TESTING

Introduction

A project is incomplete without successful testing and implementation. A program or system design is perfect only when the communication between the user and the designer is complete and clear. A successful system design helps in efficient testing and implementation. Testing plays a vital role to the success of the system.

An elaborator test data is prepared and the system is tested using the test data. While testing, if errors are noted, corrections are made. The corrections need to be noted for the future use. Both hardware and software and software securities must be ensured to the system to run smoothly in future.

Definition

Software testing is the process of evaluation of a software item to detect differences between given input and expected output. Testing accesses the quality of the product. Software testing is the process that should be done during the development process.

There are two types of software testing:

* Black box testing-internal system design is not considered in this type of testing. test are based on requirements and functionality.
* White box testing-this testing is based on knowledge of thew internal logic of an application’s code. Also known as glass box testing. Internal software and code working should be known for this type of testing. Tests are based on coverage of code statements, branches, paths and conditions.

**Testing Objective**

* Testing is the process of executing a program with the intent of finding an error
* Finding defects which may get created by the programmer while developing the software
* Gaining confidence in and providing information about the level of quality
* To prevent defects
* To make sure that the end results meets the business and user requirements.
* A successful is one that uncovers as-yet-undiscovered error.

**Testing Steps**

**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.

**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.

**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.

* The function or performance characteristics confirm to specification and are accepted.
* A deviation from specification is uncovered and a deficiency lists is created.
* 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.

**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.

This is done in regard to the following point:

* Input screen design.
* Output screen design.
* Online message should be guide to the user.
* Format of reports and other outputs.

**Black Box Testing**

It focuses on the functional requirement of the software. Black box testing attempts to find errors in the following categories.

* Incorrect or missing functions
* Error in external device access
* Performance testing
* Initialization and termination error
* Interface error

**Structural Testing**

Structural Testing, also known as glass box testing or White box testing is an approach where the tests are derived from the knowledge of the software’s structure or internal implementation.

**Performance testing**

Performance testing is the process of determining the speed or effectiveness of the computer, network, software program or device.

**Test cases**

1. **Login**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No | Test Condition | Expected Result | Result |
| 1 | If user clicks on login button without entering email id and password. | Please enter valid email id | Successful |
| 2 | If email is blank but password is entered. | Please enter valid email id. | Successful |
| 3 | If password is blank but email is entered. | Please enter password. | Successful |
| 4 | If the email or password is incorrect. | Please enter valid email id. | Successful |
| 5 | If the valid email and valid password is entered | System displays main page. | Successful |

1. **Registration**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No | Test Condition | Expected Result | Result |
| 1 | If all the fields are empty | Please enter the field | Successful |
| 2 | If the full name field is left blank | Please enter full name in letters. | Successful |
| 3 | If you enter an invalid contact number with characters | Enter Valid contact Number | Successful |
| 4 | If the address field is empty. | Enter Valid address | Successful |
| 5 | If the password not equal to confirm password. | Password mismatch | Successful |
| 6 | If numbers/special characters entered in fullname field | Only letters are allowed | Successful |
| 7 | If email field is empty | Please enter valid email id | Successful |
| 8 | If email is not valid | Please enter valid email id | Successful |
| 9 | If user clicks on Submit button | Registration Successful.. Login now is displayed | Successful |

1. **News Request**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No | Test Condition | Expected Result | Result |
| 1 | If user clicks on save button without entering the above details. | Please enter title of the product | Successful |
| 2 | If poston date is left and all other details are entered | Please enter posted on date. | Successful |
| 3 | If image is not selected | Please select the file | Successful |

1. **Add product**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No | Test Condition | Expected Result | Result |
| 1 | If user clicks on save button without entering the above details. | Please enter title of the product | Successful |
| 2 | If category is not selected | Please select an item from the list | Successful |
| 3 | If image is not selected | Please select the file | Successful |
| 4 | If minimum range is entered letters | Please enter the valid range | Successful |

1. **Add Category**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No | Test Condition | Expected Result | Result |
| 1 | If user clicks on save button without entering the category. | Please fill out this field | Successful |
| 2 | If numbers are entered in category field | Numbers are not allowed | Successful |

1. **Payment**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No | Test Condition | Expected Result | Result |
| 1 | If user enters more than 16 digits for card number | Please enter only 16 digits number | Successful |
| 2 | If CVV number is left black | Please enter only 3 digit number | Successful |

1. **Change Password**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No | Test Condition | Expected Result | Result |
| 1 | When the user enters the valid details like old password, re-enter password & new password | Checks for the valid information and provide the new password | Successful |
| 3 | If new password field is blank | Please Enter new password. | Successful |
| 4 | If Re-enter password field is blank. | Please Re-enter the new password | Successful |
| 5 | If old password, re-entered password and new password is less than 8 character | Password must contain at least one number and one uppercase and lowercase letter, and at least 8 or more characters | Successful |
| 6 | If old password and Re-entered password is not same | Password mismatch | Successful |
| 7 | If password change successful | Password been changed | Successful |

**Implementation**

Implementation is the stage of the project when the theoretical is turned into a working system. At this stage the workload and the latest upheaval shifts to the user departments. The term implementation has different meanings, ranging from the conversion of the basic application to a compatible replacement of a computer system. Implementation is used here to mean the process converting a new or a revised system design into an operational one. During the implementation stage we convert the detailed code in a programming language.

**Limitations**

The Limitations of this website are as follows:

* Only registered users can do the auction in the website and can place bid on website
* User can only do auction on the given categories
* User cannot bid on the product less than that of the specified range
* User cannot create his own series of categories
* The System should be connected to the Internet.
* Cannot view the items in person and verify themselves the condition, colour and the size of the item

**Future Scope and further enhancement**

* Information about shipping details.
* In Future we will browse many categories for auction.
* In Future this web application can be turned into a mobile application & shopping which is used in Mobile, Tablet and other technology devices.
* Change language option can be implemented
* In addition to English Auction, Reversed Auction can also be included
* Other than bid, Normal selling of the products will also be implemented

**CONCLUSION**

My project “ELECTRONIC BID” guarantees to simplify the intricate process of shopping. It promises great benefits to a user as it allows easy interaction, provide user friendly interface and reduces wastage of time. This system is extremely reliable and completely integrated so that we always know what we have in our hand and what is committed to the customer.

This project helped us to improve our knowledge in PHP. The importance of a good software design was learned during the project. I hope people find this software informative, useful, interesting and challenging. Developing the software was a good experience.

In the current scenario of software engineering, the software has to be simple, user friendly and should be able to incorporate any future improvement. This software facilitates all these features. The project was developed after extensive research conducted in a real life scenario which would exactly depict the present working condition.

The greatest strength of the project is its simplicity which enables an end user to study and use the utility in a full throttle. It has been a privilege for me to have an opportunity to implement this project.

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