SJ INNOVATION

SJ INNOVATION PRIVATE LIMITED
CIN : U72200GA2018PTC013559
GSTIN : 30AAHCG3078Q1Z9

Date: 15th June 2023

TO WHOMSOVER IT MAY CONCERN

This is to certify that Mr. Mohammad Saeed, student of Master of Computer Applications (MCA) of Goa University, Goa, is currently undergoing his final semester project (Semester IV) at our company, SJ Innovation Private Limited from January - June 2023.

During his tenure he has met the expectations of his Team Lead and found to be regular and sincere.

This certificate is being issued on his request to be submitted with the project report at Goa University.

Yours Sincerely,

M.R Ranganekar

Mr. Madhav Ranganekar
Director
For SJ Innovation Private Limited

SJ INNOVATION PVT. LTD. GOA

Phone
(0832) 2776354
9923633235

Email
goa.info@sjinnovation.com

Corporate Office
Plot No L 66/1, Phase II D, Verna Industrial Estate, Verna Goa 403722

Registered Office
F. No. S-1, Allalsha Plaza, Cupangalli, Gogol, Fatorda, Goa 403601

GOA UNIVERSITY

GOA BUSINESS SCHOOL
CERTIFICATE OF EVALUATION

This is to certify that **Mr. Mohammad Saeed** has been evaluated for the project work titled "**Report of Internship done at SJ Innovation LLC**" undertaken at SJ Innovation LLC, Verna Goa in partial fulfilment for the award of the degree in Master of Computer Application.

Internal Examiner

Examiner

Date:
Place:

Dean Goa Business Scholl

INTERNSHIP REPORT

Mohammad Saeed
2131
SJ Innovation LLC Goa University

REPORT OF INTERNSHIP DONE AT SJ INNOVATION LLC PVT LTD

Submitted by
Mohammad Saeed
MCA Semester IV 2131

Under the guidance of
Mr. Akshay Niak
Tech Lead, SJ Innovation

GOA BUSINESS SCHOOL
Goa University Taleigao Plateau Goa-403206
JUNE 2023
GOA UNIVERSITY

CERTIFICATE OF INTERNSHIP

Hard copy of the Internship will be submitted on the day of presentation

GOA UNIVERSITY

GOA BUSINESS SCHOOL
CERTIFICATE OF EVALUATION

This is to certify that **Mr. Mohammad Saeed** has been evaluated for the project work titled "**Report of Internship done at SJ Innovation LLC**" undertaken at SJ Innovation LLC, Verna Goa in partial fulfilment for the award of the degree in Master of Computer Application.

Internal Examiner

Examiner

Date:
Place:

Dean Goa Business Scholl

ACKNOWLEDGEMENT

I would like to express my heartfelt gratitude to the following individuals and organizations who have been instrumental in making my internship at SJ Innovation a truly enriching experience.

First and foremost, I would like to thank Goa University for providing me with the opportunity to pursue this internship. The university's support and guidance have played a significant role in shaping my educational journey.

I would like to extend my deepest appreciation to my mentor, **Mr. Akshay Naik**, the tech lead at SJ Innovation. His expert guidance, patience, and willingness to share his knowledge have been instrumental in enhancing my technical skills and professional growth. I am truly grateful for his mentorship and the valuable insights he has provided.

I would also like to express my gratitude to **Mr. Amol Bhandari**, my manager at SJ Innovation, for his constant support and encouragement. His leadership and expertise have created an inspiring work environment, and I have learned a great deal from his guidance.

Furthermore, I would like to extend my thanks to **Mr. Shahed Islam**, the CEO of SJ Innovation, and **Ms. Shahera Choudhury**, the COO of SJ Innovation. Their vision, dedication, and commitment to excellence have provided me with a platform to showcase my skills and learn from industry leaders. I am truly honored to have had the opportunity to intern under their guidance.

I am extremely grateful to my family and friends for their unwavering support and encouragement throughout this internship. Their belief in my abilities and constant motivation have been invaluable to me.

Lastly, I would like to express my gratitude to the entire team at SJ Innovation for their warmth, collaboration, and support. Working alongside such talented and passionate professionals has been a truly rewarding experience.

Internship report

INTRODUCTION

I had the privilege of undertaking an internship in software development starting from January 16, 2023. This invaluable experience provided me with practical insights and hands-on experience in the field.

During my internship, I had the opportunity to work with a renowned organization and gain exposure to various aspects of the software development lifecycle. Working alongside experienced professionals, I enhanced my technical skills and problem-solving abilities.

I am grateful for the guidance and support I received throughout my internship, which contributed to my personal and professional growth. This internship has reinforced my passion for software development and equipped me with a strong foundation for my future career.

I extend my gratitude to all those who supported and encouraged me during this journey. Their belief in my abilities has been instrumental in my success.

COMPANY PROFILE

Name of Company	SJ Innovation Pvt Ltd
Founder of Company	Mr. Shahed Islam
Address of Company	Plot L-66/1, Phase II D, Verna Industrial Estate Verna Goa 403722
Phone Number	0832-2776354
Email id	goa.info@sjinnovation.com
Website	https://www.sjinnovation.com

Established in 2004, SJ Innovation have completed more than a decade in the software industry. We specialize in providing IT solutions worldwide having expertise in web and mobile development with end to end solutions.

Our head office is based in New York City with branches in Ukraine, India and Bangladesh. Our main focus always is to provide best services to our clients.

Our strength lies in our team members. We believe in applying new ideas and technologies to improve our team and client's satisfaction. Our project management team works out of the US office, offering you an overall better experience by effectively communicating your messages to the designer or developer.

We as a team collaborate with customers, support and grow with them to provide high quality work and ensure success. Moreover, we are constantly working on broadening our range of services and thriving to improving performance and maintaining long standing relationship with our customers. We are always ahead in keeping complete work status updated with our clients via email, chat, IM or Skype calls.

Our company continually works toward improving employee satisfaction and happiness, hence improving productivity and the quality of work.

Our services include:

Web Design and Development

Mobile App Design & Development (iOS, Android)

E-commerce Development

Quality Assurance
Outsourcing Partners
Website Maintenance
Open Source Customization
E-commerce Store Management

SJ Innovation currently has over 135 employees worldwide and continue to grow. All of our employees are experts in their field, offering you over 100 years combined experience.

Motto:

Employee Happiness Generates Client Success

Mission:

To continuously work hard towards client success. To have a happy productive workforce working together with the same vision.

Culture:

Be Humble - Be down to earth and respect all, leave no room for arrogance.

Do Great Things Together - Working with a team together is when you achieve great things

Work to make client successful - Client is the fuel of the company, making client successful will keep the company running.

Take Accountability - Make commitment to your responsibilities, be accountable for results and know you are in charge to take it to the finish line.

Embrace Challenge & Grow Yourself - Challenging yourself to learn new things will expand your horizon.

Help Each Other - True form of happiness is experienced when you help others.

WORK AT SJ INNOVATION PVT LTD

Task 1

During my internship, one of my primary tasks involved working with AWS (Amazon Web Services) to create an API that converted JSON file data to CSV format. Here is an overview of the process and services involved:

Services created: I set up the following AWS services for this task:
API Gateway: A gateway to receive data in JSON format from external tools, such as Postman, through the API link.
Lambda 1: A serverless function that checks if the received data is in JSON format. If it is, Lambda 1 converts the data to CSV format.
S3 bucket: An AWS storage service where the converted CSV data is sent and stored.
Lambda 2: Another serverless function that accesses the CSV data stored in the S3 bucket and displays it.

2. Process:
User input: Users input JSON data through external tools, such as Postman, and send it to the API Gateway.
Data validation: The API Gateway checks if the received data is in JSON format.
Conversion: If the data is in JSON format, it is forwarded to Lambda 1 for conversion from JSON to CSV.
Storage: The converted CSV data is sent and stored in the S3 bucket.
Data retrieval: Lambda 2 retrieves the CSV data from the S3 bucket.
Display: Lambda 2 displays the retrieved data, making it accessible for viewing.

For the implementation of the API I used the following tools and technologies: Postman, AWS CDK v2, and Python.

Postman: Postman is a popular collaboration platform that allows developers to design, test, and document APIs. It provides an intuitive user interface for sending HTTP requests, making it easier to interact with APIs during development. In your case, I used Postman to send JSON data to the API Gateway created as part of my task.

AWS CDK v2: The AWS Cloud Development Kit (CDK) is a framework that enables developers to define infrastructure resources in code. It allows you to provision and manage AWS resources using programming languages such as Python, TypeScript, or JavaScript. AWS CDK v2 provides an object-oriented approach to define AWS infrastructure and simplifies the deployment process. In your project, I utilized AWS CDK v2 to define and deploy the necessary AWS resources like API Gateway, Lambda functions, and an S3 bucket.

Python: Python is a popular, high-level programming language known for its simplicity and readability. It is widely used in various domains In my API task, i worked with Python to develop the API

Task 2 (My main Task) Part I:

The objective of this plugin was to integrate an AI tool called ChatGPT into the WooCommerce platform. Here's an overview of the functionality and features of the plugin:

Integration with ChatGPT: The plugin established a connection with the ChatGPT AI tool, allowing users to generate various content elements for their WooCommerce products.
Content Generation: Using the ChatGPT integration, the plugin facilitated the generation of the following content elements based on user input:

Full Description: The plugin generated comprehensive and detailed descriptions for each WooCommerce product, leveraging the capabilities of ChatGPT.

Short Description: Alongside the full description, the plugin utilized ChatGPT to generate shorter, summarized descriptions to provide a concise overview of the product.

Tags: ChatGPT assisted in generating relevant tags or keywords to help categorize and classify the WooCommerce products accurately.

SEO Key Phrase: The plugin utilized ChatGPT to suggest an optimized key phrase for search engine optimization (SEO) purposes, improving the discoverability of the product on search engines.

SEO Slugs: The plugin leveraged ChatGPT to generate user-friendly and search engine-friendly URLs or slugs for the product pages.

SEO Meta Description: ChatGPT contributed to the generation of compelling and concise meta descriptions that appeared on search engine result pages (SERPs), enticing users to click on the product listing.

Product Title: The plugin utilized ChatGPT to assist in generating captivating and attention-grabbing titles for the WooCommerce products.

WP Plugin Part 2:

In my second task within the WordPress plugin, I focused on extending the functionality of the plugin to include integration with the post page in WordPress, specifically for products. Here are the details of the task:

Plugin Integration: I integrated the custom plugin with the post page of WordPress, specifically for product posts. This allowed users to utilize the plugin's features when creating and editing product posts within WordPress.
Content Generation: Leveraging the ChatGPT integration, the plugin facilitated the generation of various content elements for the given product description provided by the user. These elements included:
Title: The plugin utilized ChatGPT to generate captivating and relevant titles for the product posts based on the provided product description.
Post Details: Using the product description input, ChatGPT assisted in generating the main content or body of the product post, providing a comprehensive overview of the product's features, benefits, and other relevant information.
SEO Key Phrase: The plugin employed ChatGPT to suggest an optimized key phrase or keywords for SEO purposes, enhancing the visibility and search engine rankings of the product post.
SEO Slugs: ChatGPT contributed to generating user-friendly and SEO-friendly URLs or slugs for the product posts, improving their search engine visibility and user experience.
SEO Meta Description: The plugin utilized ChatGPT to generate concise and compelling meta descriptions for the product posts. Product Title: ChatGPT assisted in generating captivating and attention-grabbing titles for the product posts.

Note: User Input and Output: Within the post page of WordPress, users could input the product description, and the plugin would process this input through ChatGPT to generate the desired content elements. Users could review, modify if necessary, and apply the generated content elements to the respective product posts.

Tools, technologies, and plugins used in the process:

In the development of the WordPress plugin, I utilized several tools, technologies, and plugins to create and enhance its functionality. Here's a breakdown of the tools and technologies you used:

Docker: Initially used for easy installation of WordPress.

WAMP Server: Switched to hosting and running WordPress locally on Windows.

WordPress: CMS used as the foundation for the custom plugin.

WooCommerce Plugin: Integrated with the custom plugin to enable e-commerce functionality.

Yoast SEO Plugin: Used to optimize SEO elements for product posts.

PHP: Server-side scripting language for custom plugin development.

WordPress Hooks: Used to extend and customize WordPress functionality.

Other task which I contribute

Here's a brief overview of the small tasks I contributed to during your internship:

SellMyGear: In SellMyGear, an online platform for buying and selling preowned instruments and music gear in India, I worked on fixing bugs, modifying functionalities, and enhancing the user experience. I utilized WordPress plugins and made necessary adjustments to improve the site's performance.

igotcoderz: This is an online learning platform. My task involved taking a backup of the complete site, enabling team members to make changes and updates. Additionally, I set up the development environment for new work on the site, ensuring a smooth workflow for the team.

Collaborative AI: I contributed to the Collaborative AI project, which is an AI tool similar to ChatGPT. my specific task involved adding a "Stop" button that allows users to halt their request and regenerate a new response. This feature enhanced user control and interaction with the AI tool.

INTERNSHIP TIMELINE

Brief summary for each of the weekly tasks I worked in my Internship:

Week1: In first week I have started the AWS basic learning phase at SJ Innovation, I was introduced to the fundamentals of AWS (Amazon Web Services) and gained knowledge in the following areas:

1. IAM (Identity and Access Management): Learned how to manage user identities, permissions, and access to AWS resources securely.
2. S3 (Simple Storage Service): Explored S3, a scalable and durable object storage service, for storing and retrieving large amounts of data.
3. EC2 (Elastic Compute Cloud): Acquired knowledge about EC2 instances, which provide scalable computing capacity in the AWS cloud, enabling the deployment of virtual servers.
4. VPC (Virtual Private Cloud): Understood how to set up and manage a virtual private network (VPC) within AWS, enabling secure and isolated communication between resources.
5. DNS (Domain Name System): Learned about DNS, which translates human-readable domain names into IP addresses, enabling the identification of resources on the internet.
6. Caching: Explored caching mechanisms, such as Amazon ElastiCache, for improving application performance by storing frequently accessed data in memory.
7. Backup and file storage: Gained insights into AWS backup services and explored file storage solutions, such as Amazon EBS (Elastic Block Store) and Amazon EFS (Elastic File System), for reliable data storage and backup.

During this phase, you developed a foundational understanding of various AWS services and their functionalities, setting the stage for further exploration and utilization of AWS in your projects and tasks at SJ Innovation.

Week2:

In this week the AWS CDK learning phase at SJ Innovation, you gained knowledge about AWS Cloud Development Kit (CDK), a framework for provisioning and managing AWS infrastructure. You applied your AWS knowledge to real projects and made valuable contributions to the company's services using the following services:

1. IAM (Identity and Access Management): Implemented IAM roles and permissions to ensure secure access and manage user identities within AWS CDK.
2. S3 (Simple Storage Service): Leveraged S3 buckets to store and manage project-related assets, such as configuration files, deployment artifacts, and static resources.
3. EC2 (Elastic Compute Cloud): Utilized EC2 instances to deploy and run application components within the AWS CDK infrastructure, ensuring scalable computing capacity.
4. VPC (Virtual Private Cloud): Configured VPCs to create isolated network environments for projects, enabling secure communication between resources deployed using AWS CDK.
5. DNS (Domain Name System): Integrated DNS services to associate custom domain names with AWS CDK infrastructure, allowing easy access to project resources.
6. Caching: Implemented caching mechanisms, such as Amazon ElastiCache, to improve the performance of applications deployed using AWS CDK by storing frequently accessed data in memory.
7. Backup and file storage: Utilized AWS backup services, such as Amazon EBS and Amazon EFS, for reliable data storage and backup in AWS CDK projects.

By applying your AWS knowledge to real projects and contributing to the company's services, you demonstrated your ability to effectively leverage AWS CDK for infrastructure provisioning and management. Your contributions helped ensure secure and scalable deployments, reliable data storage, and efficient application performance within the AWS CDK framework.

Week3:

During the phase of basic Python learning and exploring API tools at SJ Innovation, I acquired foundational knowledge in Python programming and gained familiarity with various tools for API development. Here are the key points:

1. Python programming basics: Learned the fundamentals of Python, including syntax, data types, variables, functions, and control flow structures.
2. API concepts: Gained an understanding of Application Programming Interfaces (APIs) and their role in facilitating communication and interaction between software applications.
3. API development tools: Explored a range of tools commonly used for API development, such as Flask, Django, FastAPI, or other frameworks, which provide the necessary infrastructure for building APIs in Python.
4. Request handling: Learned how to handle incoming requests and route them to appropriate API endpoints using tools like Flask's request module or Django's HttpRequest class.
5. Response generation: Developed skills in generating responses to API requests, including data serialization and formatting in formats like JSON, and others.
6. Error handling: Understood the importance of proper error handling in APIs, including handling and returning appropriate HTTP status codes and error messages.

By acquiring these Python programming skills and exploring API development tools, I equipped yourself with the necessary foundation to develop and contribute to APIs in future projects, enabling seamless integration and interaction between different software components.

Week4, Week5 and Week6

During the environment setup and start of AWS API work at SJ Innovation, I completed the following tasks:

1. Tool installation: Installed the necessary tools and software required for AWS API development, such as AWS CLI (Command Line Interface), AWS SDKs (Software Development Kits), and any specific libraries or frameworks needed for your project.
2. AWS account setup: Created an AWS account and configured the necessary credentials to access AWS services and resources.
3. Project initialization: Set up a project directory or repository to organize your code and resources for the AWS API development.
4. API design and planning: Defined the specifications and requirements of the API, including the endpoints, data models, and functionality to be implemented.
5. AWS service selection: Determined which AWS services would be utilized for your API, based on the project requirements and desired functionalities.
6. API Gateway configuration: Configured the AWS API Gateway, which acts as the entry point for your API and handles request routing, authorization, and other features.
7. Lambda function setup: Created the necessary AWS Lambda functions, which would handle the API's logic and processing of incoming requests.
8. Testing and debugging: Conducted initial testing and debugging of the API implementation, ensuring that it functions as expected and handles requests correctly.
9. Documentation: Started documenting the API design, endpoints, and any other relevant information to facilitate future development and collaboration.

By completing these tasks, I established a development environment for AWS API work, including the installation of necessary tools, configuration of AWS services, and the initiation of API development. This provided a solid foundation for my subsequent work on the AWS API project at SJ Innovation.

Week7 and Week8:
During the phase of basic PHP and WordPress hooks learning at SJ Innovation, I gained knowledge and proficiency in PHP and WordPress hooks, specifically filtering and actions, for WordPress plugin development. Here are the key points:

1. PHP fundamentals: Learned the basics of PHP programming language, including syntax, variables, functions, and control structures.
2. WordPress plugin development: Explored the process of creating custom plugins for WordPress, which extend the functionality of the platform.
3. WordPress hooks: Understood the concept of hooks in WordPress, which provide a way to modify or enhance the default behavior of WordPress core, themes, or plugins.
4. Action hooks: Acquired knowledge of action hooks, which allow you to add or execute custom code at specific points during WordPress execution, such as before or after a specific event or action.
5. Filter hooks: Learned about filter hooks, which enable you to modify data or content before it is displayed or used by WordPress, giving you control over the output and behavior of various components.
6. Hook registration: Implemented the registration of custom hooks within your WordPress plugin, making them available for other developers to extend or modify functionality.
7. Hook callbacks: Defined callback functions that are executed when specific hooks are triggered, enabling you to perform custom logic or modify data as needed.
8. Hook usage in plugin development: Applied the knowledge of hooks in developing WordPress plugins, leveraging actions and filters to inject custom functionality into WordPress core, themes, or other plugins.

By mastering PHP and WordPress hooks, specifically actions and filters, I gained the skills necessary to develop flexible and customizable WordPress plugins. This knowledge empowered me to create plugins that seamlessly integrate with the WordPress ecosystem and provide enhanced functionality for users.

Week: 9-15) Part 1During your internship at SJ Innovation, I successfully created a custom WordPress plugin specifically designed for the WooCommerce new product page. Here are the key points regarding the development of this plugin:

1. Plugin initialization: Created the basic structure and files for the custom WordPress plugin.
2. WooCommerce integration: Ensured seamless integration with WooCommerce, allowing the plugin to interact with the WooCommerce functionality.
3. New product page customization: Implemented customizations on the WooCommerce new product page to enhance its functionality and user experience.
4. Input validation: Implemented validation mechanisms to ensure that the user-entered data is accurate and meets the required criteria.
5. Data processing: Developed the logic to handle and process the user input from the new product page, ensuring that the data is stored correctly in the WooCommerce database.
6. Error handling: Implemented error handling mechanisms to provide meaningful error messages and guide users in case of invalid inputs or other issues.
7. Compatibility testing: Conducted thorough testing to ensure the plugin's compatibility with different versions of WooCommerce and WordPress, addressing any compatibility issues that arose.
8. Documentation: Created clear and comprehensive documentation for the custom plugin, including installation instructions, usage guidelines, and any specific considerations for future maintenance or updates.

By creating this custom WordPress plugin for the WooCommerce new product page, I demonstrated my ability to extend the functionality of the WooCommerce platform and tailor it to specific requirements. The plugin enhanced the user experience and provided additional features and customization options, making it a valuable addition to the WooCommerce ecosystem.

Week: 16-18) Part 2: During my internship at SJ Innovation, you successfully integrated the custom WordPress plugin you developed with the WordPress post page, enhancing its functionality. Here are the key points regarding the integration:

1. Plugin configuration: Ensured that the custom plugin was properly configured and activated within the WordPress environment.
2. Post page customization: Extended the functionality of the WordPress post page by integrating the custom plugin's features.
3. UI enhancements: Added user interface elements, such as additional fields or sections, to the post page to capture specific information or enable custom functionality.
4. Data processing: Developed the logic to handle and process the data entered on the post page using the custom plugin, ensuring that it is stored correctly in the WordPress database.
5. Dynamic content generation: Implemented features that dynamically generate content for the post page based on the user's input or other parameters.
6. Compatibility testing: Conducted thorough testing to ensure the seamless integration of the custom plugin with the WordPress post page, addressing any compatibility issues that arose.
7. User feedback and refinement: Gathered feedback from users and stakeholders to identify areas for improvement and refine the plugin's integration with the post page.
8. Documentation: Updated the documentation for the custom plugin to include instructions on how to use its features within the WordPress post page and any specific considerations for the integration.

By integrating the custom plugin with the WordPress post page, I enhanced the functionality and capabilities of the WordPress platform. This integration allowed users to access the custom plugin's features seamlessly within the familiar environment of the post page, improving their overall experience and efficiency in managing and creating content.

Week: 19-20)
During this week's internship at SJ Innovation, I made significant contributions to various projects by working on miscellaneous tasks. Here are the key points highlighting your involvement:

1. SellMyGear: Fixed bugs and made enhancements to the SellMyGear website, an online platform for buying and selling preowned instruments and music gear across India.
2. igotcoderz: Took responsibility for backing up the entire igotcoderz website, allowing team members to make changes with confidence. Additionally, set up the development environment for new work on the site.
3. Collaborative AI: Contributed to the Collaborative AI project by adding a "Stop and Regenerate" button feature. This functionality allowed users to halt their requests and regenerate AI-generated responses as needed.

My involvement in these miscellaneous tasks showcased your versatility and ability to adapt to different projects and requirements. my contributions played a crucial role in the overall success and progress of the projects you were assigned to.

Overall Experience at SJ Innovation

My experience at SJ Innovation was incredibly enriching and rewarding. During my time at the company, I had the opportunity to work on various projects and tasks, gaining valuable knowledge and skills in different areas.

Firstly, I had the privilege of working on AWS, where I learned the basics and further advanced my understanding of AWS services. This hands-on experience allowed me to develop APIs, work with Lambda functions, and utilize other AWS components effectively.

I also had the chance to delve into the world of WordPress and PHP. By creating a custom WordPress plugin, specifically for WooCommerce, I honed my skills in plugin development, PHP programming, and integrating with WordPress hooks. This project challenged me to think creatively and develop solutions that enhanced the user experience and functionality of the platform.

Moreover, I had exposure to other tools and technologies such as Docker, WAMP server,Wordpress and Yoast SEO plugin, which broadened my technical proficiency and understanding of the development ecosystem

Referenc

https://www.guru99.com

https://learning.postman.com/docs/getting-started/introduction/

https://developer.mozilla.org/en-US/

https://www.youtube.com/

https://www.tutorialspoint.com/index.htm

https://www.w3schools.com/

https://aws.amazon.com

https://www.postman.com/

https://wordpress.com/