



D.S.P.M

**K. V. PENDHARKAR COLLEGE OF
ARTS, SCIENCE & COMMERCE
(AUTONOMOUS)
DOMBIVALI**

**PROJECT REPORT
ON
*MUSIC PLAYER MP3***

**DEVEPLOED BY
MR. TANAY KHILARE**

**UNDER THE GUIDANCE OF
PROF.MRS.SMITA SONAWANE**

**SUBMITTED TO
UNIVERSITY OF MUMBAI
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CERTIFICATE

This is Certify that the following student have successfully completed the project of
Home Automation
as per the syllabus and that it forms a part of the requirements for completing the BSC
degree in Computer Science of University of Mumbai
Academic Year 2022-23

Name of Student: - Tanay Rajendra Khilare
Roll No :- 227301

Under guidance of
Prof. Mrs. Smita Sonawane

BNS
26/9/22

Project guide
(Prof. Smita Sonawane)

BNS
26/9/22

Head of Department
(Prof. Smita Sonawane)
Stamp of Department

Yashwant M
26/9/22

Examiner

26/9/22

Date

Acknowledgement

It is indeed a matter of great pleasure and proud privilege to be able to present this project on “Exam-Cell Automation”.

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I would also like to express our deep regards and gratitude to the principal **Mr. Suryakant Lasune**

I would wish to thank the non-teaching staff and my friends who have helped me all the time in one way or the other.

Really it is highly impossible to repay the depth of all the people who have directly or indirectly helped me for performing the project.



TANAY R. KHILARE

T.Y.B.Sc CS

PROJECT DOCUMENTATION

of “ **MUSIC PLAYER MP3 ”**

COLLEGE: K.V Pendharkar college 5th Semester

YEAR: 2022-2023



**MUSIC PLAYER
MP3**

DEVELOPED BY:-

TANAY RAJENDRA KHILARE

ROLL NO: 22-7301

PREFACE

In our (TYBSC) computer science course ,our 5th sem project and our java till now experience both as a link between theory and actual industrial practices as well as an opportunity for hands o experience in corporate environment. Yet the opportunity could not have been utilized without the guidance and support of many individuals who although held varied positions, but were equally instrument for although exam of my 5th sem.

However, we accept the sole responsibility errors of omission and would be extremely grateful to readers of this project documentation if they bring such mistake to our notice.

DECLARATION

I'm Tanay Khilare , declare that the project titled “MUSIC PLAYER MP3’ is our original as all the informative facts and figures in this documentation is based on our own experience and study during our 5th sem exam of (TYBSC)computer science .

Date: 16/09/2022

Place: Mumbai, Maharastra

INDEX

	Page No.
□ INTRODUCTION	
✓ BUILD DEVELOPING ENVIRONMENT OF ANDROID -----	10
✓ THE DESIGN PRINCIPLE OF ANDROID APPLICATION -----	11
✓ FUNCTION AND SRUCTURE DESIGN OF ANDROID SYSTEM --	12
□ REQUIREMENT ANALYSIS OF SYSTEM	13
✓ THE FEASIBILITY ANALYSIS -----	
✓ ECONOMIC FEASIBILITY -----	
✓ TECHNICAL FEASIBILITY -----	
✓ SOCIAL FEASIBILITY -----	
✓ SATURATION OVERVIEW -----	
□ SYSTEM DESIGN	14
✓ INTRODUCTION OF PLAYER PROJECT -----	
✓ PART OF FUNCTION DESIGN -----	
✓ DATA STORAGE -----	
• FLOWCHART -----	15
• MUSIC PLAYER MP3 UI -----	16
• CONCLUSION -----	18
✓ FUTURESCOPE-----	19
• REFERENCES -----	24

INTRODUCTION

Android is open source code mobile phone operating system that comes out by Google. Music player in this project is application software based on Google Android. Music is one of the best ways to relieve pressure in stressful modern society life. The purpose of this project is to develop a player which can play the mainstream file format. To browse and query the storage space as well as operation of playing can be realised. Meanwhile, this software can play, pause and select songs with latest button and next button according to sets requirement as well as set up songs.

Android smartphones comes with a default music player to play music. Then what is the requirement of an alternate music player? This may be because the default Android music player doesn't offer the rich feature, or it may not provide a satisfactory equalizer, or its user-interface may not be agreeable. Now a day, most of the Android devices include Google Play Music, which has common functionality and cloud streaming.

BUILD DEVELOPING ENVIRONMENT OF ANDROID

The application of android need to run based on Android environment. The following is the configuration requirement and installation steps of Android development environment:

The required software of the developing environment

- Operation system: Windows 11, Linux
- Software Android SDK(Software Development Kit)、 ADT(Android Development Tool)
- JDK: Java Runtime Environment virtual machine Java Development Kit(JDK)

Installation steps of the developing environment

- Step 1: install the Java virtual machine JDK version - 7
- Step 2: install the Android SDK: first download the Android SDK
- Download address: <http://developer-android-com/sdk/index-html>
- Input SDK tools path in the SDK location: D: \ android \ software \ android SDK– Windows and click OK.
- The Android environment is set up successfully.

▪ Hardware Requirements to Run the APP

- This APP meets minimum hardware Requirements:
- >1 GHz Processor
- >512MB of RAM
- >50MB of Internal Storage

THE DESIGN PRINCIPLE OF ANDROID APPLICATION

Twice the result with half the effort will get if an overall study of the principles done before the design and follow them in the operation. The principle of software design mainly includes the following points:

(1) Reliability

The reliability of the software design must be determined. The reliability of the software system refers to the ability to avoid fault occurred in the process of system running, as well as the ability to remedy troubles once the fault occurs.

(2) Reusability

Look for commonness of similar codes, and come out new method abstractly and reasonably. Pay attention to the generic design.

(3) Understandability

The understandability of software not only require clear and readable document, but the simplified structure of software itself, which requires the designer possess keen insight and creativity, and know well about the design objects.

(4) Simple program

To keep the program simple and clear, good programmers can use simple program to solve complex problems.

(5) Testability

Testability means that the created system has a proper data collection to conduct a comprehensive test of the entire system.

(6) The Open-Closed Principal

Module is extensible but cannot be modified. That is to say, extension is open to the existing code in order to adapt to the new requirements. While modify is closed to the categories. Once the design is completed, the categories cannot be modified.

FUNCTION AND STRUCTURE DESIGN OF ANDROID SYSTEM

This system adopts the modularized program design, and system function is correspondingly divided into function modules, the main modules include:

(1) UI function module design of mobile terminal:

The index screen, play screen, music adding page, file management page are realized.

(2) Backstage function module design of mobile terminal:

The specific function, music file data storage function and other function are implemented.

REQUIREMENT ANALYSIS OF SYSTEM

The feasibility analysis:

This section verified that it is feasible to add music player on the Android system from the aspects of economic, technical and social feasibility.

Economic feasibility:

To design Android mobile phone music player as long as a computer has the Android development and the application development of Android is free. In addition, mobile phone music player is basic needs for public. The information that which functions are necessary form all the consumers , which functions are needed for some people, and which features are seldom to use is easy to understand. And a lot of research is eliminated, thus saved the spending. Therefore, the whole process of development doesn't need to spend any money that is economic feasibility.

Technical feasibility:

To design a music player which meets the basic requirements, a deep understand of JAVA language, the Android system architecture, application of framework and other technical knowledge are needed.(framework is the core of the application, and rules that all the programmers participating in the development must abide by). Based on the related technology information and resources for Android on the market, and equipped with technical personnel of technology and the spirit of willing to learn, the technology is feasible.

Social Feasibility

With the rapid development of the mobile phone market, all kinds of audio and video resources are widely circulated on the Internet. These resources seem ordinary, but have gradually become an indispensable part of people life, which derived the development of all kinds of mobile phone player. But a lot of players devoted to fancy appearance, strong function causing a lot of wasted resources to the user's mobile phone and bringing a lot of inconvenience to the user as multitasking operation is needed. Some functions are useless to ordinary people. Powerful player is a good thing, but a lot of functions are actually useless for most users. Aimed at these problems, developing multiplied audio player which owns the features of simplified functions, common play function, meeting the needs of most users, less required memory and high quality of playing music, maximizes the optimization in performance.

Saturation Overview:

This section describes requirements of the system based on basic control functions of players, and system setup function of the player according to research results of the project demand.

According to the research results of project demand, the basic requirements of project system and its function structure are presented. And describe the demand of the system through the different angles. The project is divided into the following parts by using diagram: the basic control functions of the player, the playlist management function of the player and system setting function of the player. The player interface requires rational layout, comfortable color, friendly control buttons and concise and beautiful images. According to the Android system requires, the non-response time is 5 seconds.

The following is requirements in the music player development application:

Application response time shall not exceed 5 seconds in music playing.

Application response time shall not exceed 5 seconds as the music is suspended.

Application response time shall not exceed 5 seconds as the music is stopped. Application response time shall not exceed 5 seconds as Move Next/Move Previous music. Application response time shall not exceed 5 seconds as system listing is required.

System design

The App Starting module of the player in the project is introduced, as well as the Android engineering program structure, etc.

Any AppStarting needs AndroidManifest. XML file to start. And any new project content will automatically generate an AndroidManifest. XML file. Configuration files are the core of the whole program, which contains the Android SDK version, and the default Activity in program running. The systems will automatically looking for a logo in AndroidManifest to react the corresponding operation when any component of the program triggers events.

To define the system, the first thing is launching the Activity: Android Activity. There are properties such as action and category in < intent - filter >. Most of these are the default values of the system. Setting the action and category realize the switch between different Activities. When any components of the program is about to use, declaration must be in the Android Manifest. Xml files. To be clear that authorities must be illustrated as the statement of provider. Each component has a lot of attributes; the program will define different attributes according to different needs.

The basic structure content of Android project includes: the SRC (source code), gen (constant that Android system automatically generates), res (resource file), and the layout of file and pictures in the main storage program interface.

Part of the function design:

The main play interface design.

Convenience and practical should be fully considered in the design of the main interface. Every Android interface is a visual interface, which has its unique layout configuration files. We can configure various layout and resources files according to the requirements, such as images, text and color reference, which can form different visual interface and glaring effect.

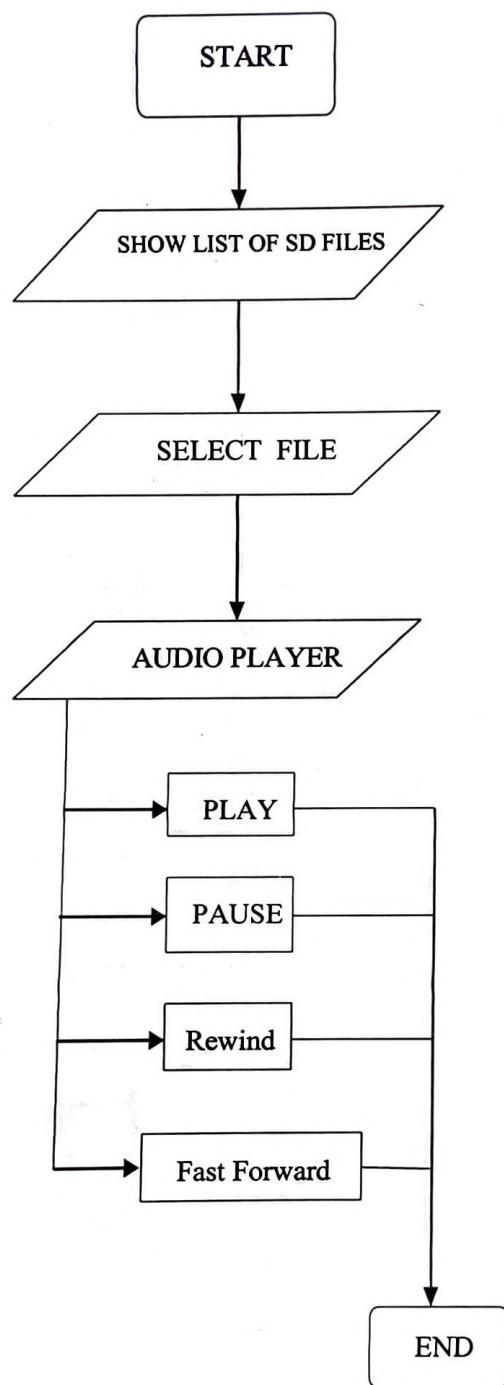
Interface design of adding songs.

There are no corresponding songs for the first time login entering the program; users need to add songs to play. Therefore, you need to enter the adding songs' interface. The empty playlist needs to add songs which can choose from the SD card to add.

Function design of play and Next/Move Previous music

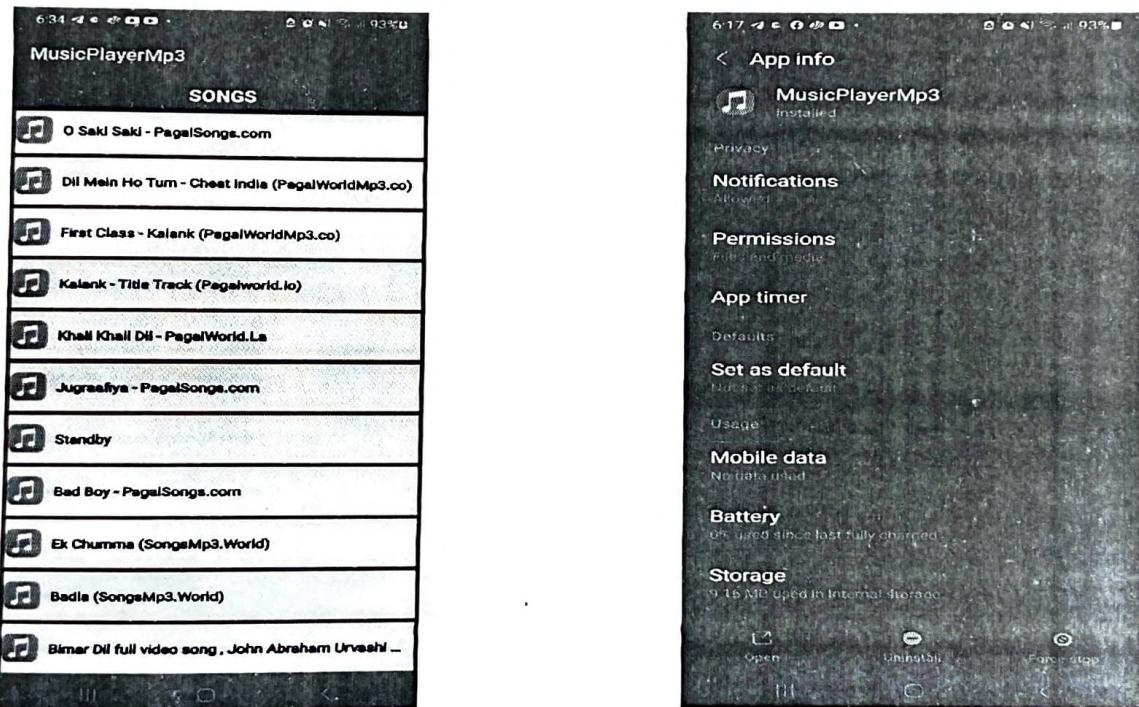
- i. When need to use the player to play appropriate music, click the play button to realize the function.
- ii. When need to use the player to switch to the previous song, click on "Move Previous music" button to realize the function.
- iii. When need to use the player to play the next song, click on "the next music" button to realize the function.

FLOWCHART

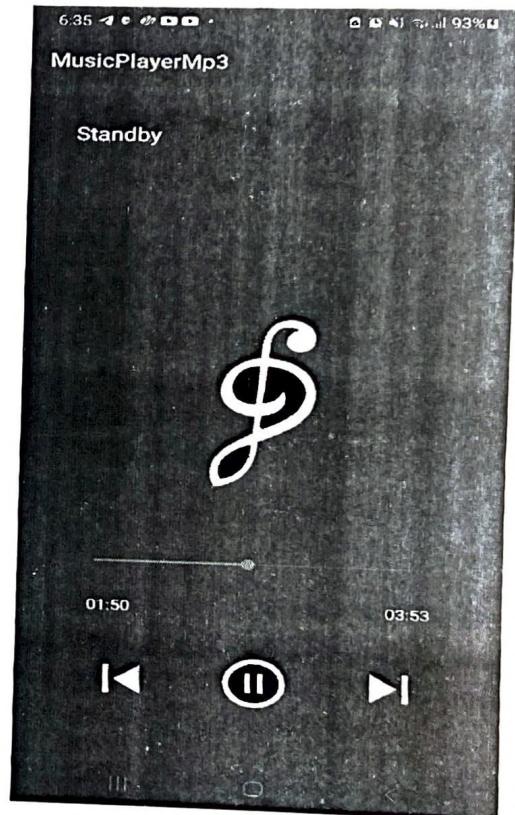


Music Player Mp3 UI (User Interface)

App info
&
Storage Usage



Storage Permissions are Required to Read External SD card
for
Music files



**Main APP Layout with
List view for Music selection**

CONCLUSION

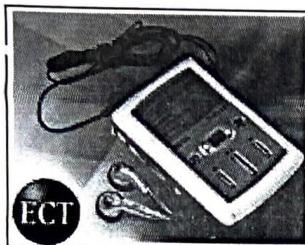
Through the development of music player on Android platform, we get a clear understanding of overall process of the system. The core part of the music player is mainly composed of main interface, file browsing and song listing, Grasping the development of the music player has had the preliminary scale small features.

Music player system realized the basic function of player: play, pause, rewind and fastforward a, volume adjustment is performed through the Android System Itself, play mode, song search, seekbar, This development implicated the popular mobile terminal development technology. This is the combination management of Java language in the open source mobile platform based on Linux system configuration file. The system realized the music player programming.

This design of music player based on Android system requires elaborate design of the music player framework, by adopting ANDROID STUDIO 3.1.2 + Java language as technical support of this system, with the Android plug-in tools, and combination of Latest Android SDK version lead to the comprehensive and smoothly design and development of the mobile terminal

FUTURE SCOPES

Although technology moves at a fast clip, the leaps and bounds in the evolution of digital music players to date have been especially speedy.



Only a few years ago, a digital music aficionado's choices consisted mainly of 128-MB flash players that held only a handful of songs. Now, 40-GB devices double as portable hard drives and hold up to 10,000 songs. Not surprisingly, this move toward more technological power has been embraced by consumers, and adoption of digital music devices is growing steadily.

With the music-player revolution moving ahead at full speed, what's next for this technology?

Live Battery

One aspect of digital music players that likely will keep changing is their technological components. Hyder Rabbani, president and COO of music-player manufacturer Archos, told the E-Commerce Times that the near future will bring better versions of everything that is on the market today.

"In the same way that hard drive technology keeps advancing, digital player technology will continue to be more refined," Rabbani said.

"Don't expect any dramatic changes, but rather, steady changes for the better that are done at a fairly fast pace."

In particular, the trend toward miniaturization should make for an interesting next couple of years. Apple has just unveiled the iPod mini, which holds 1,000 songs and is about the size of a business card. Rabbani noted that competitors are likely to move in the “smaller is better” direction as well.

One benefit of making smaller devices is that battery life can be extended, according to Rabbani.

“If you go from a 1.8-inch drive to a 1-inch drive,” he said, “you could save 60 to 70 percent of your power consumption based on form factor alone.”

Music Plus

In addition to their shrinking form factors and increasing capacity, digital music players have evolved to include more features, memory and music-format options. Jonathan Sasse, president of iRiver, told the E-Commerce Times that consumers, not developers, will continue to drive this type of innovation.

In this vein, one trend that could develop is further consolidation, making music players capable of doing more than delivering tunes.

“We see portable entertainment being a category that will emerge throughout 2004 and increase to include multiple music formats [and] multiple video formats, along with integrating photos,” Sasse noted.

The reason why tomorrow’s devices will have such power is that players have more and more storage capacity. With such a luxurious amount of space, consumers likely will seek to fill it with more than Britney and Outkast.

Content Is King

Another potential addition to digital players is an increase in the kind of content such players have excelled with already: music.

"What you're going to see soon are players that come with preloaded content," Rick Grienzewic, Gateway's director of digital audio, told the E-Commerce Times. Music and other audio files, such as audiobooks, can be preloaded onto a device via a subscription service. He added, "New digital rights management will allow you to do that, and I think it's going to be big."

Grienzewic said he thinks offering preloaded content with few restrictions, as with the iTunes model, would be cost prohibitive. However, Rabbani noted that it could be done as long as usage provisions were put in place. For example, content loaded onto a player could be prohibited from being downloaded to another device, preventing the music from hitting illegal file-swapping sites.

Already, the kinks are being worked out for this evolution, Rabbani said. Archos is looking into developing a way to include preloaded content that can be selected by a consumer from a Web site.

"There are many ways to use this kind of content and develop it," he said. "We're seeing it as the advent of a new business model for the industry."

Although music players seem to have a bright future, with more storage capacity — and probably higher price tags — Sasse noted that the range of devices now available indicates companies still are working to serve consumers who seek lower-end, cheaper alternatives.

The next few years should see a profusion of music players at allcost levels and capacities, he said.

“Digital music players have evolved to fit different lifestyles,” Sasse added. “128-MB music players are still very popular and serve a specific market need.”

Indeed, Rio vice president Kevin Brangan noted that the current marketplace is about 80 percent flash players and 20 percent hard drive players — and he does not expect that ratio to change in the near future. Within both the flash and hard drive realms, there will be many more options in coming years as more developers enter the industry.

“Having so much choice is ideal for the consumer,” Brangan told the E-Commerce Times. “There will be more players being launched, and that will lead to even more choices. It’s going to become pretty exciting from here.”

OTHER REQUIREMENTS

- Maintain ability

The design will be updated based on any changes, which are done during coding stage to maintain proper trace ability.

- Availability

Available for minimum API level 22 (Android Lollipop 5.1)

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<https://techvidvan.com/tutorials/android-music-player-app-project/>

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2. Training notes:-

https://play.google.com/store/apps/details?id=com.binaryguilt.completemusicreadingtrainer&hl=en_IN&gl=US

<https://www.geeksforgeeks.org/how-to-build-a-simple-music-player-app-using-android-studio/>

<https://www.sitepoint.com/a-step-by-step-guide-to-building-an-android-audio-player-app/>

3. Discussion among the group and with guide.

4. Some requirements are gathered through various books from library

<https://www.oreilly.com/library/view/making-musical-apps/9781449331375/>

5. By the guidance of our respected Teachers.