VIRTUAL MUSEUM ANDROID APPLICATION

A PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

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INTERNAL EXAMINER

EXTERNAL EXAMINER

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ABSTRACT

The Virtual Museum Android App is a mobile application designed to provide an immersive museum experience to users. Users can explore the virtual museum by navigating through different galleries and exhibits, interacting with objects, and learning about their history and significance. The app also includes audio and visual guides, as well as educational resources, to enhance the user's learning experience. Overall, the Virtual Museum Android App provides an engaging and educational way for users. An abstract for a virtual museum Android app would describe the key features and functionality of the app. The virtual museum app would aim to provide an immersive experience to users, allowing them to explore and learn about various exhibits and artifacts from different eras and cultures. The app would use graphical modeling and augmented reality technology to create a realistic and interactive environment for users to explore. The app would also include multimedia content such as videos, audio guides, and interactive quizzes to enhance the learning experience. The app would be designed to be user-friendly and accessible to a wide range of users, including students, researchers, and casual museum-goers. Overall, the virtual museum Android app would aim to provide a unique and engaging way for users to experience history and culture from the comfort of their own devices.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

HTML	Hypertext Markup Language
CSS	Cascading Style Sheet
JS	JavaScript
SQL	Structured Query Language
VR	Virtual Reality
AR	Augumented Reality
DFD	Data Flow Diagram
UML	Unified Modeling Language
SDK	Software Development Kit
PyPI	Python package Index
OpenCV	Open Source Computer Vision Library
GUI	Graphical User Interface
VBA	Visual Basic for Applications
RDBMS	Relational Database Management System

CHAPTER-1
INTRODUCTION

As you enter our virtual museum, you'll see that we've curated an extensive collection of exhibits and artifacts from different eras and parts of the world. You can browse through our galleries at your own pace and learn about the objects on display through detailed descriptions, images, and videos. Our exhibits are designed to be interactive, engaging, and informative, giving you a deeper understanding of the history, art, and culture of our world. One of the advantages of our virtual museum is that you can explore our exhibits from anywhere in the world, at any time. You don't need to book a ticket, wait in line, or travel to a physical location. Our museum is always open, and you can access it with just a few clicks. Our collections cover a wide range of topics and themes, from the ancient world to contemporary art. You can learn about the history of ancient civilizations, such as Egypt, Greece, and Rome, and see their artifacts up close. You can also discover the artistic movements that shaped our world, such as Impressionism, Modernism, and Surrealism. We have collections of paintings, sculptures, and installations from artists around the world. Our science exhibits feature groundbreaking discoveries and inventions that have changed the course of history. You can explore the universe, learn about the human body, and see the latest advances in technology and engineering. As you browse our exhibits, you'll notice that we've included interactive elements to enhance your experience. You can zoom in on objects, rotate them, and view them from different angles. You can also participate in quizzes, games, and activities that test your knowledge and make learning fun. We hope that our virtual museum will inspire you to explore and learn about the world around you. We believe that museums play an essential role in preserving and

sharing our collective heritage, and we're committed to making that heritage accessible to everyone. So come on in and explore our exhibits. We're sure you'll discover something new and fascinating.

CHAPTER-2

OVERVIEW

2.1 LITERATURE REVIEW

[1] This article discusses how the grounded theory method is applied in a qualitative research. Qualitative research using grounded theory method starts from the data to achieve a theory, it does not begin with theory nor test a theory, therefore a grounded theory research requires numerous well-planned and systematic steps or procedures. Qualitative research procedure using the grounded theory method consists of several steps: 1) problem formulation stage, theoretical overview usage stage (if necessary), data collection and sampling stage, data analysis stage, and conclusion and report writing stage. Nevertheless, those five stages of grounded theory research occur simultaneously. Researcher observes, collects, and organizes data and constructs theory from data at the same time. One important technique in grounded theory research is constant (fixed) comparison process in which every data is compared to all other data one by one. Data can be collected through interviews, observation, recording, or combination of these methods. Quality of grounded theory research is largely determined on a well, correct, and disciplined execution of those steps.

[2] This paper presents a methodology, based on user studies, for the comparative evaluation of different design alternatives related to the user interaction with VM systems. The methodology has been validated by means of a testbed related to a VM system hosted at the “Museum of the Brattain’s and the Sea” of Cetraro (Italy). The results of the user study demonstrate that this methodology can be effectively adopted in the development process of VM systems to optimize its outcomes in terms of usability and potential for entertainment and education.

[3] The increasing number of Mainland Chinese immigrant children with difficulties in Hong Kong schools mandates understanding of the complex interactions between cultural-linguistic differences and disabilities.This case study adopted narrative inquiryto probe deep into participants' lived experiences to reveal that the special education teacher was primarily concerned about the student participant's difficulty associated with his disabilities, totally unaware of the impact of her limited proficiency in the child's first language. Researchers called for government policies to integrate special and multicultural teacher education.

[4] Advances in network infrastructure and computing technology have made 3D virtual environment increasingly popular and less costly. Many education institutions have shown interests in its application in teaching and learning activities. In this project, we evaluated how the 3D virtual environment can facilitate students in achieving learning outcomes. To provide students with learning experience in 3D virtual environments, we designed a task which requested students to identify some information security issues in a virtual office set-up in Second Life, the most widely adopted 3D virtual environment. In this paper, we report our experience in having students finish the task within the virtual environment in an introductory management information system course. Evaluation on the students' learning experience showed that 3D virtual environments could indeed facilitate students in achieving learning outcomes through constructivist learning. We suggest some recommendations in using 3D virtual environments as an educational platform.

[5] This article, a part of dissertation entitled Developing Basic English Grammar Teaching Material based on Interactive Multimedia at University Level, presents the results of a study conducted to find the model of Basic English Grammar teaching material based on interactive multimedia needed by the students. This empirical research employed both quantitative and qualitative analyses. Seventy eight students of English Department of Universities Nigeria Padang were involved. The students were required to articulate their need on a design of Basic English Grammar teaching material based on interactive multimedia. The data were collected through an open questionnaire. The first result is that Basic English Grammar teaching material based on interactive multimedia is very needed (with the score 3.1 out of 4). Second, the result indicates the organization of Basic English Grammar teaching material based on interactive multimedia.

2.2 SYSTEM ANALYSIS

2.2.1 EXISTING SYSTEM

There are several existing virtual museum Android apps available on the market that offer users a wide range of features and functionality. Some examples of these apps include:

1. **Google Arts & Culture** - This app allows users to explore art, history, and cultural exhibits from around the world. It includes virtual tours of famous museums, high-resolution images of artwork, and curated collections of exhibits based on themes such as women's history and Black history.
2. **Museum of London** - This app offers virtual tours of the Museum of London's exhibits, including 3D models of artifacts and interactive exhibits that allow users to learn about the history and culture of London.
3. **Smithsonian American Art Museum** - This app allows users to explore the Smithsonian American Art Museum's collection of artwork, including virtual tours of exhibits, high-resolution images of artwork, and audio guides.
4. **British Museum** - This app offers virtual tours of the British Museum's exhibits, including 3D models of artifacts and interactive exhibits that allow users to learn about the history and culture of different civilizations.
5. **Louvre Museum** - This app provides users with a virtual tour of the Louvre Museum in Paris, including 360-degree views of famous exhibits such as the Mona Lisa and the Winged Victory of Samothrace.

DISADVANTAGES

Overall, these existing virtual museum Android apps offer a range of features and functionality that allow users to explore and learn about history and culture from around the world.

2.2.2 PROPOSED SYSTEM

A proposed system for a virtual museum Android app could include thefollowing features and functionality:

- **3D Modeling and Augmented Reality:** The app could use 3D modeling and augmented reality technology to create a realistic and immersive environment for users to explore. This would allow users to interact with virtual exhibits and artifacts as if they were physically present in the museum.
- **Multimedia Content:** The app could include multimedia content such as videos, audio guides, and interactive quizzes to enhance the learning experience. This would allow users to learn about the history and culture of different exhibits in a fun and engaging way.
- **Search and Navigation:** The app could include a search and navigation feature that would allow users to easily find exhibits based on keywords or themes. This would make it easy for users to explore different exhibits and artifacts based on their interests.
- **Social Sharing:** The app could include a social sharing feature that would allow users to share their favorite exhibits and artifacts on social media platforms. This would help to promote the museum and increase its visibility.

Overall, the proposed system for a virtual museum Android app would aim to provide users with an immersive and engaging way to explore and learn about history and culture from around the world.

ADVANTAGES

- User Accounts: The app could allow users to create user accounts that would allow them to save their favorite exhibits and artifacts, create playlists, and receive personalized recommendations based on their interests.

2.3 SYSTEM IMPLEMENTATION

2.3.1MODULES

- **Home**
- **Museum**
- **History**
- **Media Content**
- **Navigation**
- **Search**
- **Share details**
- **Feedback**

2.3.2 MODULE DESCRIPTION

Home

Home page is to provide visitors with an engaging and user-friendly interface that showcases the museum's exhibits and programs and helps them navigate the app to find the information they need. Home page can be included in a museum Android app home page are:

Logo: The museum's logo can be prominently displayed at the top of the home page.

Navigation menu: A navigation menu can be included to help users easily access different sections of the app, such as exhibits, events, educational resources, and visitor information.

Featured exhibits: The home page can showcase some of the museum's most popular or newest exhibits, with images and descriptions.

Upcoming events: A section can be included to highlight upcoming events and programs, such as lectures, workshops, and special exhibitions.

Search function: A search function can be provided to allow users to easily find specific exhibits or information.

Social media links: Links to the museum's social media accounts can be included to encourage visitors to engage with the museum online.

Contact information: The home page can display the museum's contact information, such as address, phone number, and email, to allow visitors to easily get in touch.

Museum

The museum detail module is an important part of an Android app for a museum, as it allows visitors to engage more deeply with the exhibits and artifacts and learn more about their history and cultural significance. It can also help to create a more immersive and interactive experience for visitors, which can increase their enjoyment of the museum and encourage them to visit again in the future.

This module typically includes several elements:

Title: The exhibit's title is displayed at the top of the module, often in a large font to make it stand out.

Description: A detailed description of the exhibit or artifact is provided, which can include its history, cultural significance, and other relevant details. This description can be accompanied by images, videos, or audio files to enhance the visitor's experience.

Gallery: A gallery of images or videos can be included to show different views of the exhibit or artifact, or to provide additional information about related items.

Social sharing: Buttons to share information about the exhibit or artifact on social media can be included to help promote the museum and its exhibits.

Visitor information: Links to visitor information, such as hours, admission prices, and directions, can be included to help visitors plan their visit to the museum.

History

A history module can be a valuable addition to a museum app as it helps to provide visitors with a greater understanding of the museum's background and context, which can enhance their overall experience. By showcasing the museum's history in a visual and interactive way, visitors can gain a deeper appreciation for the museum's exhibits and the role they play in preserving and showcasing cultural heritage.

Media Content

Media content can be included to show different views of the exhibit or artifact, or to provide additional information about related items.

Navigation

Navigation in a museum app is an essential component that helps visitors find their way around the museum and locate the exhibits or areas they are interested in. Navigation features are important to include in a museum app as they help visitors to easily locate and explore the exhibits and areas of interest within the museum. This can help to enhance the visitor's overall experience, encourage them to stay longer, and make their visit more enjoyable and memorable.

Search

A search module is an important feature to include in a museum app as it helps visitors to easily locate exhibits and artifacts that match their interests. By providing visitors with relevant and accurate search results, the museum app can help visitors to maximize their time and ensure that they have a positive and engaging experience during their visit.

Share details

Sharing media in a museum app allows visitors to share their experience with others and promote the museum to a wider audience. Social media integration allows visitors to share photos, videos, and other multimedia content directly from the museum app to their social media accounts, such as Facebook, Twitter, and Instagram.

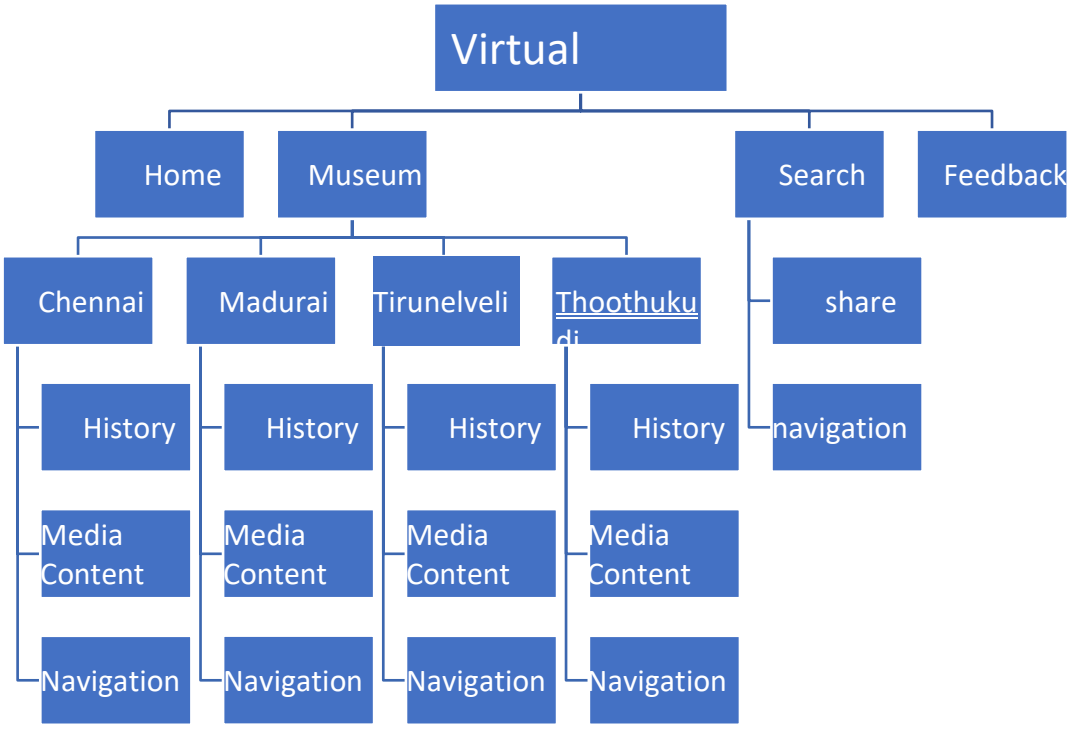
Feedback

Feedback is an important element of any museum app, as it allows visitors to provide their opinions and suggestions about their experience. Feedback forms can be included in the museum app, which allows visitors to provide feedback about their experience, including their likes and dislikes, suggestions for improvements, and comments on specific exhibits or artifacts.

2.4 SYSTEM DESIGN

2.4.1 ARCHITECTURE DESIGN

Architecture diagram shows the relationship between different components of system. This diagram is very important to understand the overall concept of system. Architecture diagram is a diagram of a system, in which the principal parts or functions are represented by blocks connected by lines that show the relationships of the blocks. This is typically used for a higher level, less detailed description aimed more at understanding the overall concepts and less at understanding the details of implementation.



2.4.2 DATA FLOW DIAGRAM

- The DFD is also called as bubble chart. It is a simple graphical formalism that can be used to represent a system in terms of input data to the system, various processing carried out on this data, and the output data is generated by this system.
- The dataflow diagram(DFD) is one of the most important modeling tools. It is used to model the system components. These components are the system process, the data used by the process, an external entity that interacts with the system and the information flows in the system.
- DFD show the information moves through the system and how it is modified by a series of transformations. It is a graphical technique that depicts information flow and the transformations that are applied as data moves from input to output.
- DFD is also known as bubble chart. ADFD may be used to represent a system at any level of abstraction. DFD may be partitioned into levels that represent increasing information flow and functional detail.

2.4.3 USER CARE DIAGRAM

A use case diagram in the Unified Modeling Language (UML) is a type of behavioral diagram defined by and created from a Use-case analysis. Its purpose is to present a graphical overview of the functionality provided by a system in terms of actors, their goals (represented as use cases), and any dependencies between those use cases. The main purpose of a use case diagram is to show what system functions are performed for which actor. Roles of the actors in the system can be depicted.

2.5 SOFTWARE DESCRIPTION

2.5.1 HARDWARE REQUIREMENTS

The minimum hardware requirements for implementing the project are

Processor	:	Intel Core i3 2330M
RAM	:	4 GB
Hard Disk Drive	:	500 GB
Compact Disk Drive	:	700 MB
Monitor	:	18.5” Color LED Monitor
Keyboard	:	108 keys

2.5.2 SOFTWARE REQUIREMENTS

Front-End	:	HTML, CSS, JS
Web Server	:	XAMPP
Framework	:	Bootstrap 5,Python Flask
Development tool	:	ECLIPSE IDE
Operating System	:	Windows 10

ANDROID

Android is an open-source mobile operating system developed by Google. It is designed primarily for mobile devices such as smartphones and tablets, but it can also be used on other devices such as smart TVs, wearables, and gaming consoles.

Android is based on the Linux kernel and uses a modified version of the Java programming language. It provides developers with a platform to create applications using a combination of Java and the Android SDK (Software Development Kit). Android applications are written using the Java programming language and run on the Dalvik virtual machine, which is specifically designed for mobile devices.

Android is known for its flexibility and customizability, as well as its ability to support a wide range of hardware and software configurations. It also has a large and active developer community, which has contributed to the development of many useful libraries and tools for app development. The Google Play Store provides access to millions of Android apps, making it one of the largest app stores in the world.

ADVANTAGES OF ANDROID

There are several advantages of Android, including:

Open-source: Android is an open-source operating system, which means that it is free to use, modify and distribute. This allows for a wide range of customization options and enables developers to create innovative applications.

Large user base: Android has a large and growing user base, making it an attractive platform for developers to create applications. This means that there is a large potential audience for apps and a greater chance of success for developers.

Customizability: Android offers a high degree of customizability, both for users and developers. Users can customize their devices with different themes, wallpapers, and widgets, while developers can customize the operating system itself to meet their specific needs.

Developer-friendly: Android offers a wide range of tools and resources for developers, including the Android SDK, which includes a set of development tools such as Android Studio, a code editor and debugger. Additionally, the Google Play Store provides an easy way for developers to distribute and monetize their apps.

Hardware diversity: Android is designed to work on a wide range of devices, from smartphones and tablets to smart TVs and wearables. This

means that developers can create applications that can be used on a variety of devices.

Integration with Google services: Android integrates seamlessly with Google services such as Gmail, Google Maps, and Google Drive. This provides users with easy access to these services and makes it easy for developers to create applications that utilize them.

PYTHON INTRODUCTION

Python is a popular programming language. It was created by Guido van Rossum, and released in 1991.

It is used for:

- Web development (server-side),
- Software development,
- Mathematics,
- System scripting.

What can Python do?

- Python can be used on a server to create web applications.
- Python can be used alongside software to create workflows.
- Python can connect to database systems. It can also read and modify files.
- Python can be used to handle big data and perform complex mathematics.
- Python can be used for rapid prototyping, or for production-ready software development.

Why Python?

- Python works on different platforms (Windows, Mac, Linux, Raspberry Pi, etc).
- Python has a simple syntax similar to the English language.

- Python has syntax that allows developers to write programs with fewer lines than some other programming languages.
- Python runs on an interpreter system, meaning that code can be executed as soon as it is written. This means that prototyping can be very quick.
- Python can be treated in a procedural way, an object-orientated way or a functional way.

Good to know:

- The most recent major version of Python is Python 3, which we shall be using in this tutorial. However, Python 2, although not being updated with anything other than security updates, is still quite popular.
- In this tutorial Python will be written in a text editor. It is possible to write Python in an Integrated Development Environment, such as Thonny, Pycharm, Netbeans or Eclipse which are particularly useful when managing larger collections of Python files.

Python Syntax compared to other programming languages:

- Python was designed for readability, and has some similarities to the English language with influence from mathematics.
- Python uses new lines to complete a command, as opposed to other programming languages which often use semicolons or parentheses.
- Python relies on indentation, using whitespace, to define scope; such as the scope of loops, functions and classes. Other programming languages often use curly-brackets for this purpose.

Applications of Python

- GUI based desktop applications

- Image processing and graphic design applications
- Scientific and computational applications
- Games
- Web frameworks and web applications
- Enterprise and business applications
- Operating systems
- Language development
- Prototyping

Advantages/Benefits of Python

The diverse application of the Python language is a result of the combination of features which give this language an edge over others. Some of the benefits of programming in Python include:

1. Presence of Third Party Modules:

The Python Package Index (PyPI) contains numerous third-party modules that make Python capable of interacting with most of the other languages and platforms.

2. Extensive Support Libraries:

Python provides a large standard library which includes areas like internet protocols, string operations, web services tools and operating system interfaces. Many high use programming tasks have already been scripted into the standard library which reduces length of code to be written significantly.

3. Open Source and Community Development:

Python language is developed under an OSI-approved open source license, which makes it free to use and distribute, including for commercial purposes.

Further, its development is driven by the community which collaborates for its code through hosting conferences and mailing lists, and provides for its numerous modules.

4. Learning Ease and Support Available:

Python offers excellent readability and uncluttered simple-to-learn syntax which helps beginners to utilize this programming language. The code style guidelines, PEP 8, provide a set of rules to facilitate the formatting of code. Additionally, the wide base of users and active developers has resulted in a rich internet resource bank to encourage development and the continued adoption of the language.

5. User-friendly Data Structures:

Python has built-in list and dictionary data structures which can be used to construct fast runtime data structures. Further, Python also provides the option of dynamic high-level data typing which reduces the length of support code that is needed.

6. Productivity and Speed:

Python has clean object-oriented design, provides enhanced process control capabilities, and possesses strong integration and text processing

capabilities and its own unit testing framework, all of which contribute to the increase in its speed and productivity. Python is considered a viable option for building complex multi-protocol network applications.

As can be seen from the above-mentioned points, Python offers a number of advantages for software development. As upgrading of the language continues, its loyalist base could grow as well.

Python is a high-level, interpreted scripting language developed in the late 1980s by Guido van Rossum at the National Research Institute for Mathematics and Computer Science in the Netherlands. The initial version was published at the alt. Sources newsgroup in 1991, and version 1.0 was released in 1994.

Python 2.0 was released in 2000, and the 2.x versions were the prevalent releases until December 2008. At that time, the development team made the decision to release version 3.0, which contained a few relatively small but significant changes that were not backward compatible with the 2.x versions. Python 2 and 3 are very similar, and some features of Python 3 have been backported to Python 2. But in general, they remain not quite compatible.

Both Python 2 and 3 have continued to be maintained and developed, with periodic release updates for both. As of this writing, the most recent versions available are 2.7.15 and 3.6.5. However, an official End Of Life date of January 1, 2020 has been established for Python 2, after which time it will no longer be maintained. If you are a newcomer to Python, it is recommended that you focus on Python 3, as this tutorial will do.

Python is still maintained by a core development team at the Institute, and Guido is still in charge, having been given the title of BDFL (Benevolent Dictator For Life) by the Python community. The name Python, by the

way, derives not from the snake, but from the British comedy troupe Monty Python's Flying Circus, of which Guido was, and presumably still is, a fan. It is common to find references to Monty Python sketches and movies scattered throughout the Python documentation.

Python is Popular:

Python has been growing in popularity over the last few years. The 2018 Stack Overflow Developer Survey ranked Python as the 7th most popular and the number one most wanted technology of the year. World-class software development countries around the globe use Python every single day.

According to research by Dice Python is also one of the hottest skills to have and the most popular programming language in the world based on the Popularity of Programming Language Index.

Due to the popularity and widespread use of Python as a programming language, Python developers are sought after and paid well. If you'd like to dig deeper into Python salary statistics and job opportunities, you can do so here.

Python is Interpreted:

Many languages are compiled, meaning the source code you create needs to be translated into machine code, the language of your computer's processor, before it can be run. Programs written in an interpreted language are passed straight to an interpreter that runs them directly.

This makes for a quicker development cycle because you just type in your code and run it, without the intermediate compilation step.

One potential downside to interpreted languages is execution speed. Programs that are compiled into the native language of the computer

processor tend to run more quickly than interpreted programs. For some applications that are particularly computationally intensive, like graphics processing or intense number crunching, this can be limiting.

In practice, however, for most programs, the difference in execution speed is measured in milliseconds, or seconds at most, and not appreciably noticeable to a human user. The expediency of coding in an interpreted language is typically worth it for most applications.
Further reading: See this Wikipedia page to read more about the differences between interpreted and compiled languages.

Python is Free:
The Python interpreter is developed under an OSI-approved open-source license, making it free to install, use, and distribute, even for commercial purposes.
A version of the interpreter is available for virtually any platform there is, including all flavors of Unix, Windows, macOS, smartphones and tablets, and probably anything else you ever heard of. A version even exists for the half dozen people remaining who use OS/2.

Python is Portable:
Because Python code is interpreted and not compiled into native machine instructions, code written for one platform will work on any other platform that has the Python interpreter installed. (This is true of any interpreted language, not just Python.)
Python is Simple
As programming languages go, Python is relatively uncluttered, and the developers have deliberately kept it that way.

Python 3 has 33 keywords, and Python 2 has 31. By contrast, C++ has 62, Java has 53, and Visual Basic has more than 120, though these latter examples probably vary somewhat by implementation or dialect.

Python code has a simple and clean structure that is easy to learn and easy to read. In fact, as you will see, the language definition enforces code structure that is easy to read. But It's not that Simple for all its syntactical simplicity, Python supports most constructs that would be expected in a very high-level language, including complex dynamic data types, structured and functional programming, and object- oriented programming.

Additionally, a very extensive library of classes and functions is available that provides capability well beyond what is built into the language, such as database manipulation or GUI programming.

Python accomplishes what many programming languages don't: the language itself is simply designed, but it is very versatile in terms of what you can accomplish with it.

Conclusion

This section gave an overview of the Python programming language, including:

- A brief history of the development of Python
- Some reasons why you might select Python as your language of choice

Python is a great option, whether you are a beginning programmer looking to learn the basics, an experienced programmer designing a large

application, or anywhere in between. The basics of Python are easily grasped, and yet its capabilities are vast.

Proceed to the next section to learn how to acquire and install Python on your computer.

1. OpenCV

Open CV (Open Source Computer Vision Library) is a open source computer vision software library for the purpose of machine learning. Open CV was developed to serve the purpose of computer vision applications and to stimulate the usage of machine perception in the commercially viable products. Open CV is a BSD- licensed product which is easy for the utilization and modification of the code. The library contains more than 2500 advanced algorithms including an extensive set of both typical and state-of-the-art computer vision and machine learning algorithms. These algorithms can be employed for the detection and recognition of faces, identification of objects, extraction of 3 D models of objects, production of 3 D point clouds from stereo cameras, stitching images together for production of a high resolution image of an entire scene, finding similar images from an image database, removing red eyes from images taken using flash, following eye movements, recognition of scenery and establishing markers to overlay it with intensified reality etc. It includes C++, Python, Java and MATLAB interfaces and supports Windows, Linux, Android and Mac OS. Open CV mainly involves real-time vision applications taking advantage of MMX and SSE instructions when available. A full-featured CUDA and Open CL interfaces are being progressively developed. There are over 500 algorithms and about 10 times functions that form or back those algorithms. Open CV is written inherently in C++ and has a template interface that works harmoniously with STL containers.

2. Pandas

Pandas is an open source Python package that caters diverse tools for data analysis. The package contains various data structures that can be used for many diverse data manipulation tasks. It also includes a range of methods that can be invoked for data analysis, which becomes feasible when working on data science and machine learning problems in Python.

3. Idle

IDLE is Python's Integrated Development and Learning Environment. IDLE is completely coded in Python, using the tkinter GUI toolkit. It works mostly uniformly on Windows, Unix and macOS. It has a Python shell window (interactive interpreter) with colorizing of error messages, code input and code output. There is a multi-window text editor with multiple undo, Python colorizing, smart indent, call tips, auto completion, and other features. Searching within any window, replacing within editor windows and searching through multiple files is possible. It also has configuration, browsers and other dialogs as well.

4. Microsoft Excel

Microsoft Excel is a spreadsheet program incorporated in Microsoft Office suite of applications. Spreadsheets prompt tables of values arranged in rows and columns that can be mathematically manipulated using both basic and complex arithmetic functions and operations. Apart from its standard spreadsheet features, Excel also extends programming support via Microsoft's Visual Basic for Applications (VBA), the capacity to access data from external sources via Microsoft's Dynamic Data Exchange (DDE) and extensive graphing and charting abilities. Excel being electronic spreadsheet program can be used to store, organize and manipulate the data. Electronic spreadsheet programs were formerly based on paper spreadsheets used for accounting purpose. The basic layout of computerized spreadsheets is more or less same as the paper

ones. Related data can be stored in *tables* - which are a group of small rectangular boxes or cells that are standardized into rows and columns.

Python

Python is a high-level, interpreted programming language known for its simplicity and readability. It was created by Guido van Rossum and first released in 1991. Python has become one of the most popular programming languages in the world, particularly in areas such as data analysis, scientific computing, web development, and artificial intelligence.

Python has a large and active community of developers, which has contributed to the development of numerous third-party libraries and tools that make it easier to use Python for specific tasks. The language's syntax is designed to be easy to read and write, making it an excellent choice for beginners.

Python can be used for a variety of tasks, including:

- Web development (using frameworks such as Django and Flask)
- Data analysis and visualization (using libraries such as NumPy, pandas, and Matplotlib)
- Scientific computing (using libraries such as SciPy)
- Machine learning and artificial intelligence (using libraries such as TensorFlow and PyTorch)
- Automation and scripting (using the built-in libraries and third-party tools)

Python is open-source and freely available for download on the Python website. It can be run on a wide variety of operating systems, including Windows, macOS, and Linux.

Advantage of Python

Python has several advantages, including:

1. Easy to Learn and Use: Python has a simple and easy-to-learn syntax, making it an excellent choice for beginners. The code is easily readable and requires fewer lines of code compared to other languages, which means it's faster to write, debug, and maintain.
2. Large and Active Community: Python has a large and active community of developers who contribute to a vast collection of libraries, modules, and frameworks that can be used for various purposes, from web development to data analysis.
3. Cross-platform Compatibility: Python is a portable language that runs on multiple platforms, including Windows, Linux, and macOS. This feature makes it an ideal choice for developing cross-platform applications.
4. Excellent for Data Analysis: Python has powerful libraries such as NumPy, Pandas, and Matplotlib, which make it an excellent choice for data analysis and visualization tasks.
5. Great for Prototyping: Python's simplicity and ease of use make it an excellent choice for rapid prototyping. You can quickly test your ideas and build a functional prototype in a short amount of time.
6. High-Level Language: Python is a high-level language, which means it abstracts away many low-level details such as memory management. This feature makes it easier to focus on the problem at hand rather than worrying about implementation details.
7. Scalable: Python is scalable, meaning it can handle both small and large-scale projects. It can be used to develop small scripts and large-scale applications alike.

Overall, Python's simplicity, ease of use, and versatility make it a popular choice for many developers and companies alike.

PyCharm

PyCharm is an integrated development environment (IDE) for Python programming language. It is developed by JetBrains, a company that produces a range of tools for software developers. PyCharm provides a comprehensive set of features and tools that help developers to write, test, and debug Python code more efficiently.

Some of the key features of PyCharm include:

1. Code Completion: PyCharm provides intelligent code completion, which suggests code snippets, functions, and variable names as you type.
2. Code Navigation: PyCharm allows developers to quickly navigate through their codebase using shortcuts, making it easier to find specific code sections and files.
3. Debugging: PyCharm provides a powerful debugger that helps developers to quickly find and fix bugs in their code.
4. Code Analysis: PyCharm includes a range of tools for code analysis, such as syntax checking, code inspections, and code formatting.
5. Project Management: PyCharm provides a range of project management tools, including version control integration, task tracking, and project templates.
6. Refactoring: PyCharm includes tools for refactoring code, such as renaming variables and functions, extracting code into functions, and changing variable types.
7. Unit Testing: PyCharm includes tools for unit testing, making it easierto write and run tests for your Python code.

Overall, PyCharm is a powerful and comprehensive IDE that can help developers to write better quality Python code more efficiently. It is available in both a free and paid version, and supports a range of platforms, including Windows, macOS, and Linux.

Advantage of PyCharm

PyCharm has several advantages for developers working with Python, including:

1. Productivity: PyCharm helps to increase productivity by providing a range of features that automate tasks and reduce the time spent on mundane tasks. For example, code completion, code navigation, and debugging tools make it easier to write and maintain code.
2. Code Quality: PyCharm provides a range of tools for code analysis, such as syntax checking, code inspections, and code formatting, which help to improve the overall quality of the code.
3. Debugging: PyCharm's powerful debugger makes it easier to find and fix bugs in Python code. The debugger allows developers to step through code line by line, set breakpoints, and inspect variables in real-time.
4. Integration: PyCharm integrates with a range of third-party tools and libraries, making it easier to work with external dependencies. For example, PyCharm supports version control systems such as Git, Mercurial, and Subversion, and can also work with virtual environments.
5. Unit Testing: PyCharm includes tools for unit testing, which allows developers to test their code and catch errors early in the development cycle. The built-in test runner makes it easy to write and run tests for Python code.
6. Refactoring: PyCharm includes tools for refactoring code, such as renaming variables and functions, extracting code into functions, and changing variable types. This helps to improve the readability and maintainability of the code.
7. Support: PyCharm has an active community of developers who contribute to the development of the IDE, and JetBrains provides

regular updates and bug fixes. PyCharm also provides excellent documentation and support resources, including tutorials and user forums.

Overall, PyCharm is a powerful and feature-rich IDE that can help to improve productivity, code quality, and collaboration for developers working with Python.

Django

Django is a high-level, open-source web framework for building web applications in Python. It is designed to be fast, secure, and scalable, and provides developers with a range of features and tools for building complex web applications.

Some of the key features of Django include:

1. Object-Relational Mapping (ORM): Django provides an ORM that allows developers to work with databases using Python objects. This makes it easier to work with databases and reduces the amount of SQL code that developers need to write.
2. URL Routing: Django provides a built-in URL routing system that maps URLs to views. This makes it easy to build complex URL patterns and handle user requests.
3. Template Engine: Django provides a template engine that allows developers to write HTML templates with placeholders for dynamic content. This makes it easy to build dynamic web pages that are easy to maintain.
4. Admin Interface: Django provides a built-in admin interface that allows developers to manage content and user accounts. This makes iteasy to build complex web applications with user authentication and authorization.
5. Security: Django provides a range of security features, including protection against cross-site scripting (XSS) and cross-site request

forgery (CSRF) attacks.

6. Scalability: Django is designed to be scalable, and provides built-in tools for caching, load balancing, and database sharding. This makesit easy to build web applications that can handle large amounts of traffic.
7. Third-Party Packages: Django has a large ecosystem of third-party packages that extend the functionality of the framework. This includes packages for authentication, REST APIs, and more.

Overall, Django is a powerful web framework that makes it easy to build complex web applications with Python. Its built-in features and tools, combined with its large ecosystem of third-party packages, make it a popular choice for web development.

Advantages of Django

Django has several advantages for developers building web applications, including:

1. Rapid Development: Django provides a range of built-in features and tools that make it easy to build web applications quickly. This includes an ORM for working with databases, a template engine for building dynamic web pages, and a built-in admin interface for managing content and user accounts.
2. Scalability: Django is designed to be scalable, and provides built-in tools for caching, load balancing, and database sharding. This makes it easy to build web applications that can handle large amounts of traffic.
3. Security: Django provides a range of security features, including protection against cross-site scripting (XSS) and cross-site request forgery (CSRF) attacks. This helps to ensure that web applications built with Django are secure and reliable.

4. Flexibility: Django is a highly flexible framework that can be used to build a wide range of web applications, from simple blogs to complex social networks. It provides a range of built-in tools and features that can be customized to meet the specific needs of a project.
5. Community Support: Django has a large and active community of developers who contribute to the development of the framework. This includes third-party packages, documentation, and support resources, such as forums and user groups.
6. Third-Party Packages: Django has a large ecosystem of third-party packages that extend the functionality of the framework. This includes packages for authentication, REST APIs, and more. This makes it easy to build complex web applications without having to write all the code from scratch.
7. Versatility: Django can be used to build web applications in a variety of industries and domains, such as e-commerce, social networking, healthcare, and more. This makes it a versatile framework that can be used to build a wide range of web applications.

Overall, Django is a powerful and versatile web framework that makes it easy to build complex web applications quickly and securely. Its built-in features and tools, combined with its large ecosystem of third-party packages, make it a popular choice for web development.

Bootstrap

Bootstrap is a popular front-end web development framework that provides developers with a range of tools and resources for building responsive and mobile-first web applications. It is an open-source framework developed by Twitter, and is based on HTML, CSS, and JavaScript.

Some of the key features of Bootstrap include:

1. Responsive Design: Bootstrap provides a range of CSS classes and utilities for building responsive web applications that work on a variety of devices and screen sizes. This makes it easy to create web applications that look great on desktops, tablets, and smartphones.
2. Pre-built Components: Bootstrap provides a range of pre-built UI components, such as navigation bars, forms, buttons, and modals. This makes it easy to create web applications with a consistent look and feel, without having to write all the code from scratch.
3. Customizable Styles: Bootstrap provides a range of CSS classes and utilities that can be customized to meet the specific needs of a project. This makes it easy to create unique and personalized web applications that stand out from the crowd.
4. JavaScript Plugins: Bootstrap provides a range of JavaScript plugins, such as carousels, modals, and tooltips, that can be easily integrated into web applications. This makes it easy to add advanced functionality to a web application without having to write all the code from scratch.
5. Large Community: Bootstrap has a large and active community of developers who contribute to the development of the framework. This includes third-party packages, documentation, and support resources, such as forums and user groups.

Overall, Bootstrap is a powerful and versatile front-end web development framework that makes it easy to build responsive and mobile-first web applications. Its pre-built components, customizable styles, and JavaScript plugins, combined with its large community, make it a popular choice for web development.

Advantages of Bootstrap

Bootstrap has several advantages for front-end web developers, including:

1. Faster Development: Bootstrap provides pre-built components, such as navigation bars, forms, buttons, and modals, that can be easily integrated into web applications. This makes it easy to create web applications with a consistent look and feel, without having to write all the code from scratch. This speeds up the development process and allows developers to focus on other aspects of the application.
2. Responsive Design: Bootstrap is designed to be responsive and mobile-first, which means that web applications built with Bootstrap will automatically adapt to different screen sizes and devices. This ensures that the web application is accessible and usable for all users, regardless of the device they are using.
3. Consistent Design: Bootstrap provides a range of CSS classes and utilities that can be used to create a consistent design across all pages of a web application. This ensures that the user experience is consistent and predictable, which can improve user engagement and retention.
4. Customizable Styles: Bootstrap provides a range of CSS classes and utilities that can be customized to meet the specific needs of a project. This allows developers to create unique and personalized web applications that stand out from the crowd.
5. Large Community: Bootstrap has a large and active community of developers who contribute to the development of the framework. This includes third-party packages, documentation, and support resources, such as forums and user groups. This ensures that developers have access to a wide range of resources and support when working with Bootstrap.

6. Cross-Browser Compatibility: Bootstrap is designed to be compatible with all modern web browsers, which means that web applications built with Bootstrap will work consistently across all browsers. This ensures that the web application is accessible and usable for all users, regardless of the browser they are using.

Overall, Bootstrap is a powerful and versatile front-end web development framework that can save developers time and effort, while also providing a range of features and tools for building responsive and mobile-first web applications.

MySQL

MySQL is an open-source relational database management system (RDBMS) that is widely used by developers and organizations to manage their data. MySQL is a popular choice for many applications and websites because it is fast, scalable, and reliable.

Here are some advantages of MySQL:

1. Open-Source: MySQL is an open-source database, which means that it is free to use and modify. This makes it an attractive option for developers and organizations who want to reduce their software licensing costs.
2. Scalability: MySQL is designed to handle large volumes of data and can scale to handle the needs of growing applications and websites. MySQL can be used in a variety of configurations, from small single-server instances to large-scale clusters.
3. High Performance: MySQL is known for its high performance and can handle large volumes of queries and data transactions. It is optimized for use with modern hardware, and its storage engine is designed to maximize performance.
4. Ease of Use: MySQL is easy to install and configure, and its SQL syntax is straightforward and easy to learn. Many developers are

familiar with SQL, which makes it easy to use MySQL for data storage and management.

5. Security: MySQL provides several features to help secure data, including built-in support for encryption and authentication. MySQL also supports role-based access control (RBAC), which makes it easy to manage user access to data.
6. Large Community: MySQL has a large and active community of developers who contribute to the development of the database. This community provides support, documentation, and resources for developers who are working with MySQL.

Overall, MySQL is a powerful and reliable relational database management system that is used by many developers and organizations to manage their data. Its scalability, high performance, ease of use, security features, and large community make it a popular choice for many applications and websites.

Advantage of MySQL

MySQL has several advantages as a relational database management system (RDBMS), including:

1. Scalability: MySQL can scale from small, single-server instances to large, complex, multi-server setups, making it suitable for a wide range of applications.
2. High Performance: MySQL is known for its speed and performance, and it can handle a large number of concurrent connections and high transaction rates. It is optimized to run on modern hardware, and its storage engine is designed to maximize performance.
3. Open-Source: MySQL is open-source software, which means that it is free to use, modify, and distribute. This makes it a cost-effective choice for businesses of all sizes.

4. Cross-Platform Compatibility: MySQL is compatible with a wide range of operating systems, programming languages, and platforms, including Linux, Windows, and macOS. This makes it easy to integrate with existing applications and systems.
5. Security: MySQL offers several built-in security features, such as encryption, access control, and auditing. It also supports integration with external security solutions and standards, such as LDAP, SSL, and OAuth.
6. High Availability: MySQL provides high availability options, such as replication and clustering, to ensure that data is always available even in the event of hardware or software failure.
7. Community and Support: MySQL has a large and active community of developers and users who provide support, documentation, and resources. This makes it easy to get help and find solutions to common problems.

Overall, MySQL is a powerful, reliable, and cost-effective RDBMS that can be used for a wide range of applications. Its scalability, high performance, open-source nature, cross-platform compatibility, security features, and community support make it a popular choice for businesses and developers alike.

SQLyog

SQLyog is a popular graphical user interface (GUI) tool for managing MySQL databases. It provides a comprehensive set of features and tools for developers, database administrators, and other users who work with MySQL databases.

Some of the advantages of using SQLyog include:

1. Easy to use: SQLyog has an intuitive and user-friendly interface, which makes it easy to navigate and perform common database tasks.

2. Comprehensive feature set: SQLyog provides a wide range of features and tools for managing MySQL databases, including database schema design, query building and optimization, data backup and restore, and more.
3. Cross-platform compatibility: SQLyog is available for Windows, Linux, and macOS, which makes it easy to use on different operating systems.
4. Customizable: SQLyog allows users to customize the interface and behavior to their preferences, which can help to increase productivity and efficiency.
5. Secure: SQLyog provides several security features, including support for SSL and SSH encryption, to ensure that data is kept safe and secure.
6. Active development and support: SQLyog is actively developed and supported by the developer community, which means that users can expect regular updates and bug fixes.

Overall, SQLyog is a powerful and user-friendly tool for managing MySQL databases. Its comprehensive feature set, cross-platform compatibility, customizability, security features, and active development and support make it a popular choice for developers and database administrators.

XAMPP

XAMPP is a free and open-source cross-platform web server solution that includes the Apache HTTP server, MySQL database server, and PHP scripting language. It also includes other tools and utilities that are commonly used in web development, such as Perl, OpenSSL, and php MyAdmin.

Here are some advantages of using XAMPP:

1. Easy to install and use: XAMPP is very easy to install and set up, even for beginners who have no experience with web servers or database management.
2. Cross-platform compatibility: XAMPP is available for Windows, Linux, and macOS, which makes it easy to use on different operating systems.
3. All-in-one solution: XAMPP includes all the tools and utilities that are needed to set up a web server and manage a MySQL database, which makes it a convenient and efficient solution for web developers.
4. Portable: XAMPP is a portable solution that can be run directly from a USB drive, which means that it can be used on any computer without the need for installation.
5. Free and open-source: XAMPP is free to use and distribute, and its source code is available for modification and customization.
6. Development environment: XAMPP provides a development environment for web developers to test and debug their applications before deploying them to a production server.

Overall, XAMPP is a convenient and efficient solution for web developers who want an easy-to-use and all-in-one web server and database management system. Its cross-platform compatibility, portability, and open-source nature make it a popular choice for web developers of all levels.

2.6 SYSTEM TESTING

INTRODUCTION

System testing of a museum app is an essential part of the development process to ensure that the app works as intended and meets all of the requirements. Here are some steps that can be taken to perform system testing of a museum app:

Test the functionality of the app:

System testing should begin with testing the basic functionality of the app, such as navigation, search, exhibit details, feedback forms, and media sharing. All the features and functions of the app should be tested to ensure that they work as intended.

Test the performance of the app:

The app's performance should be tested by checking the loading speed of exhibits, the responsiveness of the app, and the stability of the app under different conditions, such as slow internet connection or low battery levels.

Test the compatibility of the app:

The museum app should be tested on different devices, such as smartphones and tablets, to ensure that it works on all platforms and operating systems.

Test the security of the app:

The security of the app should be tested by checking for vulnerabilities such as data breaches, unauthorized access, or malware.

Test the usability of the app:
The usability of the app should be tested by checking how easy it is for users to navigate the app, find information, and use its features.

Test the integration of the app:
If the museum app is integrated with other systems or services, such as social media platforms or ticketing systems, the integration should be tested to ensure that it works seamlessly.

Conduct user testing:
User testing should be conducted to obtain feedback from real users and identify any issues or areas for improvement.
By performing system testing of the museum app, developers can ensure that the app is reliable, secure, and user-friendly, and meets the requirements of the museum and its visitors.

Unit Test

Unit testing is an essential part of the software development process, and it involves testing individual units or components of the software to ensure that they work as intended. Here are some steps that can be taken to perform unit testing of a museum app:

Identify the units to be tested: The first step in unit testing is to identify the individual units or components of the app that need to be tested. This could include functions, classes, or modules.

Write test cases: For each unit, write test cases that cover different scenarios and inputs. Test cases should be designed to ensure that each unit is working correctly, and that any edge cases or error conditions are handled properly.

Set up a testing environment: Set up a testing environment that closely mirrors the production environment, including hardware, software, and data.

Execute test cases: Run the test cases to ensure that each unit is working as expected. If a test fails, investigate the cause of the failure and make any necessary changes to the code.

Repeat: Unit testing is an iterative process, so continue writing test cases and running tests until all units have been tested and any issues have been resolved.

Integrated Test

Integration testing is a software testing technique that involves testing how different modules of an application work together when integrated. Here are some steps that can be taken to perform integration testing of a museum app:

Identify the modules to be tested: The first step in integration testing is to identify the different modules or components of the app that need to be tested together.

Develop test cases: For each module, develop test cases that cover different scenarios and inputs. These test cases should be designed to ensure that the modules work correctly together.

Set up a testing environment: Set up a testing environment that closely mirrors the production environment, including hardware, software, and data.

Execute test cases: Run the test cases to ensure that the modules work together as expected. If a test fails, investigate the cause of the failure and make any necessary changes to the code.

Repeat: Integration testing is an iterative process, so continue developing test cases and running tests until all modules have been tested and any issues have been resolved.

CHAPTER-3
CONCLUSION

In conclusion, our virtual museum provides an immersive and educational experience that showcases the wonders of our world. With a vast collection of exhibits and artifacts, covering a range of themes, eras, and regions, there is something for everyone to explore and learn.

Our virtual museum is accessible to anyone, anywhere, at any time, making it an ideal resource for students, researchers, and anyone interested in history, art, science, and culture. Our exhibits are designed to be interactive, engaging, and informative, allowing visitors to discover and appreciate the rich heritage of our world.

We believe that museums play an essential role in preserving and sharing our collective history and culture, and we're proud to be part of that mission. Our virtual museum is an opportunity for everyone to engage with that history and culture, to learn, to explore, and to appreciate the diversity and richness of our world.

We hope that you have enjoyed your visit to our virtual museum and that it has inspired you to continue your exploration of the world around you. We invite you to come back often, as we will continue to add new exhibits and artifacts to our collections. Thank you for visiting, and we look forward to welcoming you again soon.

FUTURE ENHANCEMENT

As technology advances, there are many ways that our virtual museum can be enhanced to provide an even more immersive and interactive experience for visitors. Here are a few potential future enhancements:

Virtual Reality (VR): Incorporating VR technology into our virtual museum would allow visitors to experience exhibits in a more realistic and engaging way. They could walk through virtual galleries, interact with objects, and even feel as though they are physically present in the museum.

Augmented Reality (AR): AR technology could be used to provide visitors with additional information and context about exhibits. For example, visitors could hold up their smartphones or tablets to exhibits and see additional information, animations, or 3D models overlaid on top of the object.

Artificial Intelligence (AI): AI technology could be used to create personalized tours for visitors based on their interests and preferences. The AI could analyze the visitor's browsing history, search queries, and other data to suggest exhibits that are likely to be of interest.

Interactive Exhibits: Interactive exhibits could be enhanced to provide visitors with more opportunities for hands-on learning and exploration. For example, visitors could manipulate digital models of objects, participate in simulations or games, or engage in virtual experiments.

Multilingual Support: To make our virtual museum accessible to people from around the world, we could provide multilingual support for exhibits. This could include providing translations of exhibit descriptions, audio guides, and other materials.

These are just a few of the many ways that our virtual museum could be enhanced in the future. By incorporating these and other technologies, we

can create a more immersive and interactive experience for visitors and continue to provide access to the wonders of our world for generations to come.

3.3 APPENDIX

3.3.1 SAMPLE SOURCE CODE

```
<!DOCTYPE html>
<html lang="zxx" class="no-js">
<head>
        <!-- Mobile Specific Meta -->
        <meta name="viewport" content="width=device-width, initial-scale=1,
shrink-to-fit=no">
        <!-- Favicon-->
        <link rel="shortcut icon" href="static/img/fav.png">
        <!-- Author Meta -->
        <meta name="author" content="codepixer">
        <!-- Meta Description -->
        <meta name="description" content="">
        <!-- Meta Keyword -->
        <meta name="keywords" content="">
        <!-- meta character set -->
        <meta charset="UTF-8">
        <!-- Site Title -->
        <title> Museum</title>

        <link
href="https://fonts.googleapis.com/css?family=Poppins:100,200,400,300,500,600,700
" rel="stylesheet">
    <!--CSS-->
                <link rel="stylesheet" href="static/css/linearicons.css">
                <link rel="stylesheet" href="static/css/font-awesome.min.css">
                <link rel="stylesheet" href="static/css/bootstrap.css">
                <link rel="stylesheet" href="static/css/magnific-popup.css">
                <link rel="stylesheet" href="static/css/nice-select.css">
                <link rel="stylesheet" href="static/css/animate.min.css">
                <link rel="stylesheet" href="static/css/owl.carousel.css">
```

```
                <link rel="stylesheet" href="static/css/main.css">
            </head>
            <body>
             <form action="{{ url_for('insert') }}" method="post">
        <div class="msg">{{ msg }}</div>

                <header id="header" id="home">
                    <div class="container header-top">
                        <div class="row">
                            <div class="col-6 top-head-left">
                                <ul>
                                    <li><a href="#">Visit
Us</a></li>
                                    <li><a href="#">Buy
Ticket</a></li>
                                </ul>
                            </div>
                            <div class="col-6 top-head-right">
                                <ul>
                                    <li><a href="#"><i
class="fa fa-facebook"></i></a></li>
                                    <li><a href="#"><i
class="fa fa-twitter"></i></a></li>
                                    <li><a href="#"><i
class="fa fa-dribbble"></i></a></li>
                                    <li><a href="#"><i
class="fa fa-behance"></i></a></li>
                                </ul>
                            </div>

                        </div>
                    </div>
                    <hr>
                <div class="container">
```

```
                    <div class="row align-items-center justify-content-
between d-flex">
                        <div id="logo">
                          <a href="{{ url_for('insert') }}"><img
src="static/img/logo.png" alt="" title="" /></a>
                        </div>
                        <nav id="nav-menu-container">
                          <ul class="nav-menu">
                            <li class="menu-active"><a href="{{
url_for('insert') }}">Home</a></li>
                            <li><a href="{{ url_for('about')
}}">About</a></li>
                            <li><a href="{{ url_for('gallery')
}}">Gallery</a></li>
                            <li><a href="{{ url_for('event')
}}">Events</a></li>
                            <li><a href="{{ url_for('ticket')
}}">Ticket</a></li>

                            <li><a href="{{ url_for('contact')
}}">Contact</a></li>

                          </ul>
                        </nav><!-- #nav-menu-container -->

                    </div>
                  </div>
                </header><!-- #header -->


            <!-- start banner Area -->
            <section class="banner-area relative" id="home">
                    <div class="overlay overlay-bg"></div>
                    <div class="container">
```

```
                    <div class="row fullscreen d-flex align-items-center justify-content-center">
                        <div class="banner-content col-lg-8">
                            <h6 class="text-white">Opening on 21st February, 2018</h6>
                            <h1 class="text-white">
                                Exhibition on Modern Era
                            </h1>
                            <p class="pt-20 pb-20 text-white">
                                Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incident ut labore etdolore magna aliqua. Ut enim ad minim. sed do eiusmod tempor incididunt..
                            </p>
                            <a href="#" class="primary-btn text-uppercase">Get Started</a>
                        </div>

                    </div>
                </div>
            </section>
            <!-- End banner Area -->

            <!-- Start service Area -->
            <section class="service-area pt-100" id="about">
                <div class="container">
                    <div class="row">
                        <div class="col-lg-4">
                            <div class="single-service">
                                <span class="lnr lnr-clock"></span>
                                <h4>Openning Hours</h4>
```

<
p
>

05.00pm

Mon - Fri: 10.00am to

Sat: 12.00pm to 03.00 pm
Sunday Closed

Here, I focus on a range of items and features that we use in life Here, I focus on a range of items and features that we use in life Here, I focus on a range of items and features that we usein life

Buy ticket

<h4>Ongoing Exhibitions</h4>

Mon - Fri: 10.00am to 05.00pm

Sat: 12.00pm to 03.00 pmSunday Closed

Here, I focus on a range of items and features that we use in life Here, I focus on a range of items and features that we use in life Here, I focus on a range of items and features.that we usein life

Buy ticket

<h4>Openning Events</h4>

Mon - Fri: 10.00am to 05.00pm
Sat: 12.00pm to 03.00 pm
Sunday Closed

Here, I focus on a range of items and features that we use in life Here, I focus on a range of items and features that we use in life Here, I focus on a range of items and features.that we usein life

</p>

```
                                        <a href="#" class="text-uppercase primary-btn">Buy ticket</a>
                                    </div>
                                </div>
                            </div>

                        </div>

                    </div>
                </div>
            </section>
            <!-- End service Area -->

            <!-- Start quote Area -->
            <section class="quote-area section-gap">
                <div class="container">
                    <div class="row">
                        <div class="col-lg-6 quote-left">
                            <h1>
                                <span>Music</span> gives soul to the universe, <br>
                                wings to the <span>mind</span>, flight <br>
                                to the <span>imagination</span>.
                            </h1>
                        </div>
                        <div class="col-lg-6 quote-right">
                            <p>
                                Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
```

Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

```
                                        </p>
                                    </div>
                                </div>
                            </div>
                        </section>
                        <!-- End quote Area -->

                        <!-- Start exibition Area -->
                        <section class="exibition-area section-gap" id="exhibitions">
                            <div class="container">
                                <div class="row d-flex justify-content-center">
                                    <div class="menu-content pb-60 col-lg-10">
                                        <div class="title text-center">
                                            <h1 class="mb-10">Ongoing Exhibitions from the scratch</h1>
                                            <p>Who are in extremely love with eco friendly system.</p>
                                        </div>
                                    </div>
                                </div>
                                <div class="row">
                                    <div class="active-exibition-carusel">
                                        <div class="single-exibition item">
                                            <img src="static/img/img.jpg" width="400px" height="400px" alt="">

                                        </div>

                                        <div class="single-exibition item">
                                            <img src="static/img/img1.jpg" width="400px" height="400px" alt="">
```

```
                    </div>

                    <div class="single-exibition
item">
                        <img
src="static/img/img2.jpg" width="400px" height="400px" alt="">

                    </div>

                    <div class="single-exibition
item">
                        <img
src="static/img/img3.jpg" width="400px" height="400px" alt="">

                    </div>

                    <div class="single-exibition
item">
                        <img
src="static/img/img4.jpg" width="400px" height="400px" alt="">

                    </div>

                    <div class="single-exibition
item">
                        <img
src="static/img/img5.jpg" width="400px" height="400px" alt="">

                    </div>

                    <div class="single-exibition
item">
```

<img src="static/img/img6.jpg" width="400px" height="400px" alt="">

<img class="img-fluid" src="static/img/img7.jpg" width="400px" height="400px" alt="">

<img class="img-fluid" src="static/img/img8.jpg" width="400px" height="400px" alt="">

</section>

<!-- End exibition Area -->

<!-- Start upcoming-event Area -->

<section class="upcoming-event-area section-gap" id="events">

```
                                    <h1 class="mb-10">Checkout our Upcoming Events</h1>
                                    <p>Who are in extremely love with eco friendly system.</p>
                                </div>
                            </div>
                        </div>
                        <div class="row">
                            <div class="col-lg-6 event-left">
                                <div class="single-events">
                                    <img class="img-fluid" src="static/img/img18.jpg" alt="">
                                    <a href="#"><h4>FOREST COLLEGE MUSEUM COIMBATORE</h4></a>

                                    <p>
```

The government owned Forest College Museum is a home to various forestry artefacts like that of, wood crafts, wildlife, entomology, mycology, geology, arms, timber, and non-timber products.

```
                                    </p>
                                    <a href="{{ url_for('viewdetails2') }}" class="primary-btn text-uppercase">View Details</a>
                                </div>
                                <div class="single-events">
                                    <img class="img-fluid" src="static/img/i.jpg" alt="">
                                    <a href="#"><h4>GANDHI MUSEUM MADURAI</h4></a>
                                    <h6><span>21st February</span> at Central government museum</h6>
                                    <p>
```

Established in 1959 in the memory of the Mahatma Gandhi, this Museum exhibits paintings, manuscripts, and sculptures along with the blood-stained cloth worn by Gandhi ji when assassinated.

```
                                    </p>
                                    <a href="{{ url_for('viewdetails1') }}" class="primary-btn text-uppercase">View Details</a>
                                </div>

            </div>
            <div class="col-lg-6 event-right">
                <div class="single-events">
                    <a href="#"><h4>INDIA SEASHELL MUSEUM MAHABALIPURAM</h4></a>
                    <h6><span>21st February</span> at Central government museum</h6>
                    <p>
```

Dotted with a collection of more than 40,000 shells, both rare and unique, the museum also houses ashopping bazaar, an aquarium pooled with ocean fishes, and a restaurant which servespalatable seafood.

```
                    </p>
                    <a href="{{ url_for('viewdetails3') }}" class="primary-btn text-uppercase">View Details</a>
                    <img class="img-fluid" src="static/img/img16.jpg" alt="">
                </div>
                <div class="single-events">

                    <a href="#"><h4>CHENNAI RAIL MUSEUM</h4></a>
                    <h6><span>21st February</span> at Central government museum</h6>
```

<p>

Celebrating the colossal Indian Railway network, Chennai Rail Museum delights you with its astounding presentation and a fabulous collection of rail heritage of India. Must take atoy train ride of the entire premises

```
                                                    </p>
                                                    <a                  href="{{
url_for('viewdetails4') }}" class="primary-btn text-uppercase">View Details</a>
                                                    <img    class="img-fluid"
src="static/img/img15.jpg" alt="">
                                                </div>

                                            </div>
                                        </div>
                                    </div>
                                </section>
                                <!-- End upcoming-event Area -->

                                <!-- Start blog Area -->
                                <section class="blog-area section-gap" id="blog">
                                    <div class="container">
                                        <div class="row d-flex justify-content-center">
                                            <div  class="menu-content  pb-70  col-lg-
8">
                                                <div class="title text-center">
                                                    <h1                 class="mb-
10">Museums in Tamilnadu</h1>

                                                </div>
                                            </div>
                                        </div>
                                        <div class="row">
                                            <div  class="col-lg-3  col-md-6  single-
blog">
                                                <div class="thumb">
```

<img class="img-fluid" src="static/img/img14.jpg" alt="">

<h4>SHEMBAGANUR MUSEUM OF NATURAL HISTORY KODAIKANAL</h4>

A collection of over 500 species of taxidermy birds, animals, and insects along with 300 species of exotic orchids together make a perfect place to impart knowledge to your kids about animal history.

 15 Likes

 02 Comments

<img class="img-fluid" src="static/img/img13.jpg" alt="">

<h4>GEDEE CAR MUSEUM COIMBATORE</h4>

For all the automobile fanatics, Gedee Car Museum delights you with its collection of more than 70 antique

cars including the resplendent replica of first car of the world - 1886 Benz Patent Motorwagen

 15 Likes

 02 Comments

<img class="img-fluid" src="static/img/img19.jpg" alt="">

<h4>CHOLAMANDAL ARTISTS' VILLAGE CHENNAI</h4>

Clutched by the remarkable art and culture of Tamilnadu, Cholamandal Artists' Village is quaint a artist's town tucked away in the East Coastal Road in south of Chennai. From classicalto contemporary, the artists' village is a dynamic place where a of art.

 15 Likes

 02 Comments

<p><span class="lnr lnr-

<p><span class="lnr lnr-

```
                    </div>

                </div>
                <div class="col-lg-3 col-md-6 single-blog">
                    <div class="thumb">
                        <img class="img-fluid" src="static/img/img11.jpg" alt="">
                    </div>

                    <a href="#"><h4>ARCHEOLOGICAL MUSEUM OF INDIA VELLORE</h4></a>
                    <p>
                        Visit Archaeological Museum of India to be acquainted with the historical past of the city of Vellore through incredible art and sculptures from Pallavas Dynasty and Cholas Dynasty epoch.
                    </p>
                    <div class="meta-bottom d-flex justify-content-between">
                        <p><span class="lnr lnr-heart"></span> 15 Likes</p>
                        <p><span class="lnr lnr-bubble"></span> 02 Comments</p>
                    </div>

                </div>

            </div>
        </div>
    </section>
    <!-- End blog Area -->

    <!-- Start gallery Area -->
```

```
<section class="gallery-area section-gap" id="gallery">
    <div class="container">
        <div class="row d-flex justify-content-center">
            <div class="menu-content pb-70 col-lg-8">
                <div class="title text-center">
                    <h1 class="mb-10 text-white">Our Exhibition Gallery</h1>
                    <p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.</p>
                </div>
            </div>
        </div>
        <div id="grid-container" class="row">
            <a class="single-gallery" href="static/img/img.jpg"><img class="grid-item" src="img/img.jpg"></a>
            <a class="single-gallery" href="static/img/img1.jpg"><img class="grid-item" src="img/img1.jpg"></a>
            <a class="single-gallery" href="static/img/img18.jpg"><img class="grid-item" src="img/img18.jpg"></a>
            <a class="single-gallery" href="static/img/img17.jpg"><img class="grid-item" src="img/img17.jpg"></a>
            <a class="single-gallery" href="static/img/img16.jpg"><img class="grid-item" src="img/img16.jpg"></a>
            <a class="single-gallery" href="static/img/img2.jpg"><img class="grid-item" src="img/img2.jpg"></a>
            <a class="single-gallery" href="static/img/img3.jpg"><img class="grid-item" src="img/img3.jpg"></a>
            <a class="single-gallery" href="static/img/img4.jpg"><img class="grid-item" src="img/img4.jpg"></a>
            <a class="single-gallery" href="static/img/img5.jpg"><img class="grid-item" src="img/img5.jpg"></a>
```

```
                                    <a class="single-gallery" href="static/img/img6.jpg"><img class="grid-item" src="img/img6.jpg"></a>
                                    <a class="single-gallery" href="static/img/img14.jpg"><img class="grid-item" src="img/img14.jpg"></a>
                                    <a class="single-gallery" href="static/img/img13.jpg"><img class="grid-item" src="img/img13.jpg"></a>
                                    <a class="single-gallery" href="static/img/img8.jpg"><img class="grid-item" src="img/img8.jpg"></a>


                                </div>
                            </div>
                        </section>
                        <!-- End gallery Area -->


                        <!-- start footer Area -->
                        <footer class="footer-area section-gap">
                            <div class="container">
                                <div class="row">
                                    <div class="col-lg-5 col-md-6 col-sm-6">
                                        <div class="single-footer-widget">
                                            <h6>About Us</h6>
                                            <p>
                                                Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore dolore magna aliqua.
                                            </p>
                                            <p class="footer-text">
                                                <!-- Link back to Colorlib can't be removed. Template is licensed under CC BY 3.0. -->
```

Copyright ©<script>document.write(new Date().getFullYear());</script> All rights reserved | This template is made with by Colorlib and distributed by ThemeWagon
<!-- Link back to Colorlib can't be removed. Template is licensed under CC BY 3.0. -->

<h6>Newsletter</h6>
Stay update with our latest

<form target="_blank" novalidate="true" action="https://spondonit.us12.list-manage.com/subscribe/post?u=1462626880ade1ac87bd9c93a&id=92a4423d01" method="get" class="form-inline">
<input class="form-control" name="EMAIL" placeholder="Enter Email" onfocus="this.placeholder = '' onblur="this.placeholder = 'Enter Email '" required="" type="email">
<button class="click-btn btn btn-default"></button>

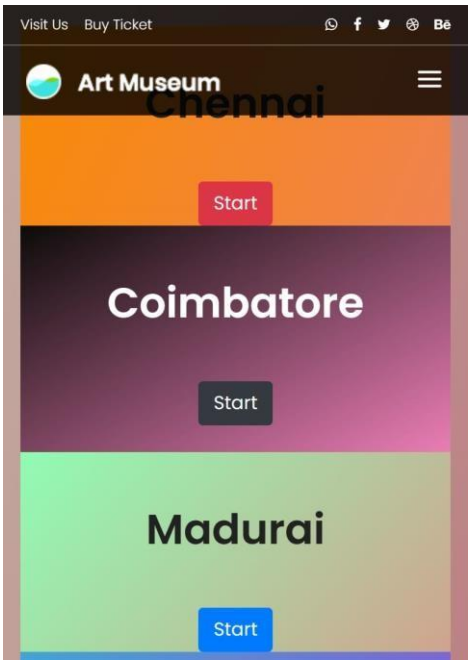
<input name="b_36c4fd991d266f23781ded980_aefe40901a" tabindex="-1" value="" type="text">

```
        </div>

                                                    <div
class="info"></div>
                                                        </form>
                                                    </div>
                                                </div>
                                            </div>

                                            <div class="col-lg-2 col-md-6 col-sm-6
social-widget">
                                                <div          class="single-footer-
widget">
                                                    <h6>Follow Us</h6>
                                                    <p>Let us be social</p>
                                                    <div   class="footer-social
d-flex align-items-center">
                                                        <a      href="#"><i
class="fa fa-facebook"></i></a>
                                                        <a      href="#"><i
class="fa fa-twitter"></i></a>
                                                        <a      href="#"><i
class="fa fa-dribbble"></i></a>
                                                        <a      href="#"><i
class="fa fa-behance"></i></a>
                                                    </div>
                                                </div>
                                            </div>

                                        </div>
                                    </div>
                                </footer>
                                <!-- End footer Area -->
```

```
                    <script src="static/js/vendor/jquery-2.2.4.min.js"></script>
                    <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"
integrity="sha384-
ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q
" crossorigin="anonymous"></script>
                    <script src="static/js/vendor/bootstrap.min.js"></script>
                    <script                              type="static/text/javascript"
src="https://maps.googleapis.com/maps/api/js?key=AIzaSyBhOdIF3Y9382fqJYt5I_s
swSrEw5eihAA"></script>
                    <script src="static/js/easing.min.js"></script>
                    <script src="static/js/hoverIntent.js"></script>
                    <script src="static/js/superfish.min.js"></script>
                    <script src="static/js/jquery.ajaxchimp.min.js"></script>
                    <script src="static/js/jquery.magnific-popup.min.js"></script>
                    <script src="static/js/owl.carousel.min.js"></script>
                    <script src="static/js/imagesloaded.pkgd.min.js"></script>
                    <script src="static/js/justified.min.js"></script>
                    <script src="static/js/jquery.sticky.js"></script>
                    <script src="static/js/jquery.nice-select.min.js"></script>
                    <script src="static/js/parallax.min.js"></script>
                    <script src="static/js/mail-script.js"></script>
                    <script src="static/js/main.js"></script>
                </form>
            </body>
        </html>
```

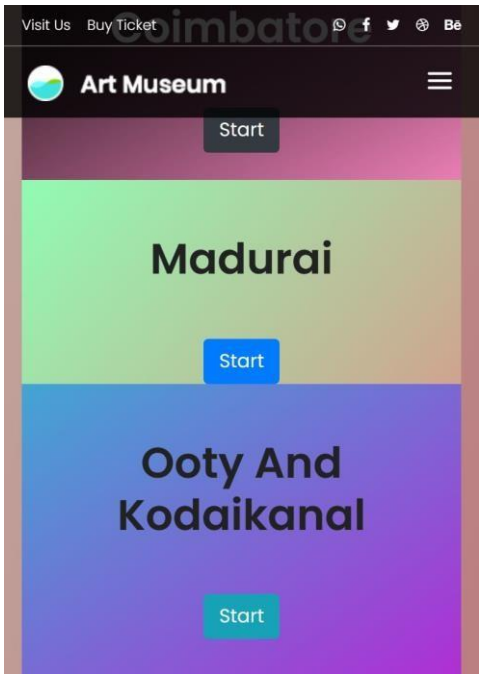
3.3.2 SAMPLE SCREENSHOTS


Visit Us Buy Ticket
Art Museum
Abstract
The Virtual Museum Android App is a mobile application designed to provide an immersive museum experience to users. Users can explore the virtual museum by navigating through different galleries and exhibits, interacting with objects, and learning about their history and significance. The app also includes audio and visual guides, as well as educational resources, to enhance the user's learning experience. Overall, the Virtual Museum Android App provides an engaging and educational way for users. The app would be designed to be user-friendly and accessible to a wide range of users, including students, researchers, and casual museum-goers. Overall, the virtual museum Android app would aim to provide a unique and engaging way for users to experience history and culture from the comfort of their own devices.


Visit Us Buy Ticket
Art Museum
Chennai
Start
Coimbatore
Start
Madurai
Start


Visit Us Buy Ticket
Art Museum
Museums in Tamilnadu
Brimming with history and culture, and soaked in spirituality, Tamil Nadu is a home to a number of exceptional and marvelous museums. Keeping its tourism notoriety into thought, the state proudly houses more than 25 enticing museums, observatories, and art galleries. For history and cultural buffs, these museums and art galleries in Tamilnadu are the treasure trove for a leisure-filled holidays worth a cherish. Indian Seashell Museum in Mahabalipuram, Fort Museum in Chennai, Wax World Museum in Ooty, and Gedee Car Museum in Coimbatore are just a couple of names when it comes to must-visit museums in Tamil Nadu. Whereas, Thanjavur Art Gallery in Thanjavur is one of the paramount museums which confers knowledge


Visit Us Buy Ticket
Art Museum
GOVERNMENT MUSEUM CHENNAI
Domiciled across the imposing Pantheon Complex, Chennai, Government Museum or Madras Museum holds a superb collection of ancient archaeology, sculptures, botany, geology, and anthropology in its 46 galleries.
Mon - Fri: 10.00am to 05.00pm Sat: 12.00pm to 03.00 pm Sunday Closed
VIEW DETAILS



GEDEE CAR MUSEUM COIMBATORE

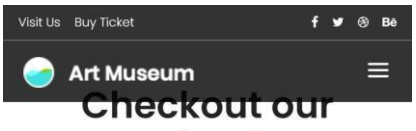
For all the automobile fanatics, Gedee Car Museum delights you with its collection of more than 70 antique cars including the resplendent replica of first car of the world - 1886 Benz Patent Motorwagen. Mon - Fri: 10.00am to 05.00pm Sat: 12.00pm to 03.00 pm Sunday Closed

VIEW DETAILS

GANDHI MUSEUM MADURAI

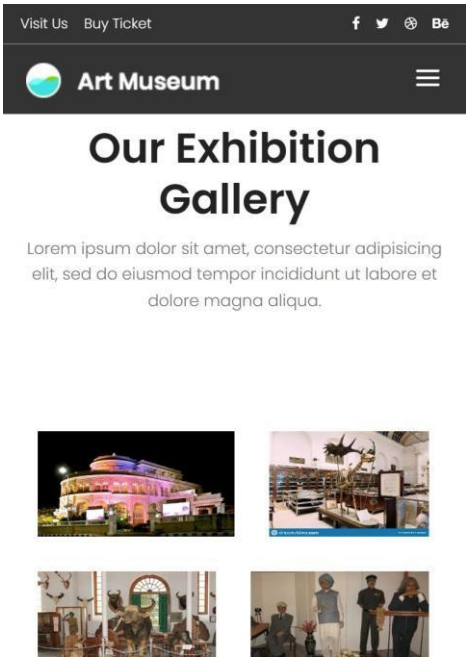
Established in 1959 in the memory of the Mahatma Gandhi, this Museum exhibits paintings, manuscripts, and sculptures along with the blood-stained cloth worn by Gandhi ji when assassinated. Mon - Fri: 10.00am to 05.00pm Sat: 12.00pm to 03.00 pm Sunday Closed

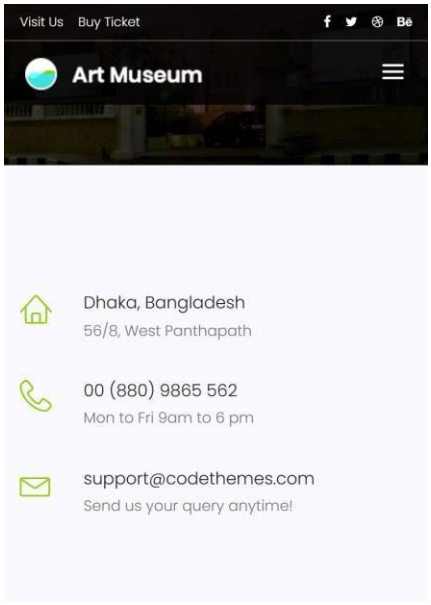
VIEW DETAILS

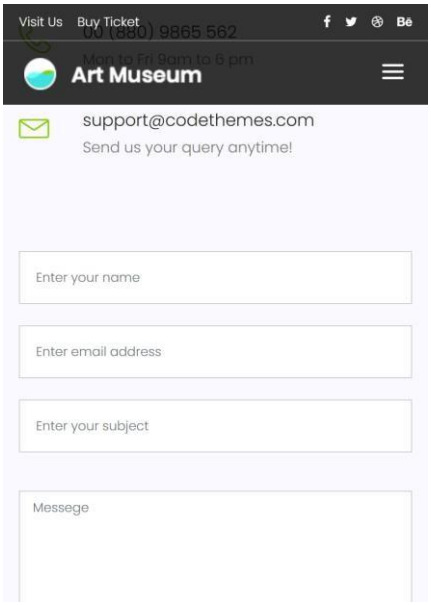


FOREST COLLEGE MUSEUM COIMBATORE


Visit Us Buy Ticket
Art Museum
Madurai Tamil Nadu
Such is the charm of Government Museum in Chennai (Madras Museum) that from over decades it has been one of the top attractions in Tamil Nadu for all ages of people. Established during the British Epoch in 1851, the museum is an ideal place for the people who are inclined towards history and art and are in a search for any historical site where they can blindly take their Tamil Nadu holidays. Being the 19th-century repository, the Government Museum is reckoned amongst the oldest museums in India and is known for holding a wide variety of arts and artefacts relating to human history and culture. The Indo-Saracenic tree-studded infrastructure of this museum has six buildings and 46 galleries which


Visit Us Buy Ticket
Art Museum
Our Exhibition Gallery
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.


Visit Us Buy Ticket
Art Museum
Dhaka, Bangladesh
56/8, West Panthapath
00 (880) 9865 562
Mon to Fri 9am to 6 pm
support@codethemes.com
Send us your query anytime!


Visit Us Buy Ticket
Art Museum
support@codethemes.com
Send us your query anytime!
Enter your name
Enter email address
Enter your subject
Messege

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