# Internship Report

## Prodigy Infotech

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## Acknowledgment

I, Shah Shashishekhar, successfully completed my internship at Prodigy Infotech in Android Development. This internship provided me with valuable industry exposure and hands-on experience, allowing me to enhance my technical and problem-solving skills in mobile application development.  
  
Internships play a crucial role in an engineering student’s journey, bridging the gap between academic learning and real-world applications. Throughout this self-paced internship, I had the opportunity to explore and apply various technologies relevant to Android development, such as Kotlin, Android Studio, UI/UX Design, and Firebase Integration.  
  
I extend my sincere gratitude to everyone who contributed to my learning experience, offering guidance and support throughout the internship. The opportunity to work independently while collaborating remotely has significantly strengthened my ability to manage tasks effectively. Maintaining a GitHub repository and documenting each completed task also reinforced the importance of structured project management and professional presentation.  
  
I look forward to applying the skills and knowledge gained from this internship to future projects and professional endeavors, further refining my expertise in my field.

## Internship Certification

This is to certify that Shah Shashishekhar, a Bachelor of Technology student in Computer Engineering at Birla Vishvakarma Mahavidyalaya, has successfully completed his internship in Android Development (Kotlin, Android Studio) from 01/06/2024 to 30/06/2024 at Prodigy Infotech.  
  
During the internship, Shah Shashishekhar demonstrated his commitment by completing the assigned projects within the stipulated time while adhering to the company’s rules and regulations. Throughout his internship, he was exposed to various Android development processes and consistently displayed qualities of diligence, hard work, and curiosity.  
  
We wish him continued success in his future endeavors and career.

## Profile of Projects

### Calculator Application

• Developed an Android calculator app using Kotlin and Android Studio.

• Implemented basic arithmetic operations such as addition, subtraction, multiplication, and division.

• Integrated advanced features like percentage calculation and memory functions (store/recall values).

• Designed a user-friendly interface with Material Design principles.

• Optimized the app for smooth performance and tested for edge cases like division by zero.

### To-Do List Application

• Built a To-Do List app that allows users to add, edit, delete, and mark tasks as complete.

• Used RecyclerView for efficient list management and dynamic UI updates.

• Implemented local storage using Room Database to retain user tasks.

• Enhanced the UX with custom animations and a clean design.

### Stopwatch Application

• Developed a fully functional stopwatch with start, pause, reset, and lap functionalities.

• Utilized Handlers and Runnable threads to ensure accurate time tracking.

• Designed an interactive UI with a digital time display.

• Allowed users to record multiple lap times and display them in a list.

### Tic-Tac-Toe Game

• Designed and implemented a Tic-Tac-Toe game for Android.

• Supported Player vs Player mode with real-time updates.

• Used GridLayout and Event Listeners to manage game logic.

• Included a game reset function and win condition checks for an optimal user experience.

## Tools & Technologies Used

• Kotlin – Programming language for Android development.

• Android Studio – IDE for designing and building Android applications.

• Material Design – UI/UX design principles for a modern look and feel.

• Firebase – For database and authentication (where applicable).

• Room Database – Local storage for To-Do List app.

• GitHub – Version control and project documentation.

## Conclusion

This internship at Prodigy Infotech in Android Development has been an insightful and enriching experience. Developing applications like Calculator, To-Do List, Stopwatch, and Tic-Tac-Toe has allowed me to apply theoretical concepts to real-world mobile development. I have gained expertise in Kotlin, Android UI/UX design, database management, and performance optimization.  
  
With the knowledge and hands-on experience acquired, I am confident in my ability to develop scalable and efficient Android applications. This internship has not only enhanced my technical proficiency but also honed my problem-solving and project management skills, which will be invaluable for my future career.  
  
I am grateful for this opportunity and look forward to leveraging these skills in future projects and professional roles.