INTERNSHIP REPORT

PRAJACTA MAUSKAR 1932

ZapCom Solutions Pvt. Ltd.

Goa University

REPORT OF INTERNSHIP DONE AT ZAPCOM SOLUTIONS PVT. LTD

SUBMITTED BY:

PRAJACTA MAUSKAR

1932

UNDER THE GUIDANCE OF

Mr. Kedar Prabhugaonker
(Software Engineer)

Mrs. Abhini Subhash
(Senior QA Engineer)

WITH

Mr. Kalyan Chakravarthy
(Senior Engineering Manager)

INTERNSHIP CERTIFICATE

zapcom.

3rd June 2022

INTERNSHIP LETTER

This is to certify that **Ms. Prajacta Mauskar**, student of MCA, 6th Semester from Goa University is working as an Intern with our Organization at Bangalore location since 10-Jan-2022, her six months internship period will get over on 30-June-2022.

During the period of her Internship program with us, she is found punctual, hardworking and inquisitive.

We wish her a successful career ahead.

Yours Sincerely,

For **ZapCom Solutions Pvt Ltd**.

SRINIVAS KOTHAKOTA COO

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GOA UNIVERSITY

GOA BUSINESS SCHOOL

Certificate of Evaluation

This is to certify that **Miss. Prajacta Mauskar** has been evaluated for the project work titled

"**Report of Internship done at ZapCom Solutions Pvt. Ltd.**" undertaken at **ZapCom Solutions Private Limited, Bangalore** 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

I would like to express my gratitude and appreciation to all the people who helped me in the completion of my internship.

I would like to thank Goa Business School, Goa University, for giving me the opportunity to carry out my internship and acquire real-world industrial experience. I thank **Mr. Ramdas Karmali** (Prof., Goa University) and **Mr. Jarret S. A. Fernandes** (Asst. Prof., Goa University) and all the faculty of Goa Business School for their constant encouragement and support.

I would also like to thank **Mr. Kishore Pallamreddy** (CEO, ZapCom), **Srinivas Kothakota (**COO, ZapCom), **Ms. Shilpi Jalota** (HR Operations Manager, Zapcom) and **Miss. Vanessa Crasto** (Associate HR Generalist) for giving me the opportunity to intern at ZapCom.

My sincerest gratitude to **Mr. Deepak Puranam** (Head of Delivery, Zapcom) and **Mr. Kalyan Chakravarthy** (Senior Engineering manager).

I would like to thank **Mr. Kedar Prabhugaonker** (Software Engineer, Zapcom) and **Ms. Abhini Subhash** (Senior QA Engineer) for being my Mentors and giving me the necessary guidance and support.

I am extremely grateful to all my colleagues and friends who helped me in the successful completion of this internship.

TABLE OF CONTENTS

INTRODUCTION

This internship report describes the tasks carried out during 5 months, full time internship period by Miss. Prajacta Mauskar which commenced on 10th January 2022 at ZapCom Solutions Pvt. Ltd, Bangalore in accordance with curriculum of the VI semester Industrial Training of the MCA program, Goa University, Goa.

In the chapters that will follow, I will talk about the company and elaborate on the projects and tasks I worked on, a brief information about the projects, the modules I worked on. I will also provide information on the technologies studied and tools used during the internship. I shall conclude by sharing my experience with the company during the internship.

COMPANY PROFILE

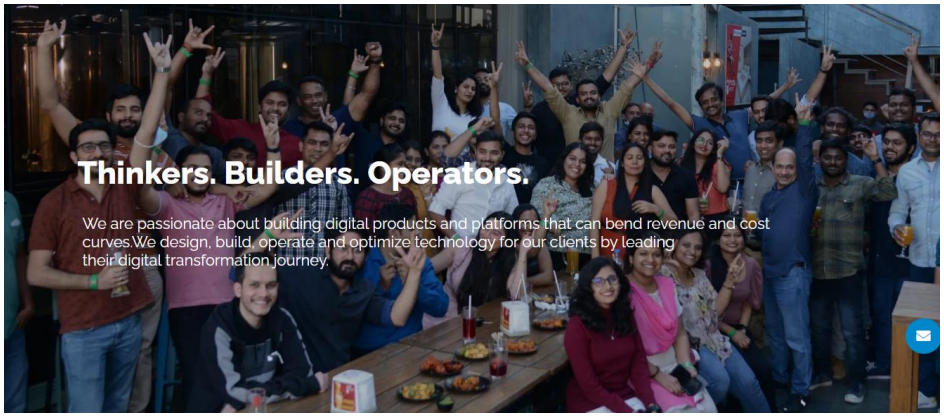
ZapCom Group is a global Product Engineering and Technology Services company that designs and develops custom software solutions, enabling partners to achieve their business goals.

They are globally specialized in building scalable platforms for Travel, Hospitality, Fin-Tech and Retail. ZapCom Group is a high performing team with competency in disruptive innovative ideas and emerging technologies.

They are headquartered in California with offices in Dublin-California, Dallas Texas, Bangalore, Hyderabad - India and San Jose-Costa Rica.

ZapCom has a strong management team with experience in Technology consulting, Product engineering and Custom solution development services. ZapCom is strategically placed to help clients deliver better products, services and business processes through Disruptive Technologies, Insights and Processes.

ZapCom has successfully delivered many projects in Agile and Scrum methodologies. The Company has helped its customers to adapt and further improve their delivery efficiency. ZapCom helps its customers to achieve performance targets.



AUTOMATION TESTING

REST API Test Automation with Cucumber

Problem Statement:

To Test the Online REST API and perform POST, GET, PUT, DELETE requests & different Validations.

Tools & Technologies Used:

- Eclipse IDE
- MySQL
- Postman
- Git
- Java
- Cucumber
- Gherkin Language

My Tasks:

The tasks performed comprised of:

- API Testing using methods: POST, GET, PUT, PATCH, DELETE
- Building Cucumber Feature File & Step Definitions:

  I had to write a REST API Test using Cucumber BDD Framework. I created a feature file to write the test scenarios. It is written in Gherkin Language. I wrote a step definition for each scenario using Rest-Assured.

- Performing validations for the following:
    1. Response Status
    2. Response Header
    3. Response Body
    4. Schema Validation
    5. Json Validation
    6. Verifying an Array of Response
    7. Verifying a particular element in Array

- Establishing Database connection to fetch data

  I was assigned a task to connect to a local database and fetch the data from dB & pass the data as a request body and perform POST Operation.

- Report Generation

Reports are generated by using Cucumber's built-in plugin.

Karate API Automation

Problem Statement:

To perform Karate API Automation on Restful-Booker Api Endpoints.

Tools & Technologies Used:

- Eclipse IDE
- MySQL
- Postman
- Git
- Java
- Karate Framework
- Cucumber
- Gherkin Language

My Task:

Creating karate-config.js file: I had to store base URLs, generated token, valid headers, timeouts in this file and call them while executing scenarios.

To perform Karate API Automation for the following end points:

CreateToken:

Here I had to verify if the token gets created when Username & Password is given in the request body with 200 status code.

GetBookingIds:

For this endpoint, I checked if all the received Ids in the list are unique for GET booking endpoint and to perform schema validation for the same.

GetBooking:

In this, I verified if the user receives 200 status code with booking details for valid booking Id & 400 status code for invalid booking Id in GET request method

CreateBooking:

I had to verify if the user is able to create the booking with the valid request body for Post Booking end point & Verification for different Status Codes under Booking Api Endpoint

UpdateBooking:

For this endpoint I had verify if the user is able to update the details using PUT request method.

PartialUpdateBooking:

I had to verify the post request & then check if the user can partially update the booking details in the request body using PATCH request method.

DeleteBooking:

For the given Booking Api endpoint, I had to verify if the user is able to delete the id when DELETE method is performed on a specific Id. I also had to verify if the user gets message "Method Not Allowed" and status code 405 when an invalid Booking Id is specified in request.

HealthCheck:

I had to verify if the User gets response message "Created" after successful GET request method on healthCheck endpoint.

DbConnection:

I had to set up a connection with local database & pass the request body using the Post request method.

Report Generation

Generating Cucumber Report for Karate

	Steps						Scenarios			Features	
Feature	Passed	Failed	Skipped	Pending	Undefined	Total	Passed	Failed	Total	Duration	Status
api/get_AllBookingIds/get_AllBookingIds.feature	13	0	0	0	0	13	1	0	1	1.675	Passed
	13	0	0	0	0	13	1	0	1	1.675	1
	100.00%	0.00%	0.00%	0.00%	0.00%		100.00%	0.00%			100.00%

Cypress UI Automation

Problem Statement:

Perform UI Automation using Cypress on SauceDemo site with End-to-End Scenarios from Login to Adding Item to Cart, Adding Delivery Details and Log out.

Tools & Technologies Used:

- Visual Studio Code
- Postman
- Git
- JavaScript
- Java
- Cucumber
- Gherkin Language
- Cypress
- Karate Framework

My Contribution:

I had to write the Manual Test Scenarios for SauceDemo site, and create & automate the same using Cypress UI Automation. Testing was done for the User Login with valid & invalid credentials displaying the error messages. Proceeding with Sorting of products based on Name Option (Ascending/Descending) & Price Option (Low to High/High to Low).

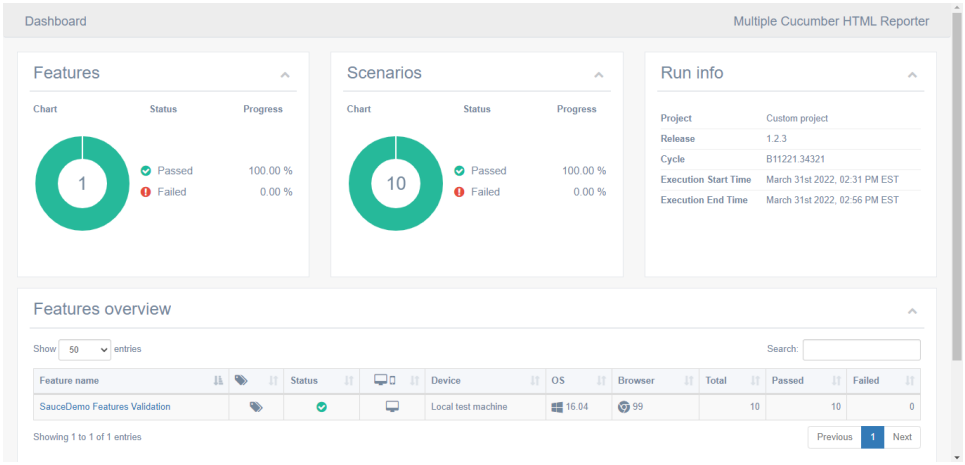
I also had to verify if the User is able to add Multiple products in the cart, view the products & remove the same from the cart. And also test if the user can check out the product for delivery by filling up the shipping details and logging out.

My Tasks:

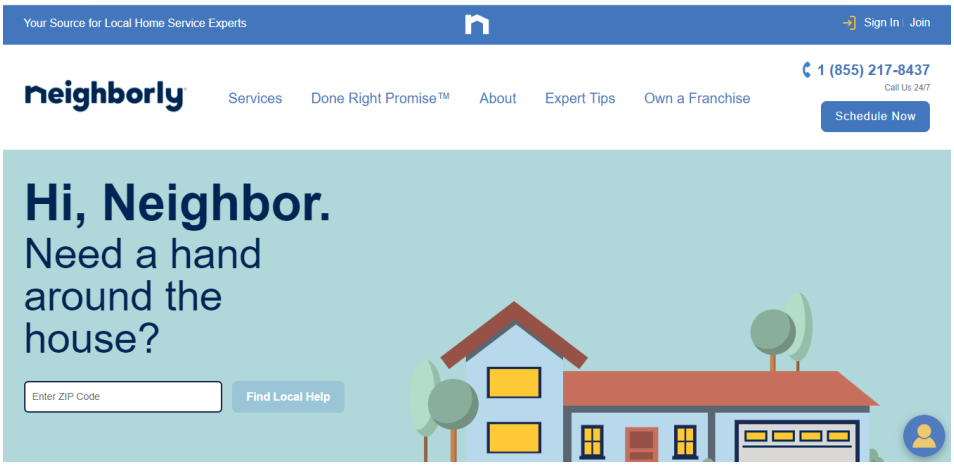
- Using the Test Runner to run tests.
- Using Json files to store data.
- Storing Web Elements in respective separate Page files.

- Performing assertions based on the elements present and error message pop ups.
- Sorting the products based on Name & Price Option
- Performing assertion on products added to cart
- Generating Report

  Reports are generated by using Cucumber's built-in plugin.



NEIGHBORLY



OVERVIEW

Neighborly is a home services platform that connects you to a very specific group of local experts. Their family of providers meets rigorous quality standards to repair, maintain and enhance your home.

There's no shortage of options when it comes to home services providers. No one knows better than Neighborly, one of the largest and most trusted home services companies in the world. Their family of brands offers virtually any service you need to keep your home safe, efficient and beautiful. You can find your local Neighborly professionals, plan maintenance schedules and book them on the site itself.

The locally owned Neighborly home services companies are backed by nationally acclaimed franchise brands, so their experts are always trained, uniformed, and well equipped to provide the exceptional work and customer service that Neighborly is known for. All their brands and 3,600+ franchise owners share the same code of values: Respect, Integrity, Customer Focus and Having Fun in the Process.

Brand Integration Team

There are different brands currently owned by Neighborly. As new brands get acquired by Neighborly, BIT team integrates them into NBLY system. BIT checks the flow of booking a service & verifies them. Different applications are used for booking a particular service.

PROBLEM STATEMENT

Production Testing (PDS OPAL POS Sync and data): Test the Opal tables & verify the data fields.

TOOLS & TECHNOLOGIES USED

- Microsoft SQL Server Management Studio
- Postman
- Azure DevOps

MY CONTRIBUTION

I was a shadow resource for this user story. I tested the assigned tables using JOINS Queries in SQL Server Management Studio. My task was to check if all the fields in the tables matched with the Tables in the sheet provided. And to count the records of each table & verify the same.

OTHER TASKS

UI AUTOMATION TESTING USING SELENIUM WEBDRIVER

PROBLEM STATEMENT

Automate the Process from Login to Adding Item to Cart in Flipkart Shopping website using Selenium WebDriver Page Object Model Framework.

TOOLS AND TECHNOLOGIES USED

- Eclipse IDE
- Java
- Selenium WebDriver
- Cucumber
- Maven
- Extent Reporting
- JUnit

MY CONTRIBUTION

I had to Create and Automate the Test Scenarios for the UI of website. Automation Testing was done for the process of User Login, proceeding with searching for items and adding them to cart and later viewing them, and finally logging out.

Database Testing

Manually Test the MCW Mapping Sheet in Dryer Vent Wizard Database and verify the records from the tables.

CERTIFICATIONS AND TRAINING COMLPLETED UNDER INTERNSHIP & SELF STUDY

UDEMY COURSES:

1. Rest API Testing (Automation) from Scratch – Rest Assured Java
2. Karate DSL: API Automation and Performance
3. Cypress – Modern Automation Testing from Scratch + Frameworks
4. Learn JMETER from Scratch on Live Apps – Performance Testing
5. Information Security Awareness-ISO 27001:2013
6. Appium - Mobile Testing (Android/IOS) from Scratch + Frameworks -- (Ongoing)

YOUTUBE TUTORIALS:

- API Testing with REST Assured & Cucumber
- JavaScript Tutorial for Beginners
- Postman

TOOLS & TECHNOLOGIES USED:

Java

Java is a general-purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible. It is intended to let application developers “write once, run anywhere” (WORA). The compiled Java code can run on all platforms that support Java without the need for recompilation

JavaScript

JavaScript is a high-level, often just-in-time compiled and multi-paradigm. It has curly bracket syntax, dynamic typing, prototype-based object-orientation and first-class functions. JavaScript is one of the core technologies of the World Wide Web. It enables interactive web pages and is an essential part of web applications.

Maven

Maven is a build automation tool used primarily for Java projects. Maven can also be used to build and manage projects written in C#, Ruby, Scala and other languages. The Maven project is hosted by the Apache Software Foundation, where it was formerly part of the Jakarta Project. Maven addresses two aspects of building software: how software is built and its dependencies.

TestNG

TestNG is a testing framework for the Java programming language inspired by Junit and NUnit. The design goal of testing is to cover a wider range of test categories: unit, functional, end-to-end, integration, etc., with more powerful and easy-to-use functionalities. TestNG is supported, out-of-the-box or via plug-ins, by each of the three major Java IDE's – Eclipse, IntelliJ IDEA and NetBeans.

JUnit

Junit is a unit testing framework for the Java programming language. Junit has been important in the development of test-driven development, and is one of a family of unit testing frameworks which is collectively known as xUnit that originated with SUnit.

Selenium WebDriver

Selenium Web driver is a collection of open-source API's which are used to automate the testing of a web application. It is a tool used to automate web application testing to verify that it works as expected. It supports many browsers such as Firefox, Chrome, IE and Safari.

Cucumber

Cucumber is a software tool that supports behavior-driven development (BDD). Central to the Cucumber BDD approach is its ordinary language parser called Gherkin. It allows expected software behaviors to be specified in a logical language that customers can understand. As such, Cucumber allows the execution of feature documentation written in business-facing text. It is often used for testing other software.

Gherkin

Gherkin is a Business Readable, Domain Specific Language created especially for behaviors descriptions. It gives you the ability to remove logic details from behavior tests. It is a line-oriented language that uses indentation to define structure. Line endings terminate statements and either spaces or tabs may be used for indentation. Most lines in Gherkin start with a special keyword.

REST API

A REST API (also known as RESTful API) is an application programming interface (API or web API) that conforms to the constraints of REST architectural style and allows for interaction with RESTful web services. REST stands for representational state transfer and was created by computer scientist Roy Fielding.

Karate

Karate is an open-source general-purpose test-automation framework that can script calls to HTTP end-points and assert that the JSON or XML responses are as expected. Karate is implemented in Java but test-scripts are written in Gherkin since Karate was originally an extension of the Cucumber framework. Karate is built on top of Cucumber, another BDD testing framework, and shares some of the same concepts. One of these is the use of a Gherkin file, which describes the tested feature.

Cypress

Cypress is a JavaScript testing automation solution used for web automation. It enables teams to create web test automation scripts. This solution aims to enable frontend developers and test automation engineers to write web tests in the de-facto web language that is JavaScript for web test automation.

Gatling

Gatling is a load testing tool which can be used for your integrated development environment, version control systems and continuous integration solutions. It does not have its own solution, rather it integrates with your existing solutions. Even though it is Scala-based, which is not as popular as other languages, like C#, JavaScript, PHP, Python, and others, it is still widely used by developers.

Eclipse

Eclipse is an integrated development environment (IDE) used in computer programming. It contains a base workspace and an extensible plug-in system for customizing the environment. Eclipse is written mostly in Java and its primary use is for developing Java applications, but it may also be used to develop applications in other programming languages via plug-ins.

Visual Studio Code

Visual Studio Code is a free source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring and embedded Git. Users can change the theme, keyboard shortcuts, preferences and install extensions that add additional functionality.

Postman

Postman is a Google Chrome app for interacting with HTTP API's. It presents you with a friendly GUI for constructing requests and reading responses. The people behind Postman also offer an add-on package called Jetpacks, which included some automation tools and most crucially a JavaScript testing library.

Git

Git is a distributed version-control system for tracking changes in source code during software development. It is designed for coordinating work among programmers, but it can be used in any set of files. Its goals include speed, data integrity and support for distributed, non-linear workflows.

JMeter

Apache JMeter is pure Java-based open-source software designed to load test functional behavior and measure performance. It can be used to simulate a heavy load on a server, group of servers, network or object to test its strength or to analyze overall performance under different load types.

SQL Server Management Studio

Microsoft SQL Server Management Studio (SSMS) is an integrated environment to manage a SQL Server infrastructure. It provides a user interface and a group of tools with rich script editors that interact with SQL Server. It supports most of SQL Server's administrative tasks and maintains a single, integrated environment for SQL Server Database Engine management and authoring.

MySQL

MySQL is an open-source relational database management system. For WordPress sites, that means it helps you store all your blog posts, users, plugin information, etc. It stores that information in separate “tables” and connects it with “keys”, which is why it's relational.

Azure DevOps

Azure DevOps provides developer services for allowing teams to plan work, collaborate on code development, and build and deploy applications. Azure DevOps supports a collaborative culture and set of processes that bring together developers, project managers, and contributors to develop software. It allows organizations to create and improve products at a faster pace than they can with traditional software development approaches.

INTERNSHIP TIMELINE

January 2022

Week 1:

1. Formal Orientation & Onboarding Process
2. Started Going through POM & Selenium, Cucumber

Week 2:

1. Worked on Task: UI Automation Testing using Selenium

Week 3:

1. Worked on changes given of Task
2. Report generation

February 2022

Week 4:

1. Learnt REST API

Week 5:

1. Learnt API Testing with REST Assured & Cucumber

Week 6:

1. Implemented REST API on Demo Project
2. Learnt Postman

Week 7:

1. Learnt JavaScript
2. Different Types of Testing
3. Testing Lifecycle

March 2022

Week 8:

1. Wrote Rest Assured Test Cases for all the methods.
2. Performed different Validations for all the request methods

Week 9:

1. Automated Online REST API Project using REST API

Week 10:

1. Learnt Karate
2. Converted Rest Assured Test Cases to Karate Test Cases

Week 11:

1. Learnt Cypress

Week 12:

1. Automated Project using Cypress UI Automation

April 2022

Week 13:

1. Automating Project using Karate

Week 14:

1. Preparing for Interns Demo Call

Week 15:

1. Types of Testing
2. Performance Testing
3. Load Testing

Week 16:

1. Learnt JMeter
2. Gatling

May 2022

Week 17:

1. Practicing PDS Queries

Week 18:

1. Worked as a Shadow Resource on BIT-NBLY

Week 19:

1. Worked as a Shadow Resource on BIT-NBLY

Week 20:

1. Started learning Appium Testing – Mobile Testing
2. DVW Testing: NBLY-BIT

June 2022

Week 21:

1. Learning Appium Framework

OVERALL EXPERIENCE AT ZAPCOM

My Internship at ZapCom has been a wonderful and growing experience that has taught me a lot.

The work environment at ZapCom is friendly. I got to experience how the industry actually functions and how the project cycle works in real life. My colleagues were extremely helpful & approachable, which made me feel comfortable working at ZapCom.

At ZapCom we are encouraged to spend a fraction of our time on activities and having fun. I got to experience events like Holi, Potluck, Fun Friday Activities and other Games. These events allowed me to forge valuable friendships with my colleagues.

Overall, my internship experience has been an extremely enriching. I am thankful for this opportunity to gain valuable working experience.

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