

AN INTERNSHIP REPORT

**SUBMITTED TO THE SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE
IN THE FULFILLMENT OF THE REQUIREMENT**

OF

THIRD YEAR OF COMPUTER ENGINEERING

SUBMITTED BY

Name of Student: Vinay Tiparadi

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WITH INDUSTRY

Company Name: ShellCode Solutions

Telephone No: 8097355922

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UNDER SUPERVISION OF

Supervisor Name: Akash Jawalkar

Mobile No: 8010658943

Start Date for Internship: 13/10/2022

End Date for Internship: 20/12/2022

Report Date: 03/27/2023



Sinhgad Institutes

**DEPARTMENT OF COMPUTER ENGINEERING
STES'S SINHGAD INSTITUTE OF TECHNOLOGY AND SCIENCE
NARHE, PUNE - 411041**

2022-2023

CERTIFICATE OF COMPLETION



REF NO: SCSLINC065

Date: 25th Jan. 2023

CERTIFICATE OF COMPLETION

This certificate is awarded to **Vinay Tiparadi** for successfully completing his period during **13th October 2022 to 20th December 2022**.

We appreciate his focus towards learning and analysing the best for the product and completing his internship along with the report submission.

Vinay's project title was **"App development using Flutter & Firebase"**.

During his tenure as technical candidate, we found his efforts sincere, meticulous and result oriented.

We wish all the best in the future endeavors.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Akash Jawalkar'.

Akash Jawalkar
Administrator Head
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ACKNOWLEDGEMENT

I would like to thank **Akash Jawalkar**, of **ShellCode Solutions** for giving me the opportunity to do an internship within the organization.

I also would like to thank all the people that worked along with me in the organization with their patience and openness they created an enjoyable working environment.

It is indeed with a great sense of pleasure and immense sense of gratitude that I acknowledge the help of these individuals.

I am highly indebted to Principal **Dr. S. D. Markande** and Vice-principal **Prof. S. A. Kulkarni**, for the facilities provided to accomplish this internship.

I would like to thank my Head of the Department **Dr. Geeta S. Navale** for her constructive criticism throughout my internship.

I would like to thank **Mr. Shrikant A. Shinde**, Internship Coordinator Department of Computer Engineering for his support and advices to get and complete internship in above said organization.

I am extremely grateful to my department staff members and friends who helped me in successful completion of this internship.

Name of Student: Vinay Tiparadi

Place: Pune

Date: 03/27/2022

COMPANY/ORGANIZATION BACKGROUND

Name of Company	ShellCode Solutions
Company address	Building no. 28, A/3, Brindavan Complex, Thane Mumbai 400093
Contact number of company	+91 8097355922
Company background	<p>IT Services</p> <p>ShellCode Solutions' next-generation solutions and the hands-on latest technology enable them to deliver the best possible outcome. With their innovative solutions, they shape clients' future so that they emerge as high performing businesses.</p> <p>Harshal Adarkar Founder & Director</p> <p>Services provided by ShellCode Solutions:</p> <ul style="list-style-type: none"> • App Development • Web Development • Designing • Search Engine Optimization <p>Our team is the driving force of Shellcode. We're a close-knit bunch of talented individuals with a strong passion for our specialties and a dedication to delivering exceptional results. Each of us brings our unique skill set and love for what we do. Because our difference lies in how much we care.</p>
Name of supervisor	Akash Jawalkar
Contact number of supervisor	+91 8010658943
Email ID of supervisor	akashjawalkar100@shellcode.co.in

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1. INTRODUCTION TO INTERNSHIP

During my internship, I had the opportunity to work on multiple cross-platform app development projects. One of the most challenging and rewarding projects was an expense management app for contractors. The app aimed to simplify the process of managing daily expenses for contractors by providing a user-friendly platform.

The app featured a comprehensive expense tracking system, allowing users to log and categorize their expenses in real-time. Additionally, the app provided an interface to manage the revenue earned from clients, making it a one-stop solution for contractors' fiscal management needs. The app also had a subscription model, where users were required to purchase a subscription before they could access the app's features. This added a layer of monetization to the app, allowing the contractors to make the most of the service and generate additional revenue.

The app also included the ability to generate PDFs of quotations, receipts, and payments received or paid to others, providing users with a complete record of their financial transactions. The app was a full-stack application, and I implemented both the front-end and back-end using the Flutter framework and Dart programming language. The app was designed to work on both Android and iOS, providing users with the flexibility to use the app on their preferred platform.

The app used Firebase as its backend, leveraging the power and reliability of Google's cloud services to deliver an efficient and secure user experience. The referral system incentivized users to refer others to the app, offering cashback to users who successfully referred new users. This made it an excellent way to increase the app's user base and generate additional revenue.

In conclusion, working on this expense management app was an enriching experience, and I was able to apply my technical skills, creativity, and problem-solving abilities to deliver a product that met the needs of its target audience.

2. MODE OF INTERNSHIP

Mode of Internship: Online (Work from Home)

3. DOMAIN OF INTERNSHIP

Domain:

Cross-Platform Application Development

Cross-platform application development refers to the process of creating software applications that can be run on multiple operating systems (OS) and platforms, using a single codebase. The main advantage of cross-platform development is that it allows developers to reach a wider audience, as they can create applications that can be used on multiple devices, including smartphones, tablets, desktop computers, and even wearables.

There are different approaches to cross-platform application development, including:

1. **Hybrid Mobile Apps:** This approach involves building applications using web technologies (such as HTML, CSS, and JavaScript) and wrapping them in a native container that can be installed on different mobile platforms. Hybrid mobile apps can provide native-like performance and access to device features, such as camera and location.
2. **Native Cross-Platform Apps:** This approach involves using cross-platform frameworks, such as Flutter, React Native or Xamarin, to create applications that can run natively on multiple platforms. These frameworks provide a way to write code once and deploy it across different platforms, while still providing access to native APIs and features.
3. **Progressive Web Apps (PWA):** PWAs are web applications that are designed to be used on mobile devices and can be installed on the device's home screen.

Sub Domain:

Develop a platform for Contractors to manage their daily expense, revenue, generate daily report in PDF format, subscription model and referral system.

4. OBJECTIVES OF INTERNSHIP

1. Upgrading from paper and Excel-based management to a user-friendly application for simpler operations.
2. To provide a user-friendly platform for contractors to log and categorize their expenses and revenue in real-time with intuitive user-interface.
3. To offer a subscription-based monetization model.
4. To implement a referral system to incentivize users to refer others to the app.
5. To generate PDFs of quotations, receipts, and payments.
6. To implement a full-stack application using the Flutter framework and Dart programming language.
7. To integrate Firebase for the backend to deliver an efficient and secure user experience.

5. MOTIVATION/SCOPE OF INTERNSHIP

The software engineering internship I joined had a focus on developing cross-platform applications and aimed to provide hands-on experience in developing real-world projects. During the internship, I had the opportunity to work on multiple projects, with one of them being a comprehensive expense and revenue management app for contractors. This project not only challenged me to apply my technical skills but also provided an opportunity to think creatively and solve real-world problems.

The app I developed was designed to make the lives of contractors easier by providing a user-friendly platform for them to log and categorize their expenses in real-time. In addition to this, the app allowed contractors to manage the revenue earned from clients and offered a subscription-based monetization model. The referral system incentivized users to refer others to the app, adding an extra layer of monetization to the project. The app also generated PDFs of quotations, receipts, and payments, making it easier for contractors to manage their financial transactions.

One of the key objectives of the internship was to develop a full-stack application, and I was able to achieve this by using the Flutter framework and Dart programming language. This provided me with exposure to both the front-end and back-end aspects of app development, and I was able to apply my skills in a practical setting. Additionally, the app was designed to work on both Android and iOS platforms, providing me with the opportunity to understand the nuances of cross-platform app development.

The app was also integrated with Firebase, a cloud-based service, for the backend. This provided me with exposure to cloud-based services and their role in delivering efficient and secure applications. Overall, the internship provided a comprehensive learning experience and exposed me to various aspects of software engineering, from design and development to testing and deployment. I am grateful for the opportunity to have worked on this project, and it has motivated me to continue learning and exploring new frontiers in the field of software engineering.

6. METHODOLOGIES LEARNT IN INTERNSHIP

During my internship, I worked on multiple cross-platform app development projects. For these projects, I implemented the Agile methodology to ensure the projects were delivered effectively and efficiently.

The Agile methodology involves several steps, including:

- **Sprint Planning:** I held a meeting with the team to plan the next sprint's tasks and priorities. We reviewed customer requirements, broke down tasks into smaller chunks, and estimated the time required to complete each task.
- **Daily Stand-ups:** I participated in daily stand-up meetings with the team to discuss progress, identify any obstacles, and make sure everyone was on the same page.
- **Sprint Execution:** I worked with the team to complete the tasks assigned during the sprint planning. This involved coding, testing, and fixing bugs.
- **Sprint Review:** At the end of the sprint, we reviewed our progress and demonstrated the completed tasks to the customer. This allowed the customer to provide feedback and helped us identify areas for improvement.
- **Sprint Retrospective:** I reflected on our performance during the sprint with the team and identified areas for improvement. This helped us continuously adapt and improve our processes.

By following the Agile methodology, I was able to ensure that the projects I worked on were delivered incrementally and that the customer's requirements were met. The focus on collaboration and customer feedback also helped us deliver the projects on time and to a high standard.

7. OUTCOME/RESULTS OF INTERNSHIP

During my time as an intern, I worked on 3 cross-platform app development projects, one of which was an application for contractors. This project allowed me to not only showcase my skills, but also learn and grow as a software developer. The app I developed was aimed at helping contractors manage their daily expenses and revenue, while also providing them with an easy way to maintain a record of their expenses. The app included a subscription model, referral system, and the ability to generate PDFs of quotations, receipts, and payments.

I implemented the front-end and back-end of the application using the Flutter framework and Dart programming language. This was a full-stack application that works on both Android and iOS platforms and uses Firebase for the backend.

During the course of the project, I had the opportunity to use the Agile development methodology, which allowed me to rapidly iterate and deliver value to users. This project was a great opportunity for me to not only put my skills to the test, but also to learn and grow. I was able to learn a lot about the Flutter framework and how it can be used to build scalable and efficient applications. Overall, I am grateful for the opportunities and experiences I gained during my internship, and I am confident that they will serve me well in my future endeavors as a software developer.

1. Simplified operations, leading to increased efficiency and productivity.
2. Reduced errors and inaccuracies associated with manual paper and Excel-based methods.
3. Potential cost savings from reduced paper usage and manual labor.
4. Developed a user-friendly platform for contractors to log expenses and revenue in real-time.
5. Ability to offer ongoing updates and improvements to subscribers.
6. Improved scalability and reliability through Firebase's cloud-based infrastructure.
7. Enhanced user experience through faster app performance and real-time data synchronization.

8. SUGGESTIONS FOR IMPROVEMENT BY INDUSTRY

Supervisor suggested the following for my betterment:

- Focus on learning and growth: Take advantage of the opportunity to gain experience and grow as a software developer. This could include learning about new technologies, programming languages, or development methodologies.
- Collaborate and communicate effectively: Clear and effective communication and collaboration are key, both within the team and with stakeholders.

9. CONCLUSION

As I reflect on my internship experience, I am filled with gratitude for the opportunities and support provided by my employer and colleagues. During my time as an intern, I was able to work on multiple cross-platform app development projects, which allowed me to hone my skills in the Flutter framework and Dart programming language. I was able to learn a lot of new things while working on various features such as managing expenses, subscription models, referral systems, generating PDFs, and implementing front-end and back-end using Firebase.

The Agile development methodology that I used during the projects helped me to understand the importance of collaboration, flexibility, and customer focus in software development. I was able to see the results of my efforts as the app became more and more user-friendly and scalable with each iteration.

I am proud to say that I was able to make a meaningful contribution to the organization, and I am grateful for the feedback and suggestions provided by my employer and colleagues. Their guidance has helped me to grow as a software engineer and has provided me with a solid foundation for my future career.

In conclusion, my internship has been a fantastic learning experience, and I am eager to continue my growth as a software engineer. I am grateful for the support and opportunities provided during my time as an intern and look forward to applying what I have learned to future projects.

REFERENCES

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ANNEXURE I


INTERNSHIP DIARY

Name of Student: Vinay Tiparadi

Mode of Internship: Online (Work from Home)

Name of Supervisor: Akash Jawalkar

Name of Organization: ShellCode IT Services Pvt. Ltd.

Sr. No.	Date	Description of Activities done during the day, Knowledge acquired, Practical Skills obtained and plan for next day	Signature of Supervisor	Signature of Faculty Coordinator
1	13/10/2022	Understand the codebase of UI and connect application with backend.		
2	14/10/2022	Authentication (Mobile Phone)		
3	15/10/2022	Authentication (Mobile Phone)		
4	17/10/2022	Authentication (Google)		
5	18/10/2022	Registration of User		
6	19/10/2022	Work on Splash Screen		
7	20/10/2022	Learn image_picker library and implement saving images to storage.		
8	21/10/2022	Start with Client Module		
9	22/10/2022	Implement client addition, edit profile.		
10	24/10/2022	Delete Client from database.		
11	25/10/2022	Start Quotation Module		
12	26/10/2022	Learn PDF generation in app.		
13	27/10/2022	Quotation Module particulars		
14	28/10/2022	Quotation Module notes.		
15	29/10/2022	Work on PDF generation.		
16	31/10/2022	Complete quotation PDF generation.		
17	01/11/2022	Add more features in Quotation module.		
18	02/11/2022	Add more features in Quotation module.		
19	03/11/2022	Add more features in Quotation module.		
20	04/11/2022	Add more features in Quotation module.		

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21	05/11/2022	Start with Staff Module
22	06/11/2022	Staff Module View Screen, Add Screens
23	07/11/2022	Staff Module Delete functionality and misc.
24	08/11/2022	Vendor Module
25	09/11/2022	Material Module (add sites, fetch site data, add materials, delete material)
26	10/11/2022	Material Module (display total amt dynamically after adding and deleting materials, implement edit material functionality, delete sites from material), New project DB design and connect to backend
27	11/11/2022	Mobile Phone auth, Register Screen
28	12/11/2022	Order module, Withdraw screen, Razorpay integration
30	14/11/2022	Filtering, PDF generation.
31	15/11/2022	Change Wallet logic, Clean up code, Shop Module
32	16/11/2022	Fix login persistence. Work on Google Maps implementation for shop.
33	18/11/2022	Start Supplier Module.
34	19/11/2022	Start Supplier Module.
35	20/11/2022	Daily report module.
36	21/11/2022	Daily report module.
37	22/11/2022	Daily report module.
38	23/11/2022	Daily report module.
39	25/11/2022	Shop: Fetch and display data from maps.
40	26/11/2022	Work on Shop details page
41	27/11/2022	Other Project changes.
42	28/11/2022	Work on more changes and inventory part of Shop.

43	29/11/2022	Add more functionality to inventory and design new card.		
44	30/11/2022	New changes and feature addition in daily report module.		
45	01/12/2022	Changes in Vendor Module and new option to assign site per vendor, work on vendor payment by site.		
46	02/12/2022	Revenue vendor sub module.		
47	03/12/2022	Revenue sub module.		
48	05/12/2022	Revenue sub module, User Profile edit.		
49	06/12/2022	Revenue Module		
50	07/12/2022	Revenue Module		
51	08/12/2022	Write future function to get data of client using site name.		
52	09/12/2022	Home Screen summary.		
53	10/12/2022	Home Screen summary.		
54	12/12/2022	Razorpay Integration, Subscription Module.		
55	13/12/2022	Refer and Earn Module		

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 13/12/2023

ANNEXURE II


ATTENDANCE RECORD

	Date																														
Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
October													P	P	P	P	P	P	P	P	P	P	H	P	P	P	P	P	P	H	P
November	P	P	P	P	P	P	P	P	P	P	P	H	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P		
December	P	P	P	H	P	P	P	P	P	H	P	P																			

P: Present

H: Sunday

A: Absent


Signature: 
 13/01/2023
 SHELLCODE IT SERVICES PVT. LTD.

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ANNEXURE III
EVALUATION SHEET

Internship Grading Sheet

Grading Area	Max Score	Score Given
Professionalism	10	10
Collaboration and teamwork	10	10
Communication skills	10	8
Technical skills	10	10
Initiative and productivity	10	10
Adaptability and problem-solving	10	10
Solved tickets on time	10	10
Learning and growth	10	10
Code review and debugging skills	10	10
Documentation and organization	10	10
Total	100	98

Signature: 
13/01/2023
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ANNEXURE IV

INTERNSHIP FEEDBACK



SITS's
Sinhgad Institute of Technology and Science Pune
 Department of Computer Engineering
 Academic Year 2022-23

Student Internship Feedback from Supervisor/Employer

Student/Intern Name: Vinay Tiparadi
 Organization Name: Shellcode Solution IT Services Pvt. Ltd.
 Dates of Internship: 13th Oct. 2022 to 13th Dec 2022
 Supervisor Name: Akash Jawalkar
 Supervisor Contact Details: 8010658943

This form is intended to help interns learn more about their strengths and the areas they might need to develop to be successful in the workforce after graduation. Supervisors are requested to complete the form and review it with their intern in a scheduled one-to-one meeting. Please evaluate your intern in the following areas:

	Excellent	Good	Satisfactory	Need Improvement
Critical Thinking/Problem Solving:				
Shows a sincere interest in understanding the organization, their role, and their assigned tasks		✓		
Practices sound judgment based on available information				
Demonstrates creativity in approaching tasks, solving problems, and overcoming obstacles		✓		
Seeks out resources and/or asks for help when unsure about how to proceed on tasks				
Communication/Leadership:				
Clearly and efficiently conveys ideas orally to persons inside and outside the organization	✓			
Communicates ideas clearly in writing in a manner suited to the intended audience	✓			
Manages their own emotions and works to understand and empathize with others	✓			
Takes initiative and seeks opportunities to contribute		✓		
Teamwork/Collaboration/Intercultural Fluency:				
Builds constructive working relationships with individuals		✓		
Demonstrates inclusiveness, sensitivity, and respect for individuals' differences			✓	
Contributes effectively to collaborative projects			✓	
Adapts well to emerging requests from managers, coworkers, and customers		✓		
Professionalism/Work Ethic/Technology:				
Demonstrates respect for organizational staff, policies, and norms		✓		
Maintains a regular schedule, makes up missed hours, and is punctual and present			✓	
Organizes and prioritizes work, manages time, and sees tasks through from start to finish		✓		

Identifies and effectively uses appropriate technologies and programs to complete work		✓		
Career Management:				
Accepts constructive feedback from others and is able to learn from mistakes			✓	
Self-advocates in a professional manner		✓		
Can identify their strengths and weaknesses		✓		
Can articulate next steps to further prepare them for their future	✓			

Comments:

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[Signature]
20/01/2023

Supervisor Name & Signature: Alcush Jowalican Date: 30th Jan. 2023