INTERNSHIP REPORT

Onkar Bhagwan Parshekar

1943

Infuse Consulting

Goa University

REPORT OF INTERNSHIP DONE AT INFUSE CONSULTING

SUBMITTED BY:

ONKAR

PARSHEKAR

1943

UNDER THE GUIDANCE OF

Mr. Subodh Borkar

(Head of Product Development)

INFUSE
consulting
Excellence through Quality Assurance

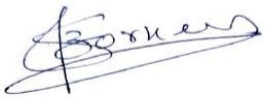
6th June 2022

INTERNSHIP CERTIFICATE

This is to certify that Onkar Parshekar, Roll. No. 1943, studying in 6th Semester Goa University MCA department, is working as an intern with us from 10th January 2022 and has successfully completed the various tasks related to feature development, bug fixing, etc. assigned to him during the internship period.

Onkar is a self learner and needs minimal supervision to complete his tasks, He has learned the product domain knowledge and required technologies at a fast pace and has contributed well towards the team delivery.

Yours Sincerely,



Subodh Borkar,
Head of Product Development - useMango

GOA UNIVERSITY

GOA BUSINESS SCHOOL

CERTIFICATE OF EVALUATION

This is to certify that Mr. Onkar Bhagwan Parshekar has been evaluated for the project work titled "**Report of Internship done at Infuse Consulting**" in partial fulfilment for the award of the degree in Master of Computer Application.

_____ _____

Examiner 1 Examiner 2

Place: Goa University _____

Date: 11th June 2022 Dean, Goa Business School

Acknowledgement

Interning in a company is a golden opportunity for learning and self-development specially to have so many wonderful people led me through this internship period. The internship wouldn't be complete without expressing my gratitude and appreciation to all the people who made it possible.

I would like to thank Mr. Nalin Parbhu(CEO/CTO, Infuse Consulting) for giving me the opportunity to intern at Infuse.

My sincerest gratitude to Mr. Subodh Borkar (Head of Product Development, Infuse Consulting) for being my mentor and giving me the necessary guidance andsupport.

My great appreciation to Mr. Piyush Sharma (Senior Software Engineer, Infuse Consulting) who in spite of being extraordinarily busy with his duties, took time out to hear, guide and keep me on the correct path and allowing me to carry out my tasks during the internship.

I thank M. S. Dayanand (Dean, Goa Business School, Goa University), Mr. Ramdas Karmali (Prof. and TPO, MCA, Goa Business School, Goa University), Ms. Yma Pinto (Program Director, MCA, Goa Business School, Goa University), Mr. Jarret Stevan Anthony Fernandes (Assistant Prof, MCA, Goa Business School, Goa University) and all the faculty of MCA, Goa University for their constant encouragement and support during the project work.

I would like to thank my family and friends for all the love, support and encouragement they provided me during this internship cannot be forgotten.

Finally, I would like to express my gratitude towards the Infuse family, specially my seniors Delroy, Imtiyaz, Vinay, Joyrel who were always ready to help me and guide me in all aspects of life. They have transformed me into a new and renewed person ready to face head-on any challenges that come my way.

-Onkar Parshekar

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Introduction

This report is a short description of my full-time on-site internship at Infuse.

I joined as an Intern at Infuse on 10th January 2022 and have been here since then. This report contains necessary information about the organization, the projects and mini projects I worked on and the other tasks and special trainings I completed in this internship period.

In the chapters that will follow, I will talk about the company, the work here, the culture, etc. Then, I shall elaborate on the projects I worked on, a brief information about the projects, the modules I built and the tasks I completed in those modules. This report highlights my learning experience and my contributions to the organization as an intern. This will describe the knowledge that I gained by successfully completing the tasks that were assigned to me.

I'll also be talking about the tools and technologies that were used followed by my internship timeline.

I shall conclude by sharing my experience and how it has helped me to grow, both, on the personal and professional front.

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 a number of 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 script-less 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 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, MS Dynamics, 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 or challenging 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!

Product – UseMango

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

- C#
- .NET framework
- WPF
- Ruby
- VBS
- Vue JS

My Contributions

I was assigned topics relating to.NET Backend Developer for self-learning throughout the early phases of the internship. These were the topics: API Gateway, Azure Event Hubs, Kubernetes, Mongo DB, RDBMS ORM.

After first initial days of learning and understanding the product I was given a feature to code and upload on AWS as lambda function. The feature included the following things:

1. Check the latest driver versions available for download.
2. Report back a JSON string which has further details:
    - Name of driver.
    - Version of driver (old and new).
    - Latest download link for each driver.

We had to make a cloud template for the same to upload it on AWS.

Later I got introduced in the sprint where we had 3 teams namely Execution & Reporting, System Management and Test Creation. I was in the Test Creation Team and and initially at the start of the sprint, we mostly solved bugs in and around the application, this gave me more exposure about the product and sped up the learning process.

We began by programming in pairs where I teamed up with another intern and we were assigned a bug to fix wherein we had to show a warning message while deleting a used parameter in the useMango app.

Our next bug fix was to fully display the step parameter name for all the components so that the user doesn't have to hover mouse to read it. Later we started working individually and my next bug fix was to maintain the same border shadow margins across all the workspaces in the useMango app.

Finally to mark the end of the first sprint, I added a minor feature wherein I had to add a description in python dependency editor under the settings panel so that the user is aware of the delimiter.

Later on in the second sprint, we implemented an email verification feature inside the useMango app for which I designed and implemented the UI interaction wherein I showed a warning icon to the user when email verification is not done, upon clicking it, a popup box would appear asking to click on the resend button which would trigger an email being sent to the user's registered email address.

Thereafter in the third sprint, I fixed a bug wherein useMango started to behave irresponsive for users after the release of new component selector window.

Followed by the bug fix, I worked on one of our new product feature i.e.: Filtering components in the new component selector window by categorization for which I created a category definition file in the useMango framework repository and modified all component definition files to have the new field categoryId.

Continuing on the component categorization in fourth sprint, I updated the data store framework component function to register the component definition changes to document DB and wrote a script in Js that runs through all the components in the framework and the category definion file to create records in the component category collection in the document DB. Later I tested my script locally on the database dump taken from document DB and then deployed my script to AWS Lambda in order to run and populate the dev database. Next I fixed an issue wherein the useMango account name changes on the website weren't reflected in useMango app and as the final task of this sprint, I fixed a bug wherein tests were not shown after switching projects in the useMango app. In addition to the responsibilities of the Test Creation Team, I also had the opportunity to work in the useMango Support Team, where I received ongoing training to better understand my responsibilities.

Followed by the training, I started giving product demo to potential clients where my task was to showcase all the features and capabilities of our test automation tool useMango for different platforms such as Web, SAP and Oracle EBS and for these demos, I had to write tests in useMango based on client requirements. Apart from giving demos, this fifth sprint was mostly a bug fixing week wherein I fixed an issue of composite component list not refreshing once a composite component was deleted. Next up I fixed an issue where scanned components were not showing up in list after a successful scan and make the components list refresh on its own once a component is added or deleted. Last bug fix of this sprint was to disable the delete button when a scripted component is being used in a test.

In the sixth sprint, most of my time was taken in product demos and providing support to our existing clients by resolving the issues they were facing while learning to use useMango. As part of Test Creation, I fixed two bugs, one where scanned component step parameter label was showing meaningless text instead of SAP or Oracle EBS screen label and second where multiple execution pop ups were displayed while running a test from the test library.

Tools and Technologies Used

C#

C# is a general-purpose, modern and object-oriented programming language pronounced as **"C sharp"**. It was developed by Microsoft led by Anders Hejlsberg and his team within the .Net initiative and was approved by the European Computer Manufacturers Association (ECMA) and International Standards Organization (ISO).

.NET Framework

The .NET Framework is a software framework developed by Microsoft that runs primarily on Microsoft Windows. It includes a large class library called Framework Class Library and provides language interoperability across several programming languages.

Ruby

Ruby is an interpreted, high-level, general-purpose programming language. It was designed and developed in the mid-1990s by Yukihiro "Matz" Matsumoto in Japan.

React JS

React (also known as React.js or ReactJS) is a free and open-source front-end JavaScript library for building user interfaces based on UI components. It is maintained by Meta (formerly Facebook) and a community of individual developers and companies.

AWS

Amazon Web Services is a subsidiary of Amazon providing on-demand cloud computing platforms and APIs to individuals, companies, and governments, on a metered pay-as-you-go basis.

Project timeline/Project diary

Jan 2022

- **Week 1:**
  1. Formal Orientation and onboarding process.
  2. Introduction to useMango.
  3. Self Learning - RDBMS ORM
- **Week 2:**
  1. Exploring feature of useMango.
  2. Automated a test using the product (useMango).
  3. Started to learn C#.
  4. Self Learning - API Gateway
- **Week 3:**
  1. Introduction to Azure Devops.
  2. Continued learning C#.
  3. Introduction to useMango Chrome Extension.
  4. Self Learning - Azure Event Hubs

Feb 2022

- **Week 4:**
  1. Had a suggestion session for adding features to the product.
  2. Started to learn .NET framework.
  3. Understanding the system architecture.
  4. Self Learning - Kubernetes
- **Week 5:**
  1. Introduction to AWS.
  2. Task to write AWS lambda in .Net runtime to find the latest version of the web drivers for useMango.
  3. Self Learning - Mongo DB
- **Week 6:**
  1. Setup AWS accounts and went through different AWS services.
  2. Learnt to write cloud formation templates.
  3. Deployed and tested the lambda function.
- **Week 7:**
  1. Resolved bugs assigned to me in Sprint.

March 2022

- **Week 8:**
  1. Resolved bugs assigned to me.
  2. Introduced and actively participated in 2 weeks sprint.
- **Week 9:**
  1. Continued learning C#.
  2. Started working on email verification UI/UX feature for App website.
- **Week 10 :**
  1. Continued learning .Net framework.
  2. Continued email verification back-end task.
- **Week 11 :**
  1. Resolved bugs assigned to me.

April 2022

- **Week 12:**
  1. Started working on component categorization feature.
  2. Resolved bugs assigned to me.
- **Week 13:**
  1. Resolved bugs assigned to me
  2. Continued working on component categorization feature.
- **Week 14:**
  1. Resolved bugs assigned to me.
  2. Continued working on component categorization feature.
  3. Participated in useMango support team training sessions.
- **Week 15:**
  1. Resolved bugs assigned to me.
  2. Web Demo with a client.

May 2022

- **Week 16:**
  1. Resolved bugs assigned to me.
  2. Web Demo with a client.

- **Week 17:**

  1. Oracle Demo with a client.
  2. Resolved bugs assigned to me.

- **Week 18:**

  1. SAP Demo with a client
  2. Resolved bugs assigned to me.

- **Week 19-20:**

  1. Resolved python release bugs assigned to me.
  2. Continued working on component categorization feature.

  3. QA Testing - reproduce bugs after new version release.

My reflections/ experiences of internship.

My Internship at Infuse has been a wonderful and growing experience. Facing newer challenges every day is a norm here at Infuse.

An un-dying hunger to learn more is something that is cultivated in employees here. Being in industry and working on a product is not something one learns but experiences.

At Infuse, I never felt alone as I was provided freedom to interact, consult seek help and guidance, etc. from any colleague.
Overall, I'm very happy to be part of Infuse. My best of wishes to everyone here.

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