MINI PROJECT

**(2022-23)**

# "Verse Music Site"

Project Report


**Institute of Engineering & Technology**

**Submitted By-**

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# Declaration

I/We hereby declare that the work which is being presented in the Bachelor of Technology. Project **"Verse Music site"**, in partial fulfilment of the requirements for the award of the ***Bachelor of Technology*** in Computer Science an Engineering and submitted to the Department of computer Engineering and Applications of GLA University, Mathura, is an authentic record of my/our own work carried under the supervision of **Mr. Bhanu Kapoor, Technical Trainer, GLA University.**

The contents of this project report, in full or in parts, have not been submitted to any other institute or University for the award of any degree.

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# Certificate

This is to certify that the project entitled “Verse Music Site”, carried out in Mini-Project- II, is a bonafide work by Abhay Pratap Singh, Divyanshu Singh, Aryan Singh, Krishna Gautam and is submitted in partial fulfilment of the requirements for the award of the degree of Bachelor of Technology (Computer Science & Engineering).

**Signature of Supervisor:**

**Name of the Supervisor:** Mr. Bhanu Kapoor

**Date:** April 25 , 2023

# Training Certificates

## Abhay Pratap Singh

GLA UNIVERSITY MATHURA

Accredited with A Grade by NAAC

*Job Oriented Value-Added Course*

on

**Hybrid Mobile App Development With Flutter (Google)**

Certificate of Participation

This certificate is awarded to **ABHAY PRATAP SINGH**, Roll No. **201500008** from **GLA University, Mathura**, for successfully completing the *Job Oriented Value-Added Course* on **Hybrid Mobile App Development With Flutter (Google)** as **Gold Medalist**, organized by Department of Computer Engineering & Applications (CEA) GLA University, Mathura (U.P.), India from **01st June, 2022** to **15th July, 2022**.

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# ACKNOWLEDGEMENT

We would like to express my gratitude towards Mr. Bhanu Kapoor for guiding us throughout the project. We also feel thankful and express my kind gratitude towards all our teachers for allowing me to conduct Verse Music Site project. The mentioned project was done under the supervision of Mr. Bhanu Kapoor.

He has been helping us since Day 1 in this project. He provided us with the roadmap, the basic guidelines explaining on how to work on the project. He has been conducting regular meeting to check the progress of the project and providing us with the resources related to the project. Without his help, we wouldn't have been able to complete this project.

We feel thankful to the college staff for giving me such a big opportunity. I believe We will enroll in more such events in the coming future.

Thanking You

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# ABSTRACT

An online music website is a digital platform that provides music-related services and content to users through the internet. The website can offer a wide range of features such as music streaming, music sales, artist profiles, concert information, music news, and more.

The objective of an online music website is to offer an engaging and personalized experience for users, while achieving the specific goals of the website, such as promoting artists, selling music, or providing music-related content.

Users can access the online music website from anywhere with an internet connection, using their computer, smartphone, or tablet. Many music websites offer social features that allow users to connect with other music fans, share playlists, and discover new music through recommendations from friends and influencers.

Online music websites have become an essential tool for music lovers to discover new music, connect with their favorite artists, and stay up-to-date with the latest trends and news in the music industry. With the rise of digital music consumption, online music websites play an increasingly important role in the modern music industry.

Overall, an online music website can provide a valuable and engaging experience for users while achieving the specific goals of the website, such as promoting artists, selling music, or providing music-related content.

# CONTENT

- Testing Strategy
- White Box Testing
- Black Box Testing

Chapter 7: Conclusion

- Conclusion
- Future Aspect

# Chapter: 1

# Introduction

## Overview

A music website is a digital platform dedicated to providing music-related content and services to users. The website can offer a wide range of features such as music streaming, music sales, artist profiles, concert information, music news, and more.

The objective of a music website is to offer an engaging and personalized experience for users, while achieving specific goals of the website, such as promoting artists, selling music, or providing music-related content. Music websites can serve many purposes, including providing a platform for music discovery, promoting and supporting independent artists, selling and distributing music, and providing music-related content and resources.

## Background Study

When conducting a background study for a music website, there are several key areas to consider:

1. Music industry trends: It's important to stay up-to-date with the latest trends and developments in the music industry, such as changes in consumer behaviour, emerging technologies, and new business models.
2. User behaviour: Understanding user behaviour is critical to the success of a music website. Conducting research on how users discover, consume, and interact with music online can provide valuable insights into how to design and optimize the website.
3. Competitor analysis: Studying the competition can help identify gaps in the market, opportunities for differentiation, and best practices to emulate or improve upon.
4. Technical considerations: Building and maintaining a music website requires technical expertise in areas such as web development, database management, and server administration. Conducting a technical feasibility study can help ensure the website is scalable, secure, and performs well under different usage scenarios.
5. Intellectual property rights: Music websites must navigate complex intellectual property laws and licensing agreements. Conducting a legal and regulatory analysis can help ensure the website is compliant with relevant laws and regulations.
6. Business considerations: Developing and operating a music website requires a sound business strategy, including revenue models, marketing plans, and partnerships. Conducting a business feasibility study can help assess the viability and potential profitability of the website.

By conducting a comprehensive background study across these areas, music website developers can gain a better understanding of the market, users, competition, technical requirements, legal considerations, and business opportunities and challenges. This can help ensure the website is designed, developed, and operated in a way that meets user needs, complies with relevant laws and regulations, and achieves its objectives.

## Project Planning

When planning a music website project, it's important to consider the following steps:

1. Define the project scope and objectives: Clearly define the scope of the project, including the features, functionalities, and content to be included. Identify the objectives of the website, such as promoting artists, selling music, or providing music-related content.
2. Conduct user research: conduct research to understand the target audience, their behaviour, preferences, and needs related to music. This can help guide the design and development of the website to meet user needs and preferences.
3. Develop a content strategy: Develop a content strategy that aligns with the objectives of the website and the needs and interests of the target audience. This can include creating or curating content such as music reviews, artist profiles, concert information, and playlists.
4. Design the user interface and user experience: Create wireframes and mockups to design the user interface and user experience of the website. This should be based on user research and best practises for web design.
5. Develop the website: Develop the website using appropriate technologies such as HTML, CSS, JavaScript, backend frameworks like Node.js, and databases like MongoDB. This involves implementing the design, functionality, and content identified in previous steps.
6. Test the website: Test the website for functionality, usability, and compatibility across different devices and browsers. This includes testing features such as music streaming, music sales, and social features.
7. Launch and promote the website: Once the website is tested and ready, launch it and promote it to the target audience through different channels such as social media, email marketing, and search engine optimisation.
8. Maintain and update the website: Maintain and update the website regularly with fresh content, new features, and bug fixes. This ensures the website remains relevant, engaging, and functional.

By following these steps, music website developers can plan and execute a successful project that meets user needs, achieves the website's objectives, and delivers a positive user experience.

## Purposes

The purpose of a music website can vary depending on the specific goals and objectives of the project. However, some common purposes of a music website can include:

1. Promoting artists and their music: A music website can provide a platform for artists to promote their music to a wider audience. This can include features such as artist profiles, music streaming, music sales, and concert information.
2. Providing music-related content: A music website can provide a variety of music-related content such as news, reviews, interviews, playlists, and tutorials. This can help engage and inform music enthusiasts and create a sense of community around the website.
3. Building a music-focused community: A music website can provide a space for music enthusiasts to connect, share their music interests and opinions, and discover new music. This can help build a community of like-minded individuals around the website.
4. Generating revenue: A music website can generate revenue through various means, such as music sales, advertising, sponsorships, and premium content. This can help sustain the website and support its continued growth and development.

Overall, the purpose of a music website is to provide a platform for music-related content and activities that meet the needs and interests of the target audience while achieving the objectives of the website. By fulfilling these purposes, a music website can create value for both the users and the website owners, ultimately leading to the success of the project.

# Chapter: 2

## System Design

System design for a music website typically involves designing the architecture and components that will enable the website to function efficiently and effectively. Here are some of the key components that would typically be included in the system design for a music website:

1. Front-end technology: The front-end of the website is responsible for presenting the website to users and enabling them to interact with it. This involves technologies such as HTML, CSS, and JavaScript, as well as front-end frameworks such as React or Angular.
2. Back-end technology: The back-end of the website is responsible for handling the data and logic of the website. This involves technologies such as Node.js, PHP, or Ruby on Rails, as well as back-end databases such as MongoDB or MySQL.
3. Server infrastructure: The server infrastructure refers to the hardware and software that hosts the website, including the web server, database server, and other components necessary to ensure the website runs smoothly and is accessible to users.
4. Music streaming technology: If the website offers music streaming, it will need to include technology to handle the streaming of audio files. This may involve integrating with third-party services such as Spotify or SoundCloud.
5. E-commerce functionality: If the website offers music sales, it will need to include e-commerce functionality to handle the purchase and delivery of music files or physical music products.
6. Content management system: A content management system (CMS) may be used to manage the content on the website, such as artist profiles, news, reviews, and playlists.
7. User authentication and authorization: The website will need to include user authentication and authorization functionality to enable users to create accounts, log in, and access restricted areas of the website.
8. Analytics and reporting: Analytics and reporting tools can be integrated into the website to track user behaviour and gather data on website performance, which can inform future improvements and optimisations.

By designing a system that includes these components, the music website can function effectively and efficiently, providing users with a positive experience and meeting the website's objectives.

# Chapter: 3

## Hardware and Software Requirements

### Hardware Requirement

- Processor : Minimum Dual Core Processor
- Operating System : Windows
- Ram : Minimum 512MB
- Hardware device : Mobile or Computer
- Storage : Minimum 4GB
- Display : Any Display

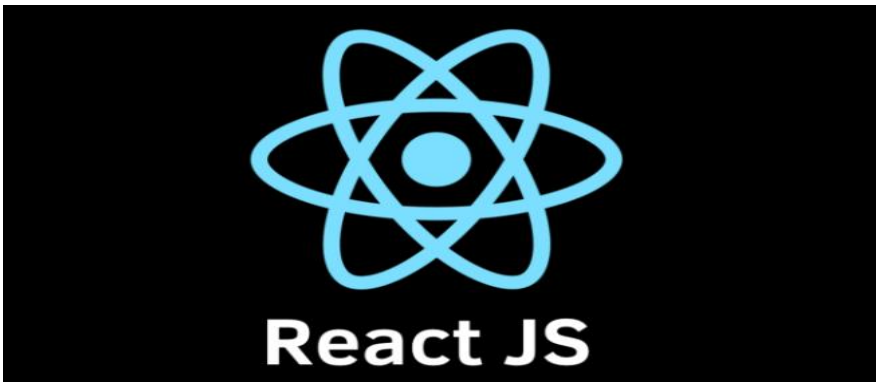
### Software Requirement

- Technology implemented : React JS , Node JS , Express JS and MongoDB
- Language Used : HTML , CSS and JavaScript
- Database : Firebase
- User Interface Design : NIL

# Chapter: 4

## Implementing Tools for the Project

### React JS




ReactJS is an open-source JavaScript library that is widely used for building user interfaces. It was developed by Facebook and is currently maintained by Facebook, Instagram, and a community of developers. ReactJS allows developers to build reusable UI components, which makes it easier to maintain and scale applications.

### Node JS


Node.js is an open-source, cross-platform, server-side runtime environment built on Chrome's V8 JavaScript engine. It allows developers to build scalable, high-performance, and networked applications using JavaScript, a language traditionally associated with front-end web development.

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- **Express JS**


Express.js, or simply Express, is a back-end web application framework for building RESTful APIs with Node.js, released as free and open-source software under the MIT Licence. It is designed for building web applications and APIs. It has been called the de facto standard server framework for Node.js.

- **Google Firebase**

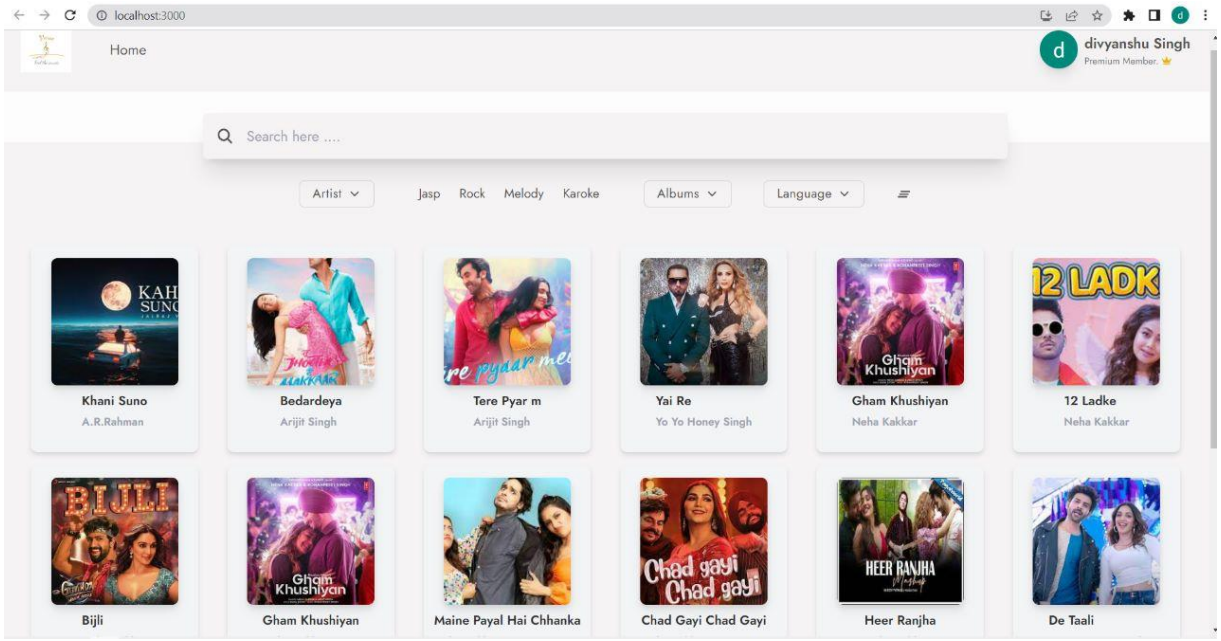

Firebase is a mobile platform that helps you quickly develop high-quality apps and grow your user base. Firebase is made up of complementary features that you can mix and match to fit your needs, with Google Analytics for Firebase at its core.

Firebase's first product was the Firebase Realtime Database, an API that synchronises application data across iOS, Android, and Web devices and stores it on Firebase's cloud. The product assists software developers in building real-time, collaborative applications.

# Chapter: 5

## Project View Model

**Home Screen:**



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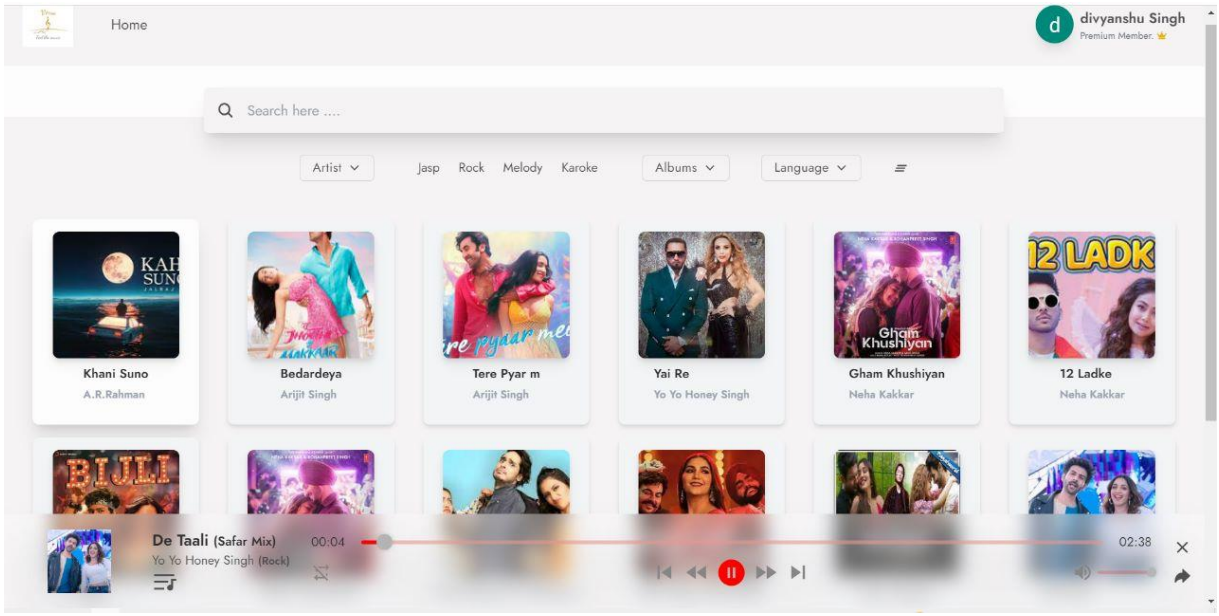
**Player:**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Arijit Singh
Yai Re
Yo Yo Honey Singh
Gham Khushiyan
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Neha Kakkar
De Taali (Safar Mix)
Yo Yo Honey Singh (Rock)
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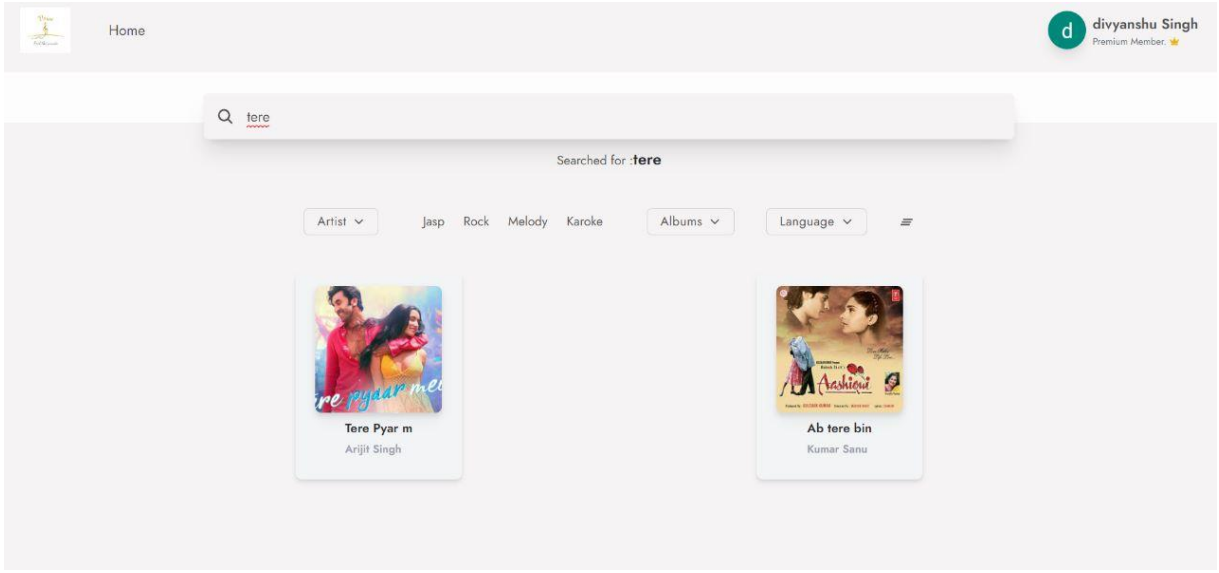
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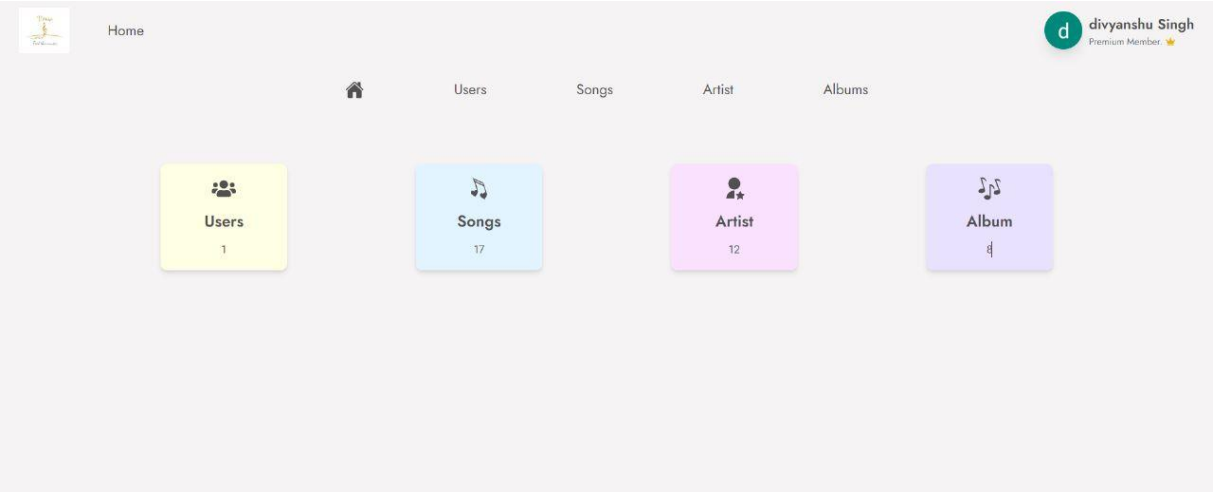
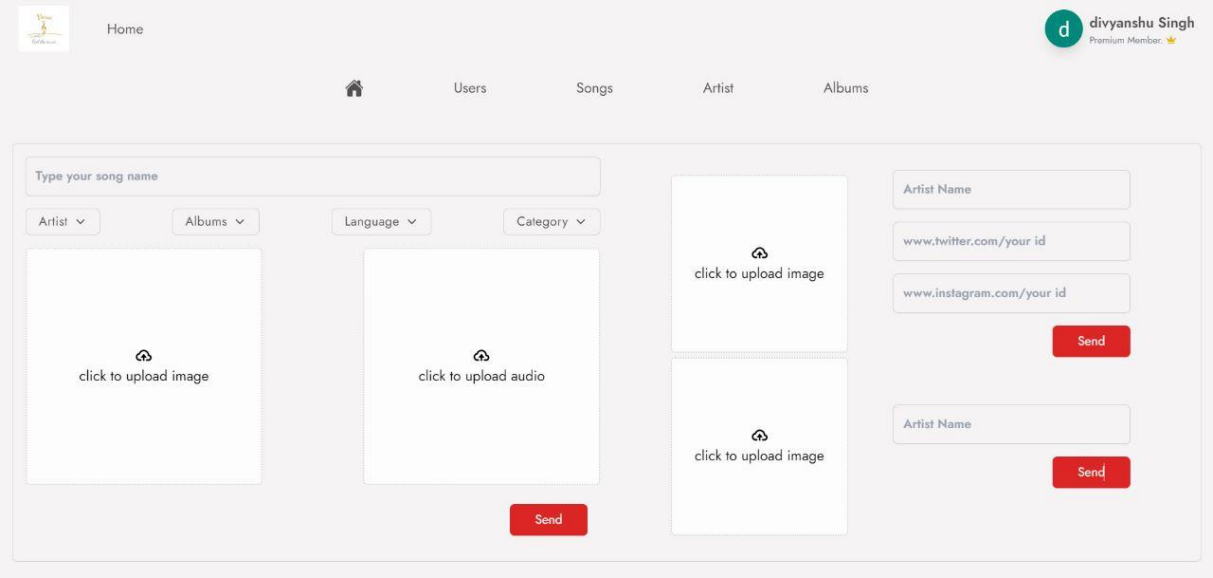
## Admin Dashboard:



## Upload song ,playlist and singer:



# Chapter: 6

## Software Testing

Software testing is the process of evaluating a software program with the aim of finding out whether it meets the specified requirements set out at the planning stage. In other words, software testing ensures that your software does what you want it to do and doesn't do anything you don't want it to do.

### O Why software testing is needed?

Ultimately, the purpose of software testing is to help ensure that a software product operates in line with both business, technical and user requirements. Specifically, its objectives include:
**Verifying** that the software conforms to the technical specifications set out at the planning stage. This usually involves checking documents, code and designs to ensure the software has been built in line with requirements.
**Validating** that the software program meets user requirements and has the potential to achieve the desired results for the business.
**Finding and preventing defects** that may cause the software to crash or fail when going live or that may impede the functionality or reliability of the application.
**Gathering information** about the software, including any defects or bugs it has. This data can be used to prevent and fix future issues and to give stakeholders more insight into the software and its development and performance.
**Ensuring compatibility** with different operating systems and device types.
**Ensuring optimal user experience** through rigorous checks to find out how easy the software is to use and whether it delivers an enjoyable experience.

### O Testing Strategy

There are types of testing that we implement. They are as follows:

While deciding on the focus of testing activities, study project priorities. For example, for an online system, pay more attention to response time. Spend more time on the features used frequently. Decide on the effort required for testing based on the usage of the system. If the system is to be used by a large number of users, evaluate the impact on users due to a system failure before deciding on the effort.

This create two problem

- Time delay between the cause and appearance of the problem.
- The effect of the system errors on files and records within the system.
-

The purpose of the system testing is to consider all the likely variations to which it will be suggested and push the systems to limits. The testing process focuses on the logical intervals of the software ensuring that all statements have been tested and on functional interval is conducting tests to uncover

errors and ensure that defined input will produce actual results that agree with the required results. Program level testing, modules level testing integrated and carried out.

There are two major types of testing they are:

- White Box Testing
- Black Box Testing

## O White Box Testing

White box sometimes called “Glass box testing” is a test case design uses the control structure of the procedural design to drive test case. Using white box testing methods, the following tests where made on the system

a) All independent paths within a module have been exercised once. In our system, ensuring that case was selected and executed checked all case structures. The bugs that were prevailing in some part of the code where fixed
b) All logical decisions were checked for the truth and falsity of the values.

## O Black Box Testing

Black box testing focuses on the functional requirements of the software. This is black box testing enables the software engineering to derive a set of input conditions that will fully exercise all functional requirements for a program. Black box testing is not an alternative to white box testing rather it is complementary approach that is likely to uncover a different class of errors that white box methods like.

- Interface errors.
- Performance in data structure.
- Performance errors.
- Initializing and termination errors.

# Chapter: 7

# Conclusion

## Conclusion

In conclusion, a music website can be an excellent platform for promoting music, providing music-related content, building a music-focused community, and generating revenue. To create a successful music website, careful planning and consideration of various aspects such as design, functionality, and technology are crucial. A well-designed music website can provide a seamless user experience, promote engagement and loyalty, and ultimately lead to the success of the project. By fulfilling its purpose of providing a platform for music-related content and activities that meet the needs and interests of the target audience, a music website can become a valuable resource for music enthusiasts and an excellent business opportunity for website owners.

## Future Aspect

The future of a music website is dependent on a range of factors, including advancements in technology, changing consumer preferences, and industry trends. Here are some potential future aspects of a music website:

1. Personalization: As technology advances, music websites may become more personalised for individual users. This could involve using machine learning and AI to recommend music based on a user's listening history and preferences, creating tailored playlists, and delivering personalised music-related content.
2. Integration with emerging technologies: Emerging technologies such as virtual and augmented reality, voice assistants, and wearables could be integrated into music websites to create new and immersive experiences for users.
3. Emphasis on social interaction: With the increasing importance of social media and social interaction, music websites may place more emphasis on creating a sense of community among users with features such as user-generated content, forums, and chat rooms.
4. Expansion of revenue streams: Music websites may expand their revenue streams beyond traditional sources such as music sales and advertising to include emerging opportunities such as live streaming, virtual concerts, and merchandise sales.
5. Integration with other media: With the convergence of different media forms, music websites may integrate with other forms of media, such as video and gaming, to create more comprehensive entertainment experiences.

6. Sustainability: The music industry is increasingly concerned with sustainability and reducing its carbon footprint. Music websites may adopt sustainable practises, such as using renewable energy sources, minimising packaging waste, and offsetting carbon emissions.

Overall, the future of a music website is likely to be influenced by technological advancements and changing consumer preferences, with an emphasis on personalization, social interaction, and the expansion of revenue streams. By adapting to these trends and providing users with innovative and engaging experiences, music websites can remain relevant and successful in the years to come.