

Complete Testing in Agile Methodology

Binu C T

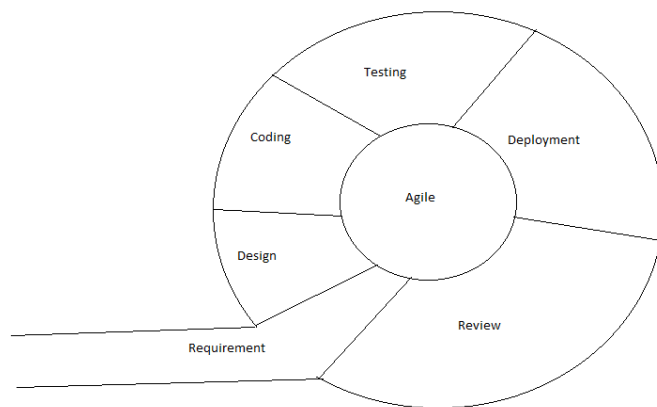
Binuct143@gmail.com

ABSTRACT: Agile Methodology is the current methodology to develop software in better way. There are different testing techniques like regression testing, smoke testing which are based on functionality. Use case testing is based on design and the proposed testing technique complete testing otherwise called work flow testing based on sequence diagram of design. The test scenarios is prepared in Analysis of Design phase and Test case is designed based on the test scenarios in testing phase in agile methodology.

KEYWORDS: Testing, Agile, Work flow, Sequence diagram

I. INTRODUCTION

Software testing in agile methodology is the current software developing method which include requirement analysis, design and review, coding, testing, deployment and then review. The total work is divided into different time span called sprint. In Requirement analysis phase accept the requirement and convert it into user stories. Design is done in the previous sprint and do the design in next sprint and then moved to coding phase. Coding is done based on design in the coding phase. In testing phase test the application based on the test cases and report issues. The developed application is delivered to the client in the deployment phase. The client review the application and report to the team



.Fig 1. Agile Methodology

II. SOFTWARE DESIGN

Software design is the technique to validate the software before it's developed. There are different design technique available to design the software which include Use case Diagram, Sequence Diagram, Activity Diagram etc.

A. Use case Diagram:

Use case diagram contain Actors, objects and communication between them.

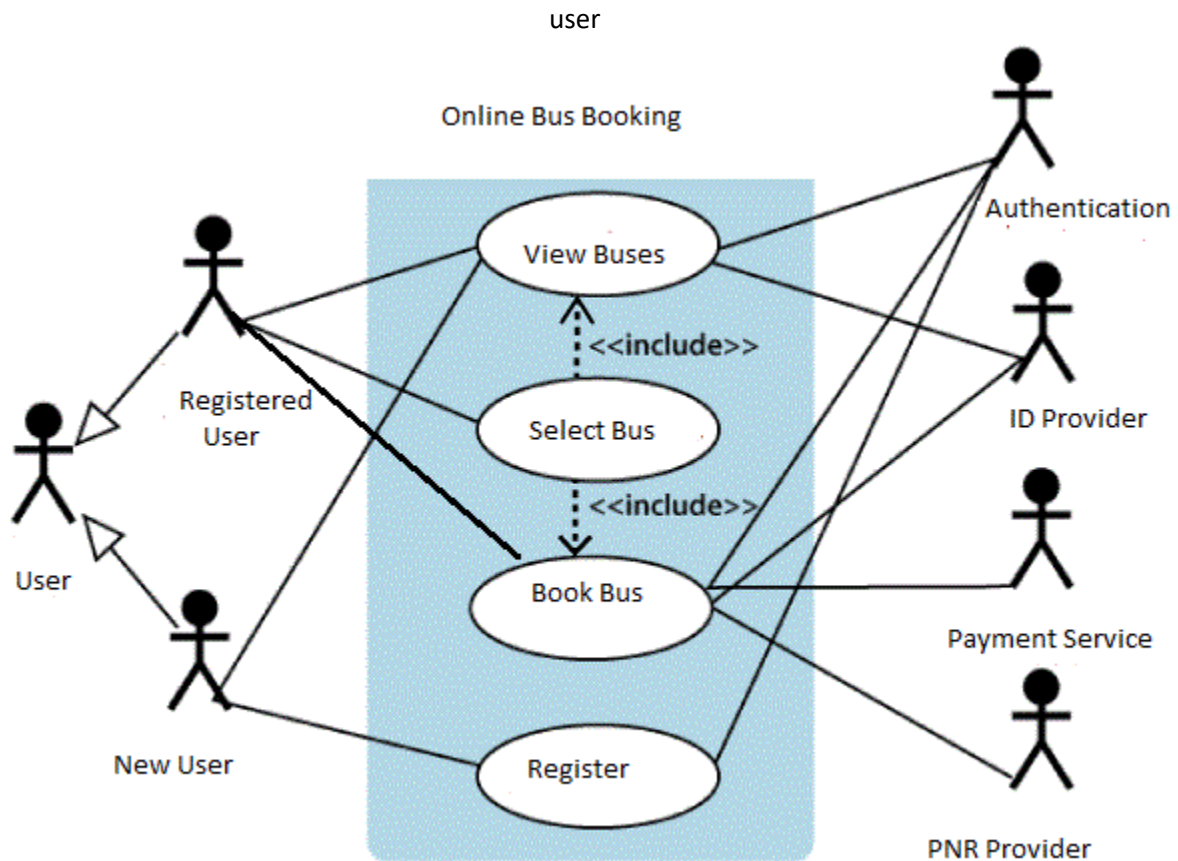


Fig.2 Use case Diagram for Online Bus Booking

The diagram is an example for use case diagram where User is an actor. The registered User is a User who can view, select and Book bus. New User can view buses and Register for bus booking service. There is also have Authentication, ID Provider, Payment Service and PNR Provider for the trusted system.

B. Sequence Diagram:

Sequence diagram highlighted on the actions which are generated while using the system.

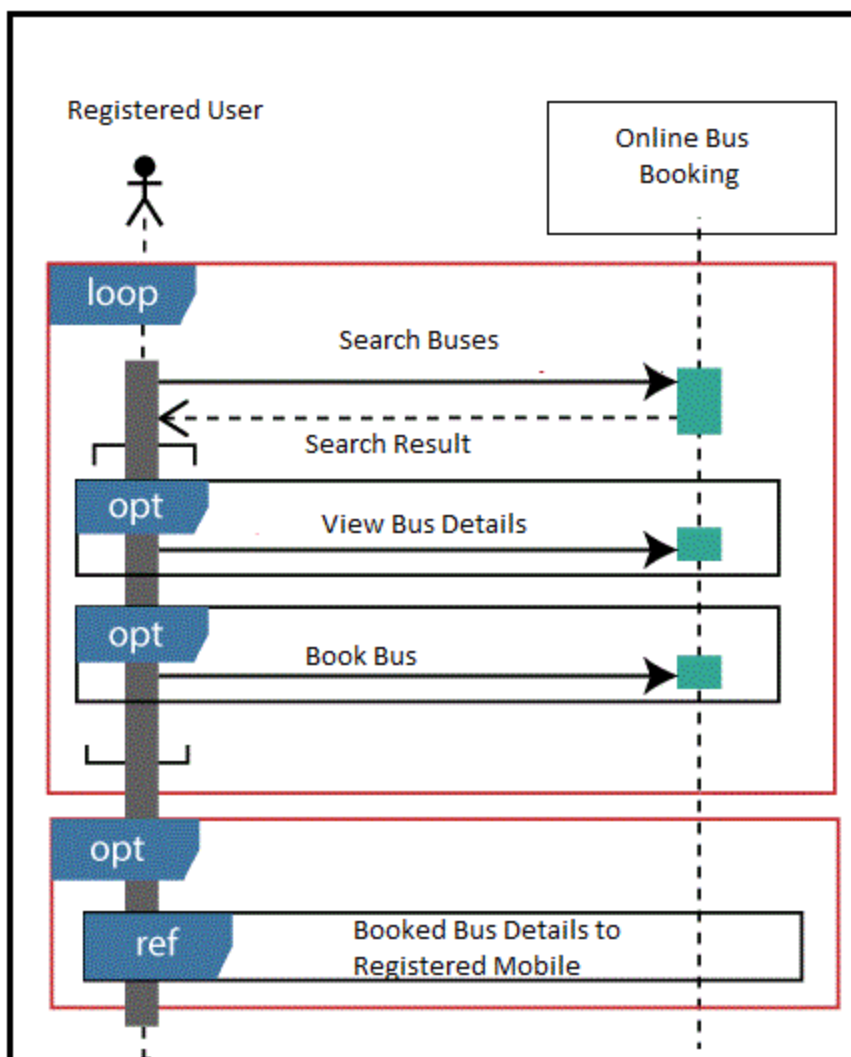


Fig.3 Sequence Diagram for Online Bus Booking

The diagram which shows the actions in online bus booking service. Registered User continuously searches the bus with keywords and the result is displayed. The user can opt services like view Bus Details and Book Bus. The reference ref is provided only for booked. PNR is send to the registered mobile number.

III. COMPLETE TESTING

Complete Testing is a type of testing technique which mainly focus on the actions in the system which are available for different actors and verifying the data of that actor. Test case preparation is based on the actions which are in order. Complete testing is otherwise called Workflow Testing. The proposed testing technique is based on the sequence diagram.

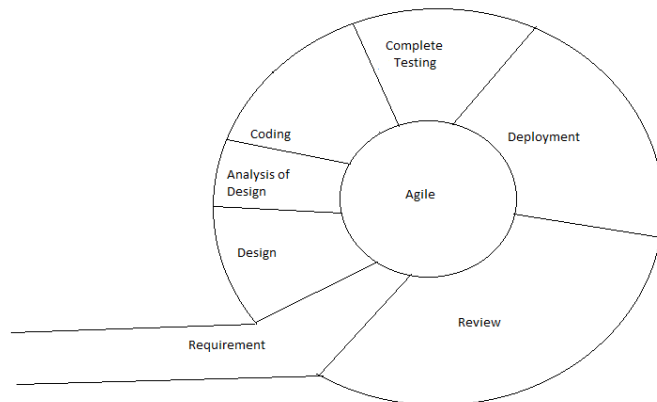


Fig.4 Complete Testing in Agile Methodology

The steps in the proposed agile methodology includes

- Requirement Analysis
- Design
- Analysis of Design
- Coding
- Complete Testing
- Deployment
- Review

- A. Requirement analysis: Requirement analysis include Epic and User Story Preparation and fetch in each sprint based on the requirement of the client.
- B. Design: Design step include selection of algorithm and design of architecture for the specific application.
- C. Analysis of Design; Tester analysis the sequence diagram and find the scenarios for each user in the application.
- D. Coding: Developers scripts and develop the application based on the user stories.
- E. Complete Testing: Testers prepare test cases based on the scenarios obtain in the Analysis of Design phase.
- F. Deployment: Deliver the quality application to the client and review.
- G. Review: The changes required for the application is discussed in this phase.