

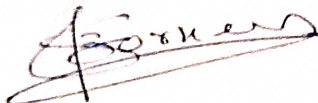
2nd June 2023

INTERNSHIP CERTIFICATE

This is to certify that **Rohan Krishanand Vishwakarma**, Roll No. 2124, currently pursuing the 4th Semester of the MCA program in the Computer Science and Technology discipline at Goa Business School, Goa University, has been actively engaged as an intern with our organization since January 9th, 2023. During his internship, he has consistently displayed exemplary performance by successfully accomplishing assigned tasks and other related responsibilities.

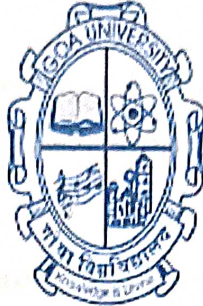
Rohan exhibits a strong sense of self-motivation and requires minimal supervision to effectively complete his assigned tasks. He has demonstrated remarkable aptitude for swiftly acquiring the required domain knowledge and mastering the necessary technologies. His rapid learning pace has greatly contributed to the overall productivity and successful delivery of the team.

Yours Sincerely,



Subodh Borkar,
Head of Product Development - useMango

GOA UNIVERSITY



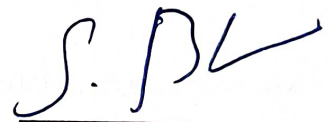
GOA BUSINESS SCHOOL

CERTIFICATE OF EVALUATION

This is to certify that **Mr Rohan Vishwakarma** has successfully completed his internship at Infuse Consulting, Patto Centre, Bambolim, Goa, India in partial fulfillment of the award of the degree in Master of Computer Application.

A handwritten signature in blue ink, appearing to be 'V. S. Datta', written over a horizontal line.

Examiner 1

A handwritten signature in blue ink, appearing to be 'S. B. V.', written over a horizontal line.

Examiner 2

Place: Goa University
Date: 15/06/2023

A handwritten signature in blue ink, appearing to be 'S. B. V.', written over a horizontal line.

Dean, Goa Business School



INTERNSHIP REPORT
INTERNSHIP DONE AT INFUSE CONSULTING
ROHAN VISHWAKARMA
MCA SEMESTER IV
2124





REPORT OF INTERNSHIP DONE AT INFUSE CONSULTING

SUBMITTED BY

ROHAN VISHWAKARMA

Roll No: 2124

for the partial fulfillment of
MCA Degree for Semester VIV/V
Discipline of Computer Science and Technology,
Goa Business School,
Goa University

At

Infuse Consulting India Private Limited
Suntek Kanaka Corporate Park, Patto Centre, Bambolim, Goa
403001

Under the guidance of

MR. SUBODH BORKAR

(Head of Product Development, useMango, Infuse Consulting)

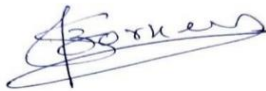
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Infuse Consulting India Private Limited
B 902, Teerth Towers, Sr. No. 28/2, Near Raj Hotel, Baner, Pune 411021
India Company Incorporated by Government of India, Ministry of Corporate Affairs under number
U74999PN2018PTC179748
www.infuse.it

GOA UNIVERSITY



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Examiner 1

Examiner 2

Place: Goa University
Date: 15/06/2023

Dean, Goa Business School

Acknowledgment

I would like to take this opportunity to express my sincere gratitude and appreciation to the individuals who have made my internship at Infuse Consulting a remarkable experience.

First and foremost, I would like to extend my heartfelt thanks to **Mr. Nalin Parbhu**, CEO/CTO of Infuse Consulting, for providing me with this internship opportunity.

My sincerest gratitude to **Mr. Subodh Borkar**, (Head of Product Development at useMango) for his unwavering mentorship and invaluable guidance throughout my internship. His expertise and insights have significantly contributed to my understanding of the industry, and I am truly grateful for his constant support.

I would also like to express my sincere appreciation to **Mr. Piyush Sharma**, a dedicated Product Engineer at Infuse Consulting. He consistently made time to offer me advice, guidance, and encouragement. I am genuinely grateful for his assistance and for helping me stay on the right path during my internship.

I would like to extend my gratitude to all the faculty and staff at the MCA, Goa University for their continuous encouragement and unwavering support during my entire course of study.

I would be remiss if I didn't acknowledge the love, support, and encouragement I received from my family and friends throughout this internship. Their unwavering belief in me has been a constant motivation, and I am truly grateful for their presence in my life.

Lastly, I want to express my deep appreciation for the entire Infuse family, particularly my seniors **Delroy Martins, Rochelle Martins, Minaxi Patil, Imtiyaz Khan, Vinay Prabhu, Joyrel Vaz, Onkar Parshekar, Preshly Fernandes**. Their guidance, patience, and willingness to assist me have been invaluable, and I am thankful for their mentorship. I would also like to thank my internship colleagues for their collaborative spirit, shared learning, and unwavering support throughout this internship.

Once again, I would like to express my deepest gratitude to everyone who has contributed to my growth and success during this internship. Your support and guidance have made a lasting impact on me, and I am truly thankful for the opportunity.

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Introduction

This report is about my internship at Infuse Consulting, which started on January 9th, 2022, and is ongoing. It provides information about the company, the projects I worked on, and the tasks I completed during this internship.

I will discuss the skills I gained and how they contributed to the organization. The report also mentions the tools and technologies I used and the duration of my internship.

The report also includes screenshots that provide a visual demonstration of the project completed. These visuals enhance the understanding of the projects and provide a tangible representation of the outcomes achieved.

Furthermore, it is worth mentioning that during my internship period, I also obtained the ISTQB (International Software Testing Qualifications Board) certification for the foundation level. This certification demonstrates my knowledge and understanding of fundamental software testing principles and practices, adding an additional layer of qualification to my internship experience.

Towards the end of the report, an internship timeline is presented, outlining the significant milestones and activities accomplished throughout each phase of the internship. This timeline provides a structured overview of the progression of my work and the key accomplishments during specific timeframes.

Moreover, a list of references is included to acknowledge the sources that were consulted and utilized during the internship project.

Overall, the primary objective of this report is to offer a comprehensive overview of my internship experience at Infuse Consulting. It seeks to showcase the valuable insights I have acquired, the skills I have developed, and the contributions I have made throughout the duration of the internship.

Company Profile



About Infuse Consulting

Infuse Consulting is an international company and leverages strategic consulting partners as well as its technology partners to deliver the best solution.

Recognized as the leading provider of Test Automation and Lifecycle Transformation Services for successful, ambitious organizations, Infuse Consulting is headquartered in the UK and since 2002 has helped more than 500 businesses get the most out of their Software Delivery Teams.

Infuse Consulting works hard in the fields of Test Automation and DevOps to reliably deliver several clear benefits for organizations seeking assistance with their Software Delivery.

Infuse is a Gold Partner of Micro Focus and Oracle, and has a partner network including CA, Microsoft, AWS and SAP.

Infuse prides itself on its ability to provide innovative solutions, especially in test automation. They have been automating mobile testing since 2003 and developed a functional scriptless test automation tool, useMango™.



What is useMango?

- Easy to use Test Automation Tool.
- Designed so non-technical individuals can build robust automation scripts.
- Flexible framework functionality that can be adapted to match your testing ability.
- Avoids the costs of engineering your own high maintenance frameworks.
- You can use useMango to create automated tests for web and packaged applications such as Oracle and SAP.

What are the key benefits of using useMango?

- Component based test building removes the need for technical developers.
- Reduce months of manual testing into minutes.
- Fast ROI, allowing you to focus on business-critical issues.
- Increase confidence in your continuous delivery output with automated end to end testing.
- Enable Continuous Delivery by adding automated end-to-end testing of your build pipelines

About useMango

With useMango tests are quicker and more efficient, saving businesses time and money. With useMango you can build a test by selecting from 200+ pre-built components, just add data and it is ready to run. If you have problems with forms, or complicated pages useMango provides an easy solution, you can activate the useMango scanner to scan your application, with a single click, this will identify all the testable objects on any UI and create a new component. If you need to create a custom component, useMango provides you the means to do so. A software tester can complement the useMango generated scripts with custom code, using in-built frameworks made with Ruby, VBScript, Python etc.

Other Key Features

- Works on modern web & desktop applications.
- Codeless test tool & framework.
- Extended to support Package Applications SAP (GUI and Web Variants),
- Oracle E-Business, Oracle Fusion.
- Ensure application quality with fast and frequent testing.
- Test processes from end-to-end across multiple platforms and technologies.
- Business users and manual testers can automate tests without coding.
- Easily keep hundreds of tests up to date as your application changes over time.
- Expand the scope of your testing with data-driven tests.
- Meet exceptional automation requirements with simple scripted components.
- A scalable cloud-based test service which meets your growing needs.
- Get automated test outcomes directly in your continuous integration pipelines.
- Integrates with your modern continuous integration tooling.

Overview

UseMango is a windows application which has several different architectural structures, from the server to website and common libraries that contain shared code. UseMango is maintained and developed by the Infuse team and has customers worldwide.

Tools and Technologies used to develop useMango:

- Python
- Flask
- Ruby
- Selenium
- JavaScript
- AWS
- Postman
- Git
- Docker
- Jenkins
- .NET framework
- C#
- WPF
- SAP
- VBScript

My contributions

During the initial phase of the internship, the focus was on familiarizing ourselves with the useMango product, the technologies employed by the company, and gaining a understanding of the product's domain. In the first few weeks, we underwent a training period during which we were introduced to different subjects. One of our tasks was to thoroughly explore the useMango app, including its features, and write tests for it. We then executed these tests, reviewed the results, and participated in a feedback session where we shared our learnings with other interns and received guidance from our mentor.

Following the introduction to useMango, our next assignment was to identify and report bugs while also suggesting improvements. This task required actively exploring the platform and thoroughly testing its diverse features. I took a proactive approach, thoroughly investigating different functionalities, workflows, and user interfaces to pinpoint any potential glitches, errors, or areas that could benefit from enhancement. With great attention to detail, I diligently documented each bug I encountered, providing comprehensive information such as the steps to reproduce the issue and any pertinent details.

After the bug identification phase, the subsequent task assigned to me was to execute a Ruby upgrade for the existing components in the system. This responsibility entailed updating the Ruby programming language to its most recent version while ensuring compatibility with the current components and dependencies.

To successfully complete this task, I initiated by conducting a comprehensive analysis of the system's existing components and their dependencies. I identified the specific components that needed an upgrade and carefully evaluated any possible compatibility issues or potential breaking changes that could arise from the Ruby upgrade.

Through the successful upgrade of the existing components to the latest version of Ruby, I played a significant role in ensuring the system's security and keeping it up-to-date. Additionally, this upgrade allowed us to leverage the latest features and performance improvements offered by the Ruby programming language, further enhancing the overall efficiency and functionality of the system.

Upon the completion of the Ruby upgrade task, I transitioned to working on a client project for Solent University. In this capacity, my responsibilities encompassed writing test steps, executing test cases, and promptly reporting any identified defects.

To commence, I actively collaborated with the project team and engaged with stakeholders to acquire a comprehensive understanding of the requirements and functionalities of the Solent University project. Drawing upon this knowledge, I meticulously crafted detailed test steps and test cases, aiming to achieve comprehensive coverage of the application's various features and functionalities.

Throughout the process, my team and I maintained detailed documentation of the test results, carefully noting any issues that were encountered. Furthermore, I collaborated closely with the project team, actively participating in defect management by identifying and reporting issues.

Tools and Technologies Used



Ruby

Ruby is a dynamic, object-oriented programming language known for its simplicity and readability. It was created in the mid-1990s by Yukihiro Matsumoto. Ruby has a robust ecosystem of libraries and frameworks, including Ruby on Rails, which is a popular web application framework.



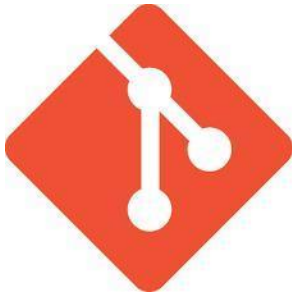
Python

Python is a high-level, general-purpose programming language that is widely used for its simplicity, readability, and versatility. It was created by Guido van Rossum and first released in 1991. Python supports multiple programming paradigms, including procedural, object-oriented, and functional programming.



Javascript

JavaScript is a high-level, interpreted programming language primarily used for front-end web development. It was initially developed by Brendan Eich in 1995 and has since become one of the most popular and widely adopted languages. JavaScript is known for its versatility and is now utilized not only on the web but also in server-side and mobile application development.



Git

Git is a distributed version control system that allows developers to track changes in source code and collaborate on projects efficiently. It was created by Linus Torvalds in 2005 and has since become the de facto standard for version control in software development.



Postman

Postman is a popular collaboration platform and toolset used by developers for testing, documenting, and sharing APIs. It was initially developed as a Chrome extension but has since expanded to become a standalone application that supports various operating systems.



AWS

Amazon Web Services (AWS) is a comprehensive cloud computing platform offered by Amazon. It provides a wide range of services and tools that enable businesses and developers to build, deploy, and manage applications and IT infrastructure in the cloud.



Docker

Docker is an open-source platform that allows developers to automate the deployment and scaling of applications using containerization. It provides a lightweight and portable way to package applications, along with their dependencies, into containers that can run consistently on any system.



MongoDB

MongoDB is a popular, open-source NoSQL database management system designed to handle large amounts of data. It provides a flexible, scalable, and high-performance solution for storing, retrieving, and manipulating data in a document-oriented format.



Flask

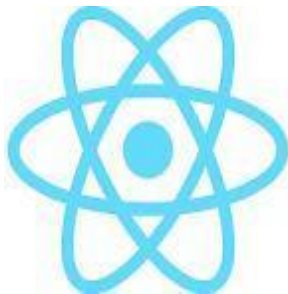
Flask is a lightweight and flexible web framework for Python, designed to create web applications quickly and with simplicity. It is classified as a micro-framework because it focuses on the core functionality needed to build web applications, providing a minimalistic and modular approach.



Selenium

Selenium

Selenium is a popular open-source framework used for automating web browsers. It provides a suite of tools and libraries that allow developers and testers to interact with web browsers programmatically, replicating user actions and automating tasks.



ReactJS

ReactJS, often referred to as React, is an open-source JavaScript library used for building user interfaces (UIs) for web applications. Developed by Facebook, React allows developers to create reusable UI components that efficiently update and render when the underlying data changes.



TeamCity

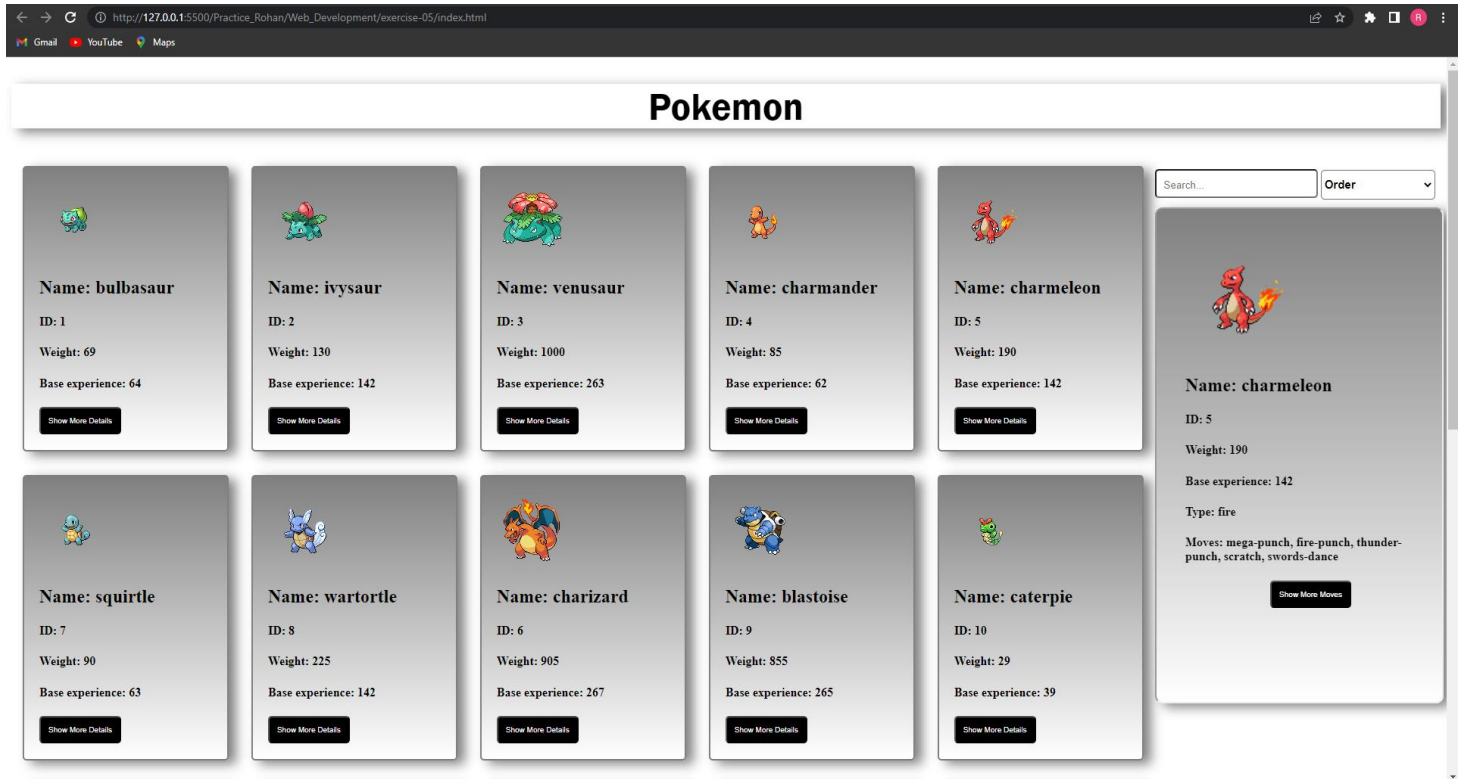
TeamCity is a powerful and extensible continuous integration (CI) and continuous delivery (CD) server developed by JetBrains. It is designed to automate the building, testing, and deployment of software projects, providing a robust and centralized platform for managing the software development lifecycle.



Jenkins

Jenkins is an open-source automation server widely used for continuous integration (CI) and continuous delivery (CD) in software development. It provides a platform for automating various tasks, including building, testing, and deploying software applications.

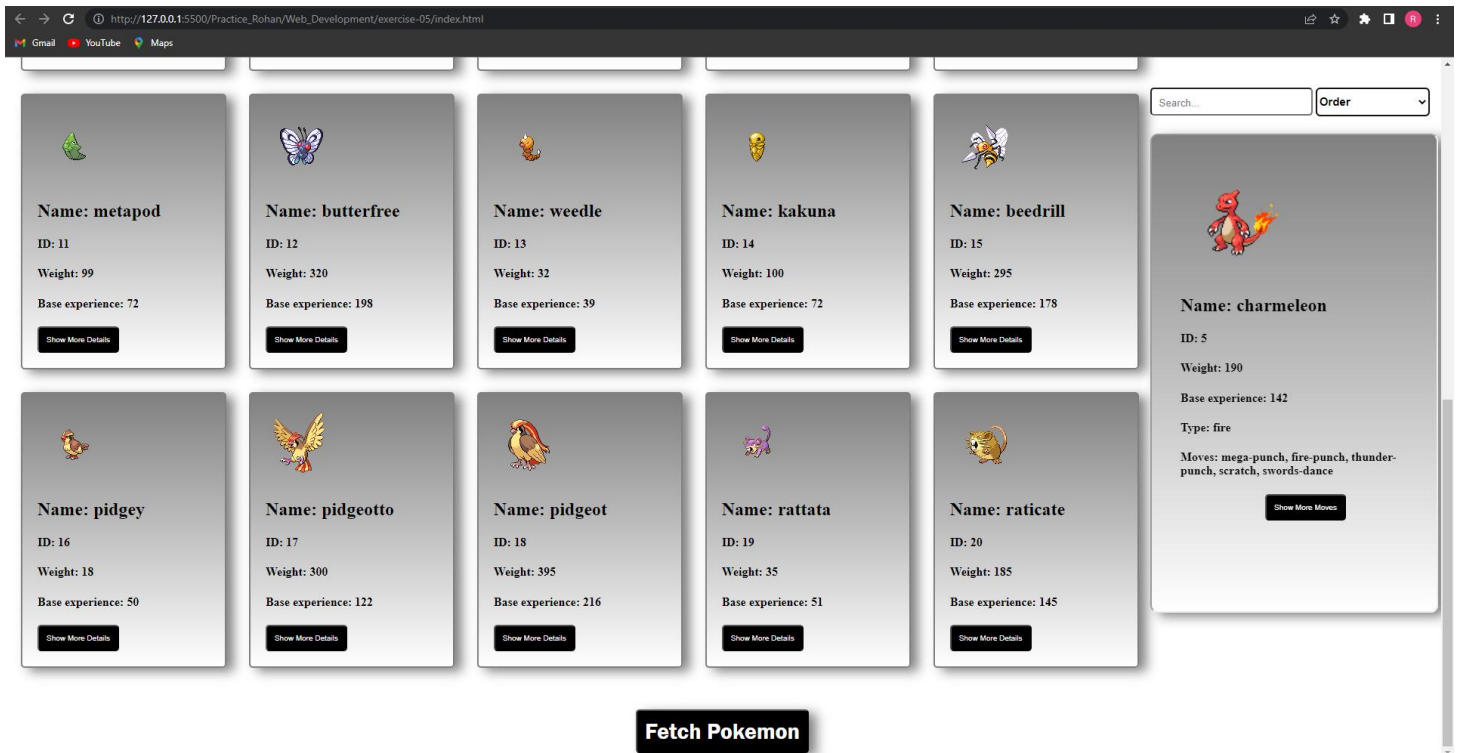
Screenshots



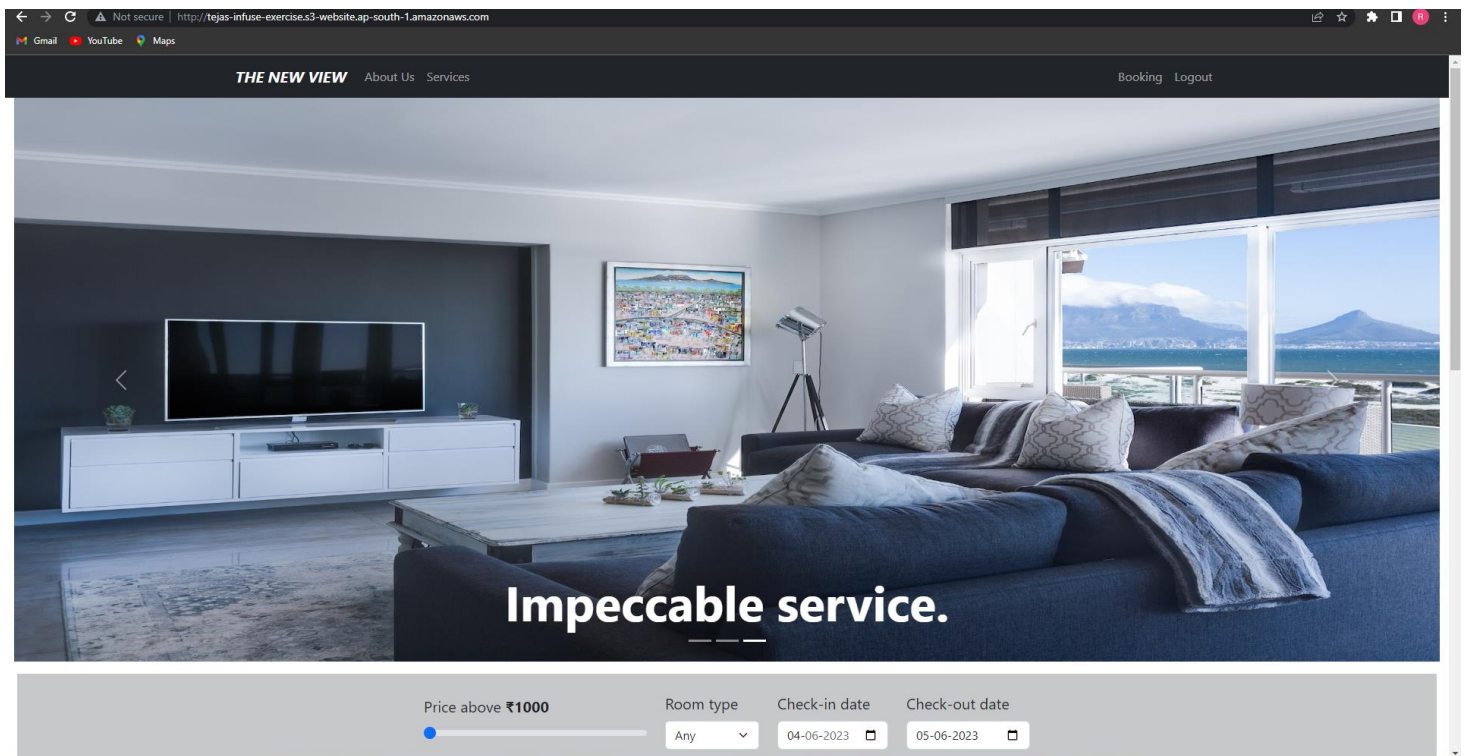
I have designed a Pokémon webpage as part of my internship, where I fetch Pokémon data from the <https://pokeapi.co/api/v2/pokemon> link.

Each Pokémon is displayed as a card, and if you click on a card, it will show more detailed information about that Pokémon on the left side of the screen.

You can also search for specific Pokémon and sort them based on their weight and base experience.



You can even fetch more Pokémon by clicking on fetch Pokémon. By default, it fetches 20 Pokémon at a time.



This is a full stack web development project for a hotel management system. With my team members Tejas Lotlikar, Leon Fernandes, Ramjet Falddesai.

<http://tejas-infuse-exercise.s3-website.ap-south-1.amazonaws.com/>

We had deployed this project on AWS EC2 and as well as on Lambda function(Backend) and S3 bucket(Frontend).

The following technology stack was chosen for implementation of the project.

- MongoDB (Database)
- ReactJS (Front-end)
- Flask (Back-end)
- Pymongo (Library for MongoDB operations)
- Pytest, pytest-bdd (Unit testing and API test)

Features

1. User Login: The website allows users to create an account and log in to access the hotel management system and book a room.
2. Room Selection: Users can browse available rooms and select their preferred room type. The room types available are single, double, and penthouse.
3. Price Range Selection: Users can specify their preferred price range for the room, ranging from ₹1000 to ₹10000.

4. Check-in and Check-out: Users can choose the desired check-in and check-out dates to book a room for a specific duration.
5. Room Reviews: When a user selects a room, they can see reviews and ratings provided by previous guests who have stayed in that particular room. These reviews help users make an informed decision about their booking.
6. Add-Ons Selection: Users can choose additional services or amenities to enhance their stay. The add-ons you mentioned include parking, breakfast, lunch, gym access, and dinners. Users can select the add-ons they desire during the booking process.

Certifications Completed under Internship

Certificate of Profession

This Certifies That

Rohan Krishanand Vishwakarma

having satisfied the requirements of the International Software Testing Qualifications Board
has been awarded the

Foundation Level Certificate in Software Testing

Awarded on 21st Day of March, 2023

Certificate Number ITB - CTFL-121905 India



Vipul Borker

ITB President
ISTQB Syllabus Foundation Level 2018 Version v3.1.1



Conclusion

In conclusion, my internship at Infuse Consulting has been an enriching journey, providing me with invaluable experiences and learning opportunities. I am grateful for the practical insights I have gained in the field. The supportive work environment and collaborative culture have nurtured my growth and allowed me to thrive as an intern.

Overall, Infuse Consulting offers a transformative internship experience that equips interns with the skills, knowledge, and confidence needed to thrive in their future endeavours. It is an organization that values its interns, provides them with meaningful opportunities, and helps shape them into accomplished professionals.

Internship Timeline

JANUARY 2023

❖ Week 1

- Formal Orientation and onboarding process.
- Introduction to useMango.
- Exploring features of useMango.
- Automated a test using the product.
- Environment and tools set up for development.

❖ Week 2

- Introduction to Programming With Ruby
- Ruby Program Exercises
- Introduction to HTML, CSS, JS & DOM
- Exercises
- Introduction to Automation
- Introduction to Selenium
- Selenium Exercise
- Introduction to Git & source code management
- Exercises
- Introduction to Containerization and Docker
- Exercises

❖ Week 3

- Workshop introduction + Sample solution
- Workshop: Build a basic containerized testing framework for a practice website
- Demo of work shop
- CI & CD pipelines (with Jenkins)
- Exercises
- Workshop: CI & CD
- Programming in Python
- Exercises

FEBRUARY 2023

❖ Week 4

- Introduction to Webservice architecture
- Python Webservice Framework

- Exercises
- Workshop: Build WebService
- Workshop: WebService Unit Testing + API Testing

❖ Week 5

- Workshop:
Involves the use of entire set of skills learned so far. For a given a problem statement expected to design, develop and test solution. This was under the guidance of team mentors.
- Workshop review + fixes

❖ Week 6

- Introduction to AWS Services
- Workshop project manual deployment to AWS
- Infrastructure as Code
- Workshop project automated deployment on AWS
- Teams demo project To Head of Training

❖ Week 7 - 8

- Preparation for ISTQB Certification Exam

MARCH - APRIL 2023

❖ Week 9 - 14

- Ruby upgrade

MAY 2023

❖ Week 15 – Current

- project (Solent University)

My reflections/experiences of internship

My internship at Infuse Consulting has been an amazing experience. Every day, I faced new challenges and learned a lot.

The company's culture promotes learning and growth, so I always felt supported and encouraged to ask for help when needed. I gained valuable knowledge about software development and improved my coding skills.

The best part is that I was able to try out new ideas and contribute to the product, even if I didn't know much about them before. Overall, I'm really grateful to be part of Infuse Consulting and I wish everyone on the team the best.

References

- <https://docs.aws.amazon.com/>
- <https://www.ruby-lang.org/en/documentation/>
- <https://docs.docker.com/>
- <https://www.javatpoint.com/>
- <http://docs.usemango.co.uk/>
- <https://www.selenium.dev/>
- <https://www.jetbrains.com/teamcity/>