# TESTING

## TYPES OF TESTING

1. Unit Testing It fixates on the most diminutive unit of software design. In this, we test an individual unit or group of interrelated units. It is often done by the programmer by utilizing sample input and visually examining its corresponding outputs.

2. Integration Testing The objective is to take unit tested components and build a program structure that has been dictated by design. Integration testing is testing in which a group of components is coalesced to engender output. Integration testing is of four types: (i) Top-down (ii) Bottom-up (iii) Sandwich (iv) Sizably voluminous Bang Example: (a) Ebony Box testing: - It is utilized for validation. In this we ignore internal working mechanism and focuses on what is the output? (b) White Box testing: - It is utilized for verification. In this we fixate on internal mechanism i.e. how the output is achieved? 3. Regression Testing Every time an incipient module is integrated leads to vicissitudes in the program. This type of testing ascertains that the whole component works congruously even after integrating components to the consummate program.

4. Smoke Testing This test is done to ascertain that software under testing is yare or stable for further testing It is called a smoke test as the testing an initial pass is done to check if it did not catch the fire or smoke in the initial switch on.

5. Alpha Testing This is a type of validation testing. It is a type of acceptance testing which is done afore the product is relinquished to customers. It is typically done by QA people.

6. Beta Testing The beta test is conducted at one or more customer sites by the cessation-utilizer of the software. This version is relinquished for a circumscribed number of users for testing in an authentic-time environment

7. System Testing This software is tested such that it works fine for the different operating systems. It is covered under the ebony box testing technique. In this, we just fixate on the required input and output without fixating on internal working. In this, we have security testing, instauration testing, stress testing, and performance testing

8. Stress Testing In this, we give inauspicious conditions to the system and check how they perform in those conditions.

9. Performance Testing It is designed to test the run-time performance of software within the context of an integrated system. It is utilized to test the haste and efficacy of the program. It is withal called load testing. In it we check, what is the performance of the system in the given load.

10. Object-Oriented Testing This testing is a coalescence of sundry testing techniques that avail to verify and validate object-oriented software. This testing is done in the following manner: Testing of Requirements, Design and Analysis of Testing, Testing of Code, Integration testing, System testing, User Testing

# TEST CASES

## MOUDULE FACULTY

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.NO | TITLE | EXPECTED OUTPUT | ACQUIRED OUTPUT | RESULT |
| 1 | Faculty login | Should not allow user with incorrect login details | The user with invalid login credentials is not allowed | PASS |
| 2 | Add Student | The student must be added with unique Roll Numbers | Students with the same roll numbers are not allowed | PASS |
| 3 | Student Image | The student image size must less than 300kb | The images with size more than 300kb are not allowed | PASS |
| 4 | Edit Student | All the validations must satisfy | The student details with wrong input are not updated | PASS |
| 5 | Phone Number | The phone number must be 10 digits | Invalid phone Number is not allowed | PASS |

## MODULE TEACHER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.NO | TITLE | EXPECTED OUTPUT | ACQUIRED OUTPUT | RESULT |
| 1 | Teacher Login | The user with invalid login details is not allowed | Invalid login details page is displayed | PASS |
| 2 | Attendance | The Attendance should not submit without proper date input | The Attendance is not submitted | PASS |
| 3 | Update Attendance | The page should have the previous values displayed | The attendance updated is submitted | PASS |
| 4 | Delete Attendance | All the attendance on that particular date should be removed | The attendance is deleted | PASS |
| 5 | Attendance marks submission | The attendance marks should be submitted via report page | The attendance is submitted | PASS |
| 8 | Update attendance marks | The marks must be updated every time the attendance marks are submitted | The attendance marks are updates | PASS |
| 9 | Examination marks | The student marks should be null when he/she is absent for the exam | The student marks are null | PASS |

## MODULE STUDENT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.NO | TITLE | EXPECTED OUTPUT | ACQUIRED OUTPUT | RESULT |
| 1 | Student Login | The user with invalid login details is not allowed | Invalid login details page is displayed | PASS |