**Testing**

**INTRODUCTION**

Testing is the process of running a system with the intention of finding errors. Testing enhances the integrity of a system by detecting deviations in design and errors in the system. Testing aims at detecting error-prone areas. This helps in the prevention of errors in a system. Testing also adds value to the product by conforming to the user requirements.

The main purpose of testing is to detect errors and error-prone areas in a system. Testing must be thorough and well-planned. A partially tested system is as bad as an untested system. And the price of an untested and under-tested system is high.

The implementation is the final and important phase. It involves user-training, system testing in order to ensure successful running of the proposed system. The user tests the system and changes are made according to their needs. The testing involves the testing of the developed system using various kinds of data. While testing, errors are noted and correctness is the mode.

**OBJECTIVES OF TESTING:**

The objectives of testing are:

* Testing is a process of executing a program with the intent of finding errors.
* A Successful test case is one that uncovers an as- yet-undiscovered error.

**The various types of testing on the system are:**

1. Unit Testing.

2. Integration Testing

3. System testing

4. User Acceptance Testing

**1.1. Unit Testing:**

Unit testing focuses efforts on the smallest unit of software design. This is known as module testing. The modules are tested separately. The test is carried out during programming stage itself. In this step, each module is found to be working satisfactory as regards to the expected output from the module.

**1.2. Integration Testing:**

Data can be lost across an interface. One module can have an adverse effect on another, sub functions, when combined, may not be linked in desired manner in major functions. Integration testing is a systematic approach for constructing the program structure, while at the same time conducting test to uncover errors associated within the interface. The objective is to take unit tested modules and builds program structure. All the modules are combined and tested as a whole.

**1.3. System Testing:**

System testing is the stage of implementation. This is to check whether the system works accurately and efficiently before live operation commences. Testing is vital to the success of the system. The candidate system is subject to a variety of tests: on line response, volume, stress, recovery, security and usability tests. A series of tests are performed for the proposed system is ready for user acceptance testing.

**1.4. User Acceptance Testing:**

User acceptance of a system is the key factor for the success of any system. The system under consideration is tested for the user acceptance by constantly keeping in touch with the prospective system users at the time of developing and making changes whenever required.

* **Validation:**

At the culmination of the integration testing, Software is completely assembled as a package. Interfacing errors have been uncovered and corrected and a final series of software test begin in validation testing. Validation testing can be defined in many ways, but a simple definition is that the validation succeeds when the software functions in a manner that is expected by the customer. After validation test has been conducted, one of the three possible conditions exists.

1. The function or performance characteristics confirm to specification and are accepted.
2. A deviation from specification is uncovered and a deficiency lists is created.
3. Proposed system under consideration has been tested by using validation test and found to be working satisfactory.

* **Output Testing:**

After performing the validation testing, the next step is output testing of the proposed system, since no system could be useful if it does not produce the required output in a specific format. The output format on the screen is found to be correct; the format was designed in the system design time according to the user needs. For the hard copy also; the output comes as per the specified requirements by the user. Hence output testing did not result in any correction for the system.

**Login:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Input Values** | **Test case** | **Conditional being checked** | **Result** |
| 1 | Email | Empty | Please Enter valid Username | Successful |
| 3 | Email | Already Exists or not | Login ID should be unique | Successful |
| 4 | Password | Empty | Please Enter valid Password | Successful |
| 5 | Password | If wrong Password | Enter Password | Successful |
| 6 | Password | Length | Length should be less than or equal to 10 character | Successful |

**Registration:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Input Values** | **Test case** | **Conditional being checked** | **Result** |
| 1. | First Name | Empty | It must not be empty | Successful |
| 2 | **Last Name** | Empty | Last Name must not be empty | Successful |
| 3 | **Email** | Empty | Enter valid Email ID. | Successful |
| 4 | **Password** | Empty | Enter valid Password. | Successful |
| 5 | **Password** | Length | Minimum 8 characters required | Successful |
| 6 | **Confirm Password** | Empty | Password and confirmation password must be same | Successful |
| 7 | **Date Of Birth** | Select | Enter valid Username and Password. | Successful |

**Edit Profile:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Input Values** | **Test case** | **Conditional being checked** | **Result** |
| 1. | First Name | Null | First Name must not be empty | Successful |
| 2 | Last Name | Empty | Last Name must not be empty | Successful |
| 3 | City | Empty | City must not be empty | Successful |
| 4 | State | Empty | state must not be empty | Successful |
| 5 | Pin code | Empty | PIN code must not be empty | Successful |
| 6 | Country | SELECT | Please select country | Successful |
| 7 | High School | Empty | High School must not be empty | Successful |
| 8 | College | SELECT | Please select college | Successful |
| 9 | Course | Empty | Course must not be empty | Successful |

**Scrap:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Input Values** | **Test case** | **Conditional being checked** | **Result** |
| 1. | To Address | Null | Please select To address | Successful |
| 2 | Subject | Null | Subject must not be empty | Successful |
| 3 | Message | Null | Please enter message in text | Successful |

**Question and Answers:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Input Values** | **Test case** | **Conditional being checked** | **Result** |
| 1. | Question | null | Please add Question. | Successful |
| 2 | Options | null | Please Enter Options. | Successful |
| 3 | Answer | Select | Please Select valid answer | Successful |

**Photos:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Input Values** | **Test case** | **Conditional being checked** | **Result** |
| 1. | Image Title | Null | Image title must not be empty | Successful |
| 2 | Add Image | BROWSE | Please browse image | Successful |
| 3 | Delete Image | Select | Please select image to delete | Successful |

**Videos:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Input Values** | **Test case** | **Conditional being checked** | **Result** |
| 1. | Video Title | Null | Video title must not be empty | Successful |
| 2 | Add Video | BROWSE | Please browse video | Successful |
| 3 | Delete Video | Select | Please select video to delete | Successful |

**Tutorials:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Input Values** | **Test case** | **Conditional being checked** | **Result** |
| 1. | Subject Name | Empty | Please enter Subject name | Successful |
| 2 | Section | Empty | Please enter section | Successful |
| 3 | Description | Empty | Please enter Description | Successful |
| 4 | Upload Tutorials | BROWSE | Please upload documents | Successful |
| 5 | Tutorials | Empty | Please add tutorials or upload tutorials | Successful |
| 6 | Practical Subject Name | Empty | Please enter Practical Subject Name | Successful |
| 7 | Section | Empty | Please enter section | Successful |
| 8 | Description | Empty | Please enter Description | Successful |
| 9 | Upload Video Tutorial | BROWSE | Please upload Video Tutorials | Successful |
| 10 | Download Tutorial | Select | Please select tutorials to download | Successful |

**Articles:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Input Values** | **Test case** | **Conditional being checked** | **Result** |
| 1. | Article Title | Empty | Please enter Title for article | Successful |
| 2 | Subject Name | Empty | Please enter Subject name for article | Successful |
| 3 | Section | Empty | Please enter section | Successful |
| 4 | Article | Empty | Please add articles | Successful |