# **Abstract**

This report gives a brief description of the process went through while designing an online music application for mobile platforms. This report tries to offer a better version of the music app than the currently existing ones. Before beginning the designs, PACT analysis, both descriptive and graphical HTA was done for this app. Personas of five participants with an overall report and a storyboard for it were also made. Then low-fidelity prototype was developed using the “Balsamiq Wireframes” tool. The prototype was tested with five different people using the “Wizard of Oz” method. They were asked some questions before, during, after the test and also given some tasks. All of their activities were captured too. The users and result of the testing was analyzed from various perspectives. Their recommendations were noted. Some improvements were done while designing the high-fidelity prototype using “Adobe XD” software. A guerilla testing with five different people was conducted for this prototype and their results were analyzed too. During the testing and analysis, some processes used in low-fidelity were also repeated. Some feedbacks were noted too. This report also covers background and motivation, methodology, discussion and future works part for the design of this application.

# **Introduction**

Most people use mobile devices to listen to music and there are lots of music applications available on the internet for it but all of them are not perfect from all points of view and don’t cover all the features. Some have bad designs, some plays music from local files only, some works with the internet connection only. Some of them are very good too but they require money to download. There are very rare free music applications that satisfy most of the users.

Therefore, an online music application for mobile platforms has been designed in this report to offer a better version of the music app to the users than the currently existing ones. This app offers all the features and functionality that all kinds of music lovers want in a music app. This app contains both free and premium versions. All of the necessary features are available in free versions. The premium version offers some extra features like viewing lyrics and video, downloading songs, albums for offline listening, and users have to pay money for it. Users can search for any songs, albums, artists they want, can create their library and add music content to it, listen to various kinds of the default generated playlists.

This is a user-centered design and before designing this, various music apps like Spotify, Apple Music, YouTube that were already available were studied, and their pros and cons were evaluated. The users, environment, activities, and technology were also studied, and then both low and high-fidelity prototypes of the app have been designed and tested. The results of the testing have been analyzed in various ways. Most of the feedback from the users was good and some of them gave recommendations too. Some improvements have been applied to the design after the testing of the low-fidelity prototype.

# **Background and Motivation**

# **Methodology**

## **Requirement Gathering**

After doing the pact analysis of the app, the hierarchical task analysis was done in both descriptive and graphical ways. This provides the step that should be taken to listen songs and gives some plans that tells the order in which some steps needed to be done in some particular conditions. All of the methods used in this report are user centered.

## **Formative User Study**

Before designing the prototype, a formative user study was done. Some personal questions and questions related to the music were asked to five different people. Their answers were noted and an final report from their answers was derived. This report gives very important informations which will be very helpful during the design process of this app. A storyboard was also designed for a better understanding of how the app will work.

## **Design**

Both low and high fidelity prototype for the app was developed. The low-fidelity prototypes were printed in A4 papers too for the testing purpose. In high-fidelity prototype, some improvements were adapted and this prototype took a bit of more time to be completely finished because it contains high level of details than the low-fidelity prototype.

## **Participants**

Before testing low-fidelity, total five different participants were informed about it and asked to come on particular date and time in particular place. The participants were given consent form to sign in it before beginning the test.

High-fidelity prototype testing was done in public areas and the participatns were not recruited in advance. A total of five different ramdom participats were requested for the testing.

## **Evaluation**

Wizard of Oz method was used to conduct the testing. Participants were given some tasks and their was an wizard who helped exchanging the prototype while completing the tasks. All their activity were recorded in a video. The results were analyzed in tables and charts in various ways like learnability analysis, efficiency analysis, error tolerance analysis, qualitative analysis, etc. Participant’s likings, dislikings and recommendations were also analyzed.

The high-fidelity testing was conducted using guerilla method. Participants were given some tasks and a laptop to use the high-fidelity prototype while completing the tasks. Their activities were captured in a video and photographs. The testing’s result was again analyzed in tables and charts in various perspective like time on each tasks, task completion, errors analysis, etc. A qualitative analysis of features of the app was analyzed with rating system and represented in a chart too. Participant’s feedback and recommendations were noted too.

## **Questionners**

During the testing of low-fidelity prototype, participants were asked demographic and background questions before testing, some questions related to wellness of the app during the testing, qualitative and quantitative questions after testing. In the high-fedility prototype testing, participants were asked qualitative questions related to functionalities and features of the app.

## **Tools and Technology**

The low-fidelity prototype was designed using Balsamiq Wireframes tool and the high-fidelity prototype was designed using Adobe XD tool. Lots of svg icons that were used in high fidelity prototype were taken from the Flaticon website.