

**Mobile Application & Development**

**Project Title:**

**Event Ticket Booking**

**Team:**

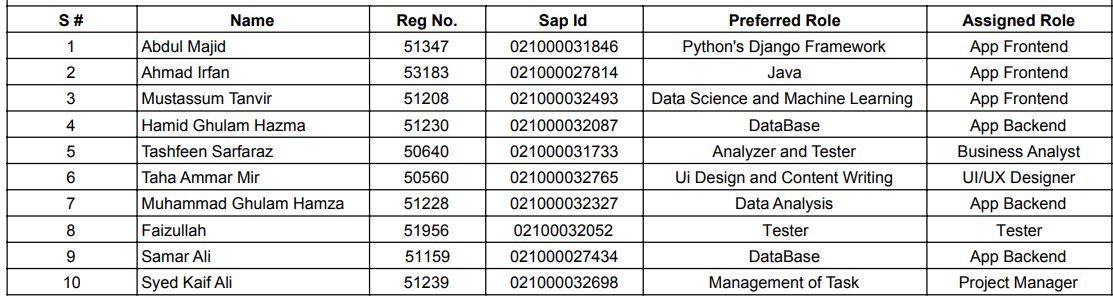
**Games of Codes**

**Tag line: Brace Yourself, Bugs Are Coming**

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**Submit Date:**

**Group Members Details:**

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**Timeline:**

Here's the timeline for our project presented in a table format.

| **Week** | **Tasks** |
| --- | --- |
| **1** | - Define project scope and requirements.  - Create basic wireframes and design mockups.  - Gather initial feedback on design concepts. |
| **2** | - Set up the development environment.  - Implement essential front-end features.  - Prioritize key user interface elements. |
| **3** | - Design and set up a basic server-side architecture.  - Implement core back-end functionalities.  - Integrate front-end and back-end components. |
| **4** | - Address critical bugs and issues.  - Deploy the app-to-app stores. |
| **Post-launch** | - Monitor app performance and user feedback.  - Address critical post-launch issues promptly.  - Plan for immediate updates and bug fixes. |

**Project Introduction:**

Our aim to develop an application for android users “Event Ticket Book” in the vibrant world of entertainment and live experiences like **concerts and movie shows**, “Event Ticket Booking” mobile app emerges as a dynamic solution designed to elevate the way users discover, engage, and participate in events. With a primary focus on seamless user experiences and cutting-edge technology, this Android-based app seeks to revolutionize the event ticketing landscape.

**Overview:**

The “Event Ticket Booking” app is a comprehensive mobile platform that empowers users to effortlessly explore and secure tickets for a diverse range of events, from concerts and shows productions. Tailored for the Android ecosystem, the app combines intuitive design, robust features, and secure payment processing to create an immersive and hassle-free ticket booking experience.

**Vision:**

Our vision behind the “Event Ticket Booking” mobile app is to provide a user-centric, technologically advanced platform that redefines how individuals connect with the events that matter to them. By seamlessly blending functionality, security, and engagement, the app aspires to become the go-to destination for event enthusiasts, enhancing their overall experience from discovery to attendance. Through continuous improvement and innovation, the Event Ticket Booking app aims to set new standards in the realm of mobile event ticketing.

**Problem Statement & Scope (Why):**

In the dynamic landscape of entertainment and live events, users often face challenges in seamlessly booking tickets for their desired concerts, shows, or events. Existing platforms may lack user-friendly interfaces, efficient seat selection options, and secure payment processing. Furthermore, the absence of digital ticketing solutions often results in inconvenience for users. There is a need for a comprehensive mobile app that addresses these pain points and enhances the overall ticket booking experience.

**Scope & Project Objectives:**

The "Event Ticket Booking" mobile app aims to revolutionize the ticketing experience by providing a user friendly platform for seamless event booking. The app boasts a diverse event catalog, interactive seat selection, and secure payment processing, ensuring a comprehensive and enjoyable booking process. The implementation of digital ticketing with QR codes enhances convenience and safety. User profiles, real-time notifications, and social sharing features foster community engagement. A feedback and reviews system promotes user involvement and continuous improvement. Offline ticket access ensures accessibility, and integration with calendar apps streamlines schedule management. Analytics tools offer valuable insights, facilitating data-driven enhancements for an optimal user experience.

1. **User friendly Ticket Booking:**

Develop a user-friendly mobile app that simplifies the process of booking tickets for events, concerts, and shows, ensuring a seamless and enjoyable experience for users.

1. **Diverse Event Catalog:**

Curate and maintain a comprehensive database of events, concerts, and shows across various genres and locations to offer users a diverse range of options for booking

1. **Interactive Seat Selection:**

Implement an interactive seat selection feature, allowing users to view and choose their preferred seats through detailed seating maps, enhancing the ticket booking process.

1. **Secure Payment Processing:**

Payments will be processed via external messenger i.e. Whatsapp. Upon ticket confirmation, the user will send information to event manager and the proof of ticket booking in form of screenshot. After receiving the screenshot, the event manager will lock the booking.

1. **Digital Ticketing with QR Codes:**

Implement a digital ticketing system that generates QR codes for each booked ticket, providing users with a convenient and contactless method for ticket validation at event entry points.

1. **User Profiles and Preferences:**

Enable users to create and manage profiles with preferences depend on user need or allowing for personalized recommendations based on their favorite genres, artists, and event types.

1. **Social Sharing Integration:**

Integrate social sharing features to enable users to share their booked events on popular social media platforms, promoting the app and fostering a sense of community around events.

1. **Offline Ticket Access:**

Develop a mechanism that allows users to access their digital tickets offline, ensuring accessibility in areas with limited or no internet connectivity.

1. **Analytics and Reporting:**

Develop a mechanism that allows users to access their digital tickets offline, ensuring accessibility in areas with limited or no internet connectivity.

**Project Requirements Tools and Technologies:**

1. **Development Platform - Android Studio:**

Android Studio is the official Integrated Development Environment (IDE) for Android app development. It provides a robust set of tools for designing, coding, testing, and debugging Android applications,

1. **Frontend Development - Kotlin and XML:**

Kotlin is the official programming language for Android app development. Known for its conciseness, safety features, and interoperability with Java, Kotlin is a versatile language that enhances developer productivity. It offers modern language features, expressive syntax, and strong support from the Android community, making it an excellent choice for crafting the frontend of the Event Ticket Booking app.  
**XML:**XML is utilized for designing the layout and structure of Android app interfaces. In combination with Kotlin, XML defines the visual components, views, and their attributes within the app's frontend. XML provides a standardized format for expressing the presentation of the user interface, ensuring a clear separation of the app's structure from its logic.

1. **Backend Development - Node.js or Django:**

Node.js and Django are backend frameworks that facilitate server-side development. Node.js is known for its event-driven architecture and JavaScript support, while Django, based on Python, offers a high-level, clean, and pragmatic design for efficient backend development.

1. **Database - MySQL:**

MongoDB, a NoSQL database, and MySQL, a relational database, serve as data storage solutions. MongoDB's flexible, schema-less structure suits dynamic data, while MySQL's structured tables excel in handling relational data.

1. **QR Code Generation - ZXing library:**

The ZXing (Zebra Crossing) library is a versatile tool for generating QR codes within the app. It provides an open-source, multi-format 1D/2D barcode image processing library, facilitating efficient QR code implementation.

1. **Push Notifications - Firebase Cloud Messaging (FCM):**

The ZXing (Zebra Crossing) library is a versatile tool for generating QR codes within the app. It provides an open-source, multi-format 1D/2D barcode image processing library, facilitating efficient QR code implementation.

1. **User Interface Design - Figma:**

Sketch and Adobe XD are powerful design tools for creating visually appealing and user-friendly interfaces. They offer features for wireframing, prototyping, and collaboration, aiding in the creation of an intuitive and aesthetically pleasing app design.

1. **Version Control – Git:**

Git is a distributed version control system essential for tracking changes in the codebase. It enables collaborative development, allowing multiple developers to work on the same project simultaneously while maintaining a history of changes for easy debugging and rollback.

1. **Testing Frameworks - JUnit and Espresso:**

JUnit is a widely-used testing framework for Java applications, ensuring the reliability of the app's backend logic. Espresso, a UI testing framework for Android, validates the user interface's functionality and responsiveness, ensuring a smooth user experience.

1. **Deployment and Hosting - Google Play Store:**

The Google Play Store serves as the deployment platform for Android apps. It provides a centralized marketplace for users to discover, download, and install the app on their Android devices, ensuring widespread accessibility.

**Acceptance Criteria & Outcomes:**

The Event Ticket Booking mobile app aspires to redefine the ticketing experience, offering users a seamless and enriching journey from event discovery to attendance. To ensure the success of this endeavor, a set of acceptance criteria and desired outcomes have been established, focusing on user satisfaction, functionality, and overall app performance.

**Criteria and Outcomes:**

**Intuitive Event Discovery:**

**Outcome:** Users can effortlessly browse and discover events based on categories, locations, and dates.

**Acceptance Criteria:** The app provides a user-friendly interface with easy navigation, filters, and search options, ensuring users can explore and find events with minimal effort.

**Seat Selection and Booking:**

**Outcome:** Users can select seats, view seating maps, and successfully complete the booking process.

**Acceptance Criteria:** The app integrates an interactive seating map, allowing users to choose seats, adjust quantities, and proceed to payment with a clear and intuitive flow

**Secure Payment Processing:**

**Outcome:** Transactions are secure, and users receive payment confirmations.

**Acceptance Criteria:** User will pay the amount of ticket then share proof with event manager through WhatsApp or any other messenger app. Users receive clear payment confirmation messages and emails.

**Digital Ticketing with QR Codes:**

**Outcome:** Users receive digital tickets with QR codes for seamless event entry.

**Acceptance Criteria:** Upon successful booking, users receive digital tickets with QR codes that can be easily accessed within the app and through confirmation emails.

**User Profiles and Preferences:**

**Outcome:** Users can create, manage profiles, and receive personalized recommendations.

**Acceptance Criteria:** The app allows users to set preferences, save favorite genres or artists, and receive event recommendations based on their profile information.

**Real-time Notifications:**

**Outcome:** Users receive timely and relevant notifications.

**Acceptance Criteria:** The app sends push notifications for booking confirmations, event updates, and personalized recommendations, enhancing user engagement.

**Social Sharing Integration:**

**Outcome:** Users can share booked events on social media platforms.

**Acceptance Criteria:** The app integrates social sharing features, enabling users to share their booked events with friends and followers on platforms like Facebook, whatsapp, or Instagram.

**Offline Access to Tickets:**

**Outcome:** Users can access digital tickets offline.

**Acceptance Criteria:** The app enables users to access their digital tickets without an internet connection, ensuring seamless entry even in areas with limited connectivity.

**Event Ticketing Application Features**

**Event Managers**

* + Account creation
  + Log in, log out.
  + Reset password.
  + Add events.
  + Approve tickets for users.
  + Remove events.

|  |  |  |
| --- | --- | --- |
| Id | Name | Description |
| 1 | Account creation | Username, email id, phone number, password. Add account to the database |
| 2 | Log in | User validation |
| 3 | Log out | Close user account on app |
| 4 | Approve tickets | Approve temporary tickets of user when booking is requested |
| 5 | Cancel tickets | Cancel temporary tickets of user when booking is requested |
| 6 | Remove events | Delete an event |

**Users**

* View current events.
* View upcoming events.
* View past events.
* View favorite events.
* Remove events from favorites.
* Buy ticket for an event.
* Get QR code for an event.
* Sort event on basis of locale, event type, price
* View events by categories

|  |  |  |
| --- | --- | --- |
| Id | Name | Description |
| 1 | Open events | Event title, description, space, price, location, favorite them |
| 2 | View current events | All current happening events |
| 3 | View upcoming events | All events that are yet to happen |
| 4 | View past events | All past events that the user has booked |
| 5 | View favorite events | All events that the user has favorited |
| 6 | Remove events from favorites | Remove events from favorites list |
| 7 | Buy ticket for an event | Generate and send a temporary ticket to the event manager, show booked when approved by manager, show pending until approved, show buy button again if not approved |
| 8 | Generate QR code | Generate QR code that displays event name, price and approved tag |
| 9 | Sort events | Sort events on basis of area, type of event and ticket price |
| 10 | View events by categories | A categories page that shows events as they are categorized |