Capstone Project

Introduction

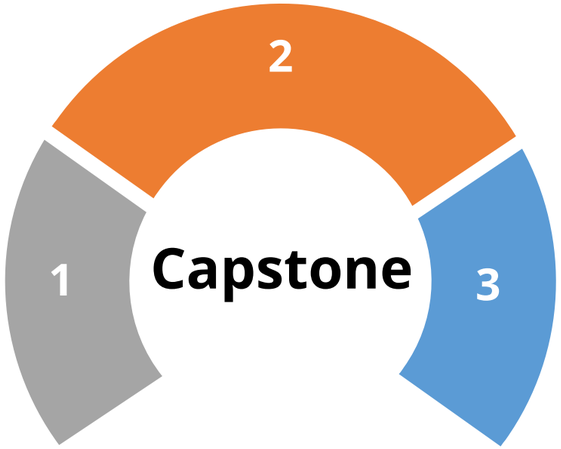
A capstone project is a major project that aims to deliver end-to-end functionality of a business application.

Multiple technologies

Every stage of a capstone project can be implemented with different technologies and frameworks present for the operations.

Multi-level

It is a multi-level project with different stages, such as backend, frontend, automation, and DevOps, depending on the technology.



Scalable

Due to its dynamic nature, it is built around various domains and business use cases that make it scalable.

Cloud Airlines

Agenda:

Develop a comprehensive QA and test environment for an airline booking website and automate the whole testing process.

This QA and test environment should be inclusive of the following testing layers:

- Browser-based end user testing
- Unit testing for backend elements of the website
- API testing on cloud
- Automating the whole testing process

Cloud Airlines

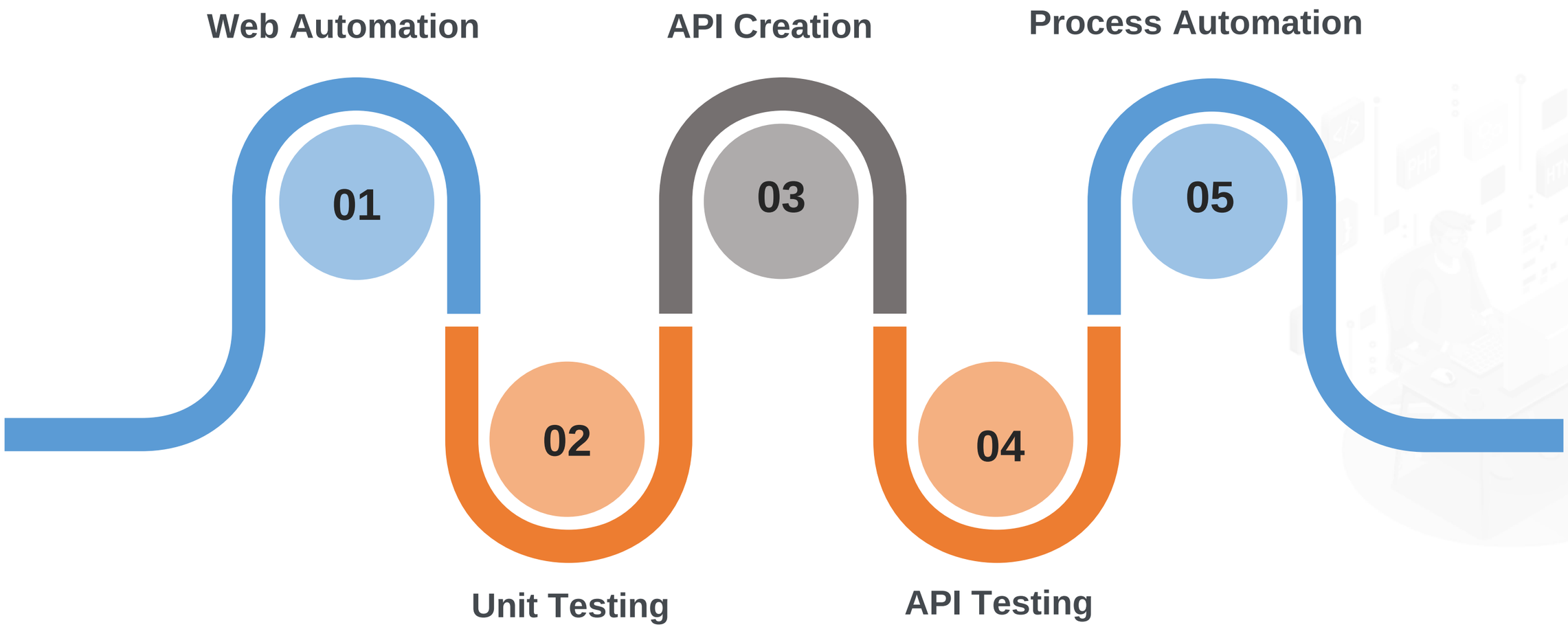
Background of the project:

Cloud Airlines is a ticket-booking portal that lets people book flights on their website. The website has the following features:

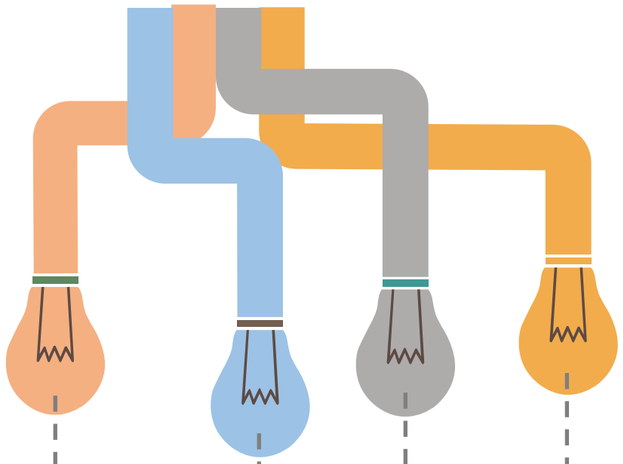
- A search form in the homepage is used to enter the travel details like the date of travel, source, destination, and the number of passengers.
- Based on the travel details entered, it opens a page with the available flight details and their ticket prices.
- Once a person selects a flight to book, they will be taken to a register page where they must fill in their personal details. In the next page, the flight details are displayed and the payment is done via a dummy payment gateway. On completion, a confirmation page with the details of the booking is displayed.

The above website is already functional. The objective is to add a testing layer, which will ensure that every component of the website is passed through the QA.

Project Development Flow



Technologies



Web Automation

Eclipse IDE and Selenium webdriver

Unit Testing

TestNG and Junit

API Testing

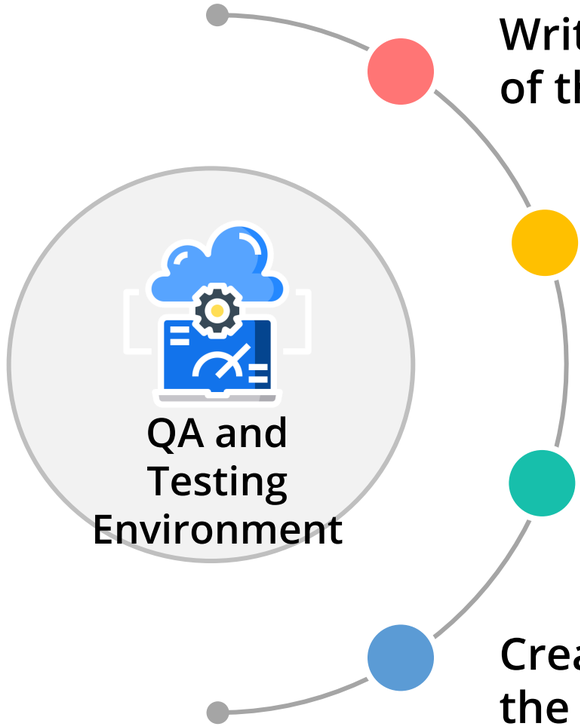
Eclipse IDE, Postman, and AWS cloud

Process Automation

Jenkins

Required Testing Layers

Below are the key responsibilities and functionalities to be implemented in the QA and testing environment:



- Write an automation script using page object design to store the web elements of the home page
- Perform unit testing for all backend classes and methods of the website using TestNG
- Add additional code to the original project to add the REST API module and perform API testing using Selenium
- Create and build Jenkins job for all the automation testing phases performed in the previous steps

Thank You