# **6. User Evaluation of the First Prototype:**

## **6.1 Methodology:**

### **6.1.1 Session**

The testing of the MoodPlayer was done indoors. It was set upped and conducted inside an empty room of my house on 27 June 2021. The testing took about half and one hour to be finished.

**Questions**

**Before Testing**

**Demographic**

1. How old are you?
2. What’s your gender?
3. How do you describe your relationship status?
4. What is your profession?
5. What’s your household income?

**Background**

1. Which app do you use most to listen to music?
2. What device do you use most to listen to music?
3. How you listen to songs? (Playing style: random or shuffling or particular)
4. Which genre of music do you listen to most?
5. When do you prefer to listen to songs?

**During Testing**

1. How was your experience while searching for an artist’s album?
2. What do you think of the user interface?
3. How did you find the add to queue bottom?
4. How is the audio quality?
5. What’s your opinion about the radio play mode?
6. What do you think about the song’s genres?

**After Testing**

**Qualitative**

1. Which features do you like the most and least?
2. How would you describe your experience with MoodPlayer?
3. Would you use MoodPlayer for listening to online and offline songs?
4. What is the thing you felt about MoodPlayer that makes it different from others music apps?
5. How easy do you think MoodPlayer is to use?
6. What would be the feature you would like to add to MoodPlayer?
7. What would be the reason that could make you use MoodPlayer?
8. How the searching of the MoodPlayer?

**Quantitative**

1. I would use MoodPlayer frequently.
2. I think MoodPlayer is easy to use.
3. I found very useful features in MoodPlayer.
4. I need to learn a lot of things before using MoodPlayer.
5. I found any songs I searched in MoodPlayer.
6. The audio quality of the songs is very good
7. I would like to have a premium subscription.
8. MoodPlayer is easy to navigate.
9. MoodPlayer has lots of advertisements.
10. People will learn to use MoodPlayer very quickly.
11. MoodPlayer’s Free version sucks.
12. It feels good to use MoodPlayer.
13. MoodPlayer is cumbersome to use.
14. MoodPlayer is inappropriate to use.
15. MoodPlayer has a very attractive user interface.

### **6.1.2 Wizard of Oz**

All the participants were asked to seat in front of a table containing all the prototypes, consent forms, and tasks. They were given prototypes and asked to do the tasks one by one. They were given and told about the tasks and there was a wizard who was giving them and exchanging the prototypes according to their input while completing the tasks. They were also asked some questions before, during, and after the testing which are listed above. All their activities were recorded in a video.

### **6.1.3 Participants**

Total 5 different participants of different age groups were invited. Some of them are teachers, some are students and one is a guitar player. All the participants were invited and told about the whole testing scenario with the terms and conditions through social media. Participants who accepted the requests were notified when the testing was going to be conducted through email.

### **6.1.4 Scenarios/Tasks**

1. Log in, go to the premium page and take Premium Subscription
2. Search an artist, play a song from his album, give like to it and to its songs
3. View lyrics and video of a song
4. Add some songs to the queue, go to the queue page and remove some songs from the queue
5. Go to a song’s Radio and add some songs to your playlist
6. Go to your library, visit the artist and album page, play songs from the playlist

## **6.2 Results**

### **6.2.1 Time on each task:**

It measures the total time taken by each user per task and gives the average time of each task as the final time taken to complete the particular task.

Table 1: Time on each task of each users in seconds

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Task\Users** | **User 1** | **User 2** | **User 3** | **User 4** | **User 5** | **Average Time** |
| **Task 1** | **20** | **19** | **23** | **20** | **24** | **21.2** |
| **Task 2** | **33** | **34** | **38** | **33** | **36** | **34.8** |
| **Task 3** | **15** | **13** | **16** | **15** | **14** | **14.6** |
| **Task 4** | **51** | **55** | **59** | **54** | **58** | **55.4** |
| **Task 5** | **41** | **47** | **56** | **43** | **49** | **47.2** |
| **Task 6** | **21** | **20** | **25** | **21** | **24** | **22.2** |

Figure 1: Time taken by users to perform each task in seconds

### **6.2.2 Task Completion Rates:**

It measures the ability to complete the tasks. It gives details of accomplished and not accomplished tasks by each user. The completion rate is the completion percentage of a particular task.

Table 2:Task completion rates for each task by the users.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Task\Users** | **User 1** | **User 2** | **User 3** | **User 4** | **User 5** | **Completion Rate** |
| **Task 1** | **✓** | **✓** | **✓** | **✓** | **✓** | **100%** |
| **Task 2** | **✓** | **✓** | **✓** | **✓** | **✓** | **100%** |
| **Task 3** | **✓** | **✓** | **✓** | **✓** | **✓** | **100%** |
| **Task 4** | **✓** | **✓** | **🗶** | **✓** | **✓** | **80%** |
| **Task 5** | **✓** | **✓** | **🗶** | **✓** | **🗶** | **60%** |
| **Task 6** | **✓** | **✓** | **✓** | **✓** | **✓** | **100%** |

Figure 2:Task completion rates for each task by the users

### **6.2.3 Number of Actions to Complete the tasks**

It measures efficiency. It gives the number of the actions or the click taken by each user per each task. The Hypothesis is the aspect amount of action and the Average is the final output that came from the testing.

Table 3: Number of actions to complete the tasks

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Task\Users** | **User 1** | **User 2** | **User 3** | **User 4** | **User 5** | **Average** | **Hypothesis** |
| **Task 1** | **8** | **9** | **12** | **10** | **11** | **10** | **10** |
| **Task 2** | **12** | **13** | **15** | **12** | **14** | **13.2** | **14** |
| **Task 3** | **3** | **3** | **4** | **3** | **4** | **3.4** | **3** |
| **Task 4** | **14** | **13** | **15** | **13** | **15** | **14** | **12** |
| **Task 5** | **8** | **8** | **12** | **9** | **11** | **9.6** | **8** |
| **Task 6** | **5** | **4** | **6** | **5** | **5** | **5** | **4** |

Figure 3: Number of Actions to complete the tasks

### **6.2.4 Number of Request for Help**

It measures the learnability of the system. It gives the number of requests asked by the users per each task to complete it. This determines how easily the system can be used.

Table 4: Number of help requests per task

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Task\Users** | **User 1** | **User 2** | **User 3** | **User 4** | **User 5** | **Completion Rate** |
| **Task 1** | **0** | **0** | **1** | **0** | **1** | **0.4** |
| **Task 2** | **0** | **1** | **2** | **0** | **1** | **0.8** |
| **Task 3** | **0** | **0** | **0** | **0** | **1** | **0.2** |
| **Task 4** | **2** | **3** | **5** | **3** | **4** | **3.4** |
| **Task 5** | **3** | **4** | **6** | **5** | **6** | **4.8** |
| **Task 6** | **0** | **0** | **1** | **0** | **0** | **0.2** |

Figure 4:Task completion rate of number help requests per task

### **6.2.5 Quantitative analysis**

It gives a quantitative analysis based on the user agreement of the quantitative questions asked after the testing. It measures how good, flexible, and easy the system is.

Table 5: Quantitative analysis of the users

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Questions\Agreement** | **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** | **Agreement Percent** |
| I would use MoodPlayer frequently. | **0** | **0** | **1** | **2** | **2** | **80%** |
| I think MoodPlayer is easy to use. | **0** | **0** | **1** | **4** | **0** | **80%** |
| I found very useful features in MoodPlayer. | **0** | **0** | **0** | **2** | **3** | **100%** |
| I need to learn a lot of things before using MoodPlayer. | **4** | **1** | **0** | **0** | **0** | **0%** |
| I found any songs I searched in MoodPlayer. | **0** | **0** | **0** | **1** | **4** | **100%** |
| The audio quality of the songs is very good | **0** | **0** | **0** | **0** | **5** | **100%** |
| I would like to have a premium subscription. | **0** | **3** | **0** | **2** | **0** | **40%** |
| MoodPlayer is easy to navigate. | **0** | **0** | **2** | **3** | **0** | **60%** |
| MoodPlayer has lots of advertisements. | **0** | **0** | **1** | **4** | **0** | **80%** |
| People will learn to use MoodPlayer very quickly. | **0** | **0** | **0** | **5** | **0** | **100%** |
| MoodPlayer’s Free version sucks. | **0** | **2** | **1** | **2** | **0** | **20%** |
| It feels good to use MoodPlayer. | **0** | **0** | **0** | **0** | **5** | **100%** |
| MoodPlayer is cumbersome to use. | **5** | **0** | **0** | **0** | **0** | **0%** |
| MoodPlayer is inappropriate to use. | **5** | **0** | **0** | **0** | **0** | **0%** |
| MoodPlayer has a very attractive user interface. | **0** | **0** | **0** | **0** | **5** | **100%** |

Figure 6: Agreement percentage of the quantitative questions

### **6.2.6 Errors**

It gives the mistakes done by the user per each task while completing it. The Average point is the final errors that occurred per task. It measures how much confusing the system is.

Table 6: Errors by the users

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Task\Users** | **User 1** | **User 2** | **User 3** | **User 4** | **User 5** | **Average** |
| **Task 1** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Task 2** | **1** | **1** | **2** | **1** | **1** | **1.2** |
| **Task 3** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Task 4** | **2** | **3** | **5** | **3** | **4** | **3.4** |
| **Task 5** | **2** | **4** | **6** | **3** | **5** | **4** |
| **Task 6** | **0** | **0** | **1** | **0** | **1** | **0.4** |

Figure 6: Errors by users per each task

## **6.3 User Analysis**

### **6.3.1 Liked Most**

All the users liked the ‘view lyrics’ feature a lot because it’s a rare feature offered by music apps. They also liked ‘add to queue’, ‘add to playlist’, and ‘MoodPlayer default playlists’ features.

### **6.3.2 Liked Least**

Users don’t like the ‘Radio mode’ feature as I had aspected. They also did not show any interest in the ‘view video’ feature. It might be because of other apps like youtube.

### **6.3.3 Recommendations**

A common recommendation from all the users was adding a new feature of playing songs from the mobile’s local files. As the viewing lyrics and view, video features are available to the premier users only. They recommended having the view lyrics feature to the free users also.

Some other recommendations were listed below.

* Direct searching of Radio albums
* Following song’s genres
* Dark theme
* View favorite playlists on Home Page

### **6.3.4 Conclusion**

The result of the testing was analyzed in six different ways in six different tables and charts. The first table and chart prove that task 4 was the most time-consuming and task 3 was the least time-consuming to complete. The second table and chart tell that all the tasks except tasks 4 and 5 were completed. User 3 couldn’t do tasks 4, 5 completely and user 5 couldn’t do task 5 completely.

The third one shows that task 1 was completed in the aspected amount of actions but task 2 was completed in even less amount of actions. Other tasks took a little more action than aspected. The fourth one shows that task 5 was the hardest task that required lots of help to complete. Then task 4 comes in second place but other tasks required only a little helps. The fifth table and chart prove that among 15 quantitative questions, Q4, Q13, Q14 were not agreed, Q3, Q5, Q6, Q12, Q15 were agreed 100% and others questions were agreed but there was some disagreement too.

The sixth one shows that users done no errors in task 1 and task 3, task 5, 4 was the most error occurring task, and task 2, 6 got little errors. From the above analysis, tasks 4 and 5 seem to be a little confusing and harder. To solve them, the following actions need to be done.

* The buttons should be a little large and differentiable
* There should be an external Radio button for Radio songs like the Queue button
* There should be a help button that will navigate to the help page to search for how to do any actions