, there is a 'Restaurants' button to only show restaurants to make the desired restaurant easier to find. These features work similarly to Google Maps, which the user is likely to have used.

### **How easy is it to tell if the system is now in the desired state?**

When the user is navigating, there is a large white box at the top of the screen with an 'End' button and the amount of time to get to the destination. There is a map shown in a 3D perspective rather than top down, with the destination in the distance. All the information on the screen makes it very clear that the user is now navigating to the desired location.

### **Does the app have clearly marked exits?**

When the user clicks the 'Map' icon, the 'Home' icon still exists, but the Map icon turns purple to show that it's selected, while the Home icon turns black to show that it isn't. This signifies that the user can press Home again to reverse the previous action. When the user taps the location, there is a pop-up with a shadow, and the background goes dark but is still visible to let the user know they can return to it. There is a dark grey bar at the top of the pop-up to let the user know they can drag down to get rid of it, which is a standard feature in apps. On the navigation screen, the End button is in red so it's clearly visible.

## **Task 2: Find the rock concerts, and add one to your schedule**

### **How easy is it to work out the function of the device?**

The user may not know about the Schedule feature, as its icon is in the bottom right of the screen. Finding the rock concerts is a simple process. It is easy to find other types of concerts too, because the user can search by genre, stage, date/time or with the Search box. All search elements are grouped together.

### **How easy is it to tell what actions are possible with the device at that moment?**

The Events icon looks much like a festival stage and also has text saying 'Events' under it, making it obvious how to get to the Events page. From here, the user can see many ways to search for concerts.

Every concert has a '+' button next to it, but this is unlabelled until the user taps a concert, after which it says 'add to my schedule.' Once the user has clicked on a concert once – which they are almost certain to do, as it's a festival app – they will know the function of the '+' button, so they will be able to add things to their schedule more quickly.

**How easy is it to determine the mappings from the intention to the physical movement required in order to achieve the goal?**

Navigating to the rock section takes 3 steps: tap the Search button, tap the Genres list, tap the Rock button. Out of these three steps, the last two are easy to work out, but the first is harder.

The user might try clicking the 'My Schedule' button when asked to add something to their schedule. From here, there is a large purple floating '+' button which is the most obvious button on the screen, so it is easy to find events.

**How easy is it to tell if the system is now in the desired state?**

The plus button turns into a tick and fills in, which indicates that the task is complete. To verify this, the user can navigate to their schedule and see the concert they've added there. (The prototype doesn't have this functionality as it was made in PowerPoint, but the final app would.)

**Does the app have clearly marked exits?**

On all screens where the navbar isn't shown, there is a back button to let the user return to where they were. If they want to remove something from their schedule, they can click the tick button (which was previously a plus) to remove it.

Max 1000 words (30 marks)

**Part Two – User Evaluation**

I tested my app on three users. They were all 21 years in age, which is within the target demographic for this app. They all managed to complete the tasks quickly and easily without confusion. All three of them made no errors with either of the tasks.

To navigate to the food place, I explained to the participants that there is a navigation feature to find venues at the festival. I asked them to start navigation to the epic burger place (a restaurant I made for the purposes of testing). Two of the participants clicked Food and Drink, then Epic Burger Place (under Top Picks), then the navigation button. Both of these participants said that, if they hadn't found the restaurant on the Food and Drink page, they would have clicked the search box and attempted to find it that way. The other participant didn't mention the search box and said "if it wasn't there, I don't know which of the categories I would have used to find the burger place," suggesting that perhaps there should be more categories. One participant clicked on the map, then on the restaurant, then clicked navigate. The last participant also clicked End afterwards without being prompted, showing that this exit was clear. The users knew when the task was done and the system was in the desired state.

For the second task, I explained that there was a schedule feature to add concerts to so users can see what concerts they will be attending. I asked the participants to find a rock concert and add it to their schedule. Each user clicked the Events tab at the bottom, then Genres A-Z, then Rock, then the '+' button. Once again, the participants all knew when the system was in the desired state due to the feedback when the '+' button is pressed. A user using the final app would have the added benefit of being able to check the Schedule page to see if the event appeared there, confirming that the event was indeed in their schedule; however, my participants were all aware that the concert had been added to their schedule.

My prototype was created in PowerPoint. Sometimes, there were screens which could be reached from two different places – for example, the Burger Place restaurant can be reached either from the Search page, or the main Food and Drink page. When the back button is clicked, it should lead back to the Search page if the user came from the Search page, or the Food and Drink page if the user came from the Food and Drink page; however, I programmed it to always go back to the Search page. This was a mistake, and it would have been better to create two identical slides with back buttons leading to different places depending on where the user came from.

If the app were tested further, it would be a good idea to test other tasks, as it may be that other tasks are more difficult to perform. It would also be good to test on more people to see if other people have any problems working out what actions to perform to complete the desired tasks, and which methods they used to do these tasks, as for the first task, two different methods were used. It might be useful to see what proportion of users opt for each method.

Max 800 words (20 marks)

### **Comparison of results between user evaluation study and heuristic evaluation**

In the heuristic evaluation I assumed that the participants would click on the map to find the burger place and didn't think about them using the Food and Drink section. I assumed the users would think to use the map because I'd asked them to navigate, but 2 out of 3 users used the food and drink menu, with only one user opting to use the map. This could be because the user will scan top to bottom and left to right down the page to find the feature they want, and 'Food and Drink' is further left than 'Map', so they see this button first and instantly click on it without considering other options.

To find a rock concert and add it to their schedule, the user evaluation and heuristic evaluation produced the same results. Each participant managed the task in under 15 seconds. They all clicked the Events button, then clicked Genres A-Z, then clicked Rock, then clicked the '+' button. In my heuristic evaluation, I thought the users might click on the name of the concert and then click the '+' button within the event page, where it is labelled 'Add to My Schedule,' because they might not be sure what the '+'

button did if it didn't have a label; however, they might have clicked the '+' button immediately because they already knew about the schedule feature from having been told about it, and assumed the button was to add the concert to the schedule. Perhaps a new user with no prior knowledge of the app might not know what the button does, and they might have clicked the concert first before realising that the + button is to add the event to their schedule.

In my heuristic evaluation, I said that while trying to find the restaurant, the user might click on the Map icon, but then not think of clicking on the restaurant. Out of the three users, one chose to click on the map. This person then searched for the restaurant without using any of the filters and clicked on it as soon as they found it. It might have helped that in my PowerPoint prototype, the mouse pointer turns into a hand when the user mouses over a hyperlink. Users often trace where they're looking with the mouse pointer. The participant moved the cursor where they were looking while they searched for the restaurant, then when they found it, the cursor turned into a hand, making it obvious that it could be clicked. This would not happen for a mobile app, so it may be less obvious to mobile users that the restaurant can be clicked, although as I mentioned in the heuristic evaluation, the feature works similarly to other map apps, so the user will probably be able to work out that they can click the restaurant anyway.

Max 500 words (20 marks)

### **Recommendations for improvement, considered with reference to design guidelines**

To navigate to the restaurant from the Map screen, the user needs to click the restaurant icon then the navigation button. The navigation button is very obvious, but the user may never think to click on the restaurant. If they have experience with Google Maps (very likely since the user base is young and has experience with phones), they might know to click on the place to navigate to it, but it is not immediately obvious that this exists in the app.

A way to solve this could be to create a prompt to tell the user that they can click on a place to find more information about it, and then when they click on it, they will see the option to navigate.

The user must press a '+' button to add a concert to their schedule. This turns into a tick after it has been clicked, to show that it has been added to the schedule. To remove the concert, the user must press the tick again. This may not be immediately obvious. It might be better if, on the Schedule page, there was a more obvious way to remove concerts – e.g., there could be an 'Edit' button, making red minus symbols appear next to the concerts, similar to editing a playlist in Apple Music – but this would be adding more ways to do the same action and would add clutter to the app.

There may be some features which are unnecessary and could be removed from the app. For example, there are very few venues on the map, so it might not be needed to have the filters at the bottom of the screen to only show certain types of venues. However, these filters do not take up very much space, so it could be that removing these would be removing functionality for no reason.

The Genres page might be better if it looked more like the Spotify or Apple Music genres page. In these apps, the genres are arranged as buttons in a grid. The buttons are different colours, and have an image with them – for example, classical music might be represented with a violin, or rock music with an electric guitar. The different colours would be more eye-catching and pleasant to look at than a list of genres. The images would be utilising dual coding, meaning the user doesn't have to concentrate as hard to find the genre they're looking for.

It might have been better if I chose a different accent colour. I chose purple for the accents in my app. Purple is a colour used by a lot of banking apps, because it has connotations of money and formalism. A colour such as orange or light blue might have a more joyful, fun connotation.

Max 500 words **(20 marks)**