

PRACTICAL: 10

Aim: Design the following for given project (Black Box Testing)

1. TestCase
2. TestSuite
3. TestingStrategy

Also Design Test Cases using White Box Testing, Gray Box testing.

Software Required: NONE.

Knowledge Required: Basics of Software Engineering – testing techniques

Project Name: Community Management

Theory:

1. Evaluation and Testing

Introduction:

- Testing is the process used to validate and verify the system.
- Testing is required in each phase of the software development. Always test plan required to test the entire system or components of system and identify the client requirements.

2. Objective of the Testing

- To establish that the software worked satisfactorily as per the requirement of client.
- To prove that the program is error free and user friendly with proper validations.
- To certify that the software functioned correctly and could be used in production.

3. Front End Testing

- Web based application mainly related with the web user interfaces(UI's).
- Blackbox testing methodology is used to check the UI's functions according to the test plan.
- System was tested in module wise and the test cases are listed below.

4. Black-box testing alludes to tests that are conducted at the software interface. They are used to determine that software functional are operational, that input is properly accepted and output is correctly produced, and that the integrity of external information (e.g. database) is maintained. It does not consider the internal logic

structure that importance.

5. **White-box testing** of software is predicated on close examination of procedural detail. Logical paths through the software are tested by providing test cases that exercises specific sets of conditions and/or loops. The status of the program may be examined at various points to determine if the expected or asserted status corresponds to the actual status.
6. **Gray Box Testing** is a technique to test the software product or application with partial knowledge of the internal workings of an application.

In this process, context-specific errors that are related to web systems are commonly identified. It will increase the testing coverage by concentrating on all of the layers of any complex system. Gray Box Testing is a software testing method, which is a combination of both White Box Testing and Black Box Testing method.

- In White Box testing internal structure (code) is known
 - In Black Box testing internal structure (code) is unknown
 - In Grey Box Testing internal structure (code) is partially known
7. **Browser Testing:** Browser testing carried out for implemented Online Job Portal System on all the latest browsers such as Firefox Chrome, IE 10 and Safari. As well as mobile friendly or responsive of the web pages also tested in browser level.
 8. **Browser Testing:**

Tested Pages	Firefox	Chrome	IE	Safari
Login Page	✓	✓	✓	✓
Community Search page	✓	✓	✓	✓
User profile	✓	✓	✓	✓
Admin page	✓	✓	✓	✓
Membership page	✓	✓	✓	✓
View community page	✓	✓	✓	✓
Apply for Community Page	✓	✓	✓	✓
Payment Page	✓	✓	✓	✓
Sign Up and reset password page	✓	✓	✓	✓

9. Test cases used to test login UI and function:

Test	Test Case	Test			
		Steps	Expected response from the system	Actual response from the system	Test Case status
1	New user input details with valid email id and details	Enter correct credentials for user	Adds user details to the database, send email to user about the registration.	Adds user details to the database, send email to user about the registration.	Success
2	New user input details with invalid email id and details	Enter incorrect credentials for user	Form validation display errors in relevant fields. System rejects input.	Form validation display errors in relevant fields. System rejects input.	Success
3	New user tries to register with blank details	Leave the space blank	Form validation display errors in relevant fields. System rejects input.	Form validation display errors in relevant fields. System rejects input.	Success
4	User tries to register with an existing email address	Enter credentials same as other user	Email address is been validated and notifies user. If exist asks to login.	Email address is been validated and notifies user. If exist asks to login.	Success
5	Validate user password with confirm password field	Enter correct password with right conventions	If both password and confirm passwords are similar user can proceed.	If both password and confirm passwords are similar user can proceed.	Success
6	User provides invalid username/password	Enter wrong credentials for each	Notifies user that the user name/ email or password is incorrect	Notifies user that the user name/ email or password is incorrect	Success
7	User tries blank input and to login	Left field for Login	Notifies user that the user name/ email or password is blank	Notifies user that the user name/ email or password is blank	Success

8	User clicks forgets user name or password	Forgot credentials rules are implanted	Provided input field to enter the email address of the user.	Provided input field to enter the email address of the user.	Success
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10. Test cases used to test apply for user memberships.

Test	Test Case	Test Steps	
		Expected response from the system	Test Case Status
1	Only registered user can apply for membership	System will turn to registration and login page for user authentication	Success
2	Availability of options in memberships	System will provide the payment gateways according the type of membership selected	Success
3	Community formation	System will display various options for formation of a community	Success
4	Advertisement	According to the type of membership taken, system will provide the advertisement potions to upload	Success
5	Join a community	Search and join any community by clicking the join button	Success
6	Leave a community	System provides Leave option for leaving the community	Success

11. Test cases used to test Administrator UI and functions:

Test	Test Case	Test Steps	
		Expected response from the system	Test Case status
1	Assigning the head of community	Assigns the HOC in already formed communities based on various factors from the users of that community	Success
2	Add/remove member	System provides admin the option of adding or removing a member through admin panel	Success
3	Manage community	System provides various controls in the admin panel to manage a community- edit information/block users etc.	Success
4	View profiles other than users	As super user can view and access detailed	Success
5	Warns users if there are any violations	If there is any violations occurred or reported by other users, admin can inform or notify that particular user through email or system.	Success
6	Inform users if there is system down or if any technical issue occurred	Email based notifications will notify the users regarding this	Success