**System Testing**

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**What is System Testing.**

System testing is the level of software testing where a complete and integrated software is tested. The advantage of this test is to evaluate the system’s compliance with the specified requirements.

System testing is the third level of the software testing, which will be performed after the Integration testing and before the Acceptance testing.

**Overview (Car Race in Minecraft)**

Here are the couple of the use cases in this car race. First of all, when the user will start game, he/she will see the Entry fee level on the system, which also include the verify sufficient funds and it will also extend error or not enough money. After that, user will simple write his name and will move to the car department where he/she can buy new cars or modify their old car (Change the engine, colour, gears, speed etc.). After that, they will simply choose the track depends on their choice. Finally, after all of these things they will be able to play race where the will see couple of challenges with their opponent including the pit stop. Then, they will see their race results, prizes and others.

There are over 50 types, through which we can test our system. Here are some types.

**Usability Testing:**

Focused of usability testing is to mainly focus on the end user to make sure that there is no difficulty in use of application, flexibility and ability of the system to meet its aims.

**Load Testing**

It is necessary in the system testing to make sure that our software will perform well in real life.

**Regression Testing**

The role of regression testing is to make sure that no old bugs appear after the new addition of the software, and also test to make sure none of changes made over the development process.

**Recovery test**

Recovery test will test the reliability of the software, steady and successful recover from the possible crashes.

**Migration Testing**

In system testing, we will do migration testing to make sure that our software will update easily from oldest version to latest version.

**Functional Testing**

In our system we will perform the functional testing to make sure all the functionality is involved in our system according to the user meets.

**Hardware/Software Testing**

This is the most important type of the system testing, when the tester will focus his attention on the interaction between hardware and software during the system testing.

**System Test 1.**

When the user will start game, the system will ask for the Entry fee

* If the user has verified enough funds, he/she ready to go to the next step.
* Otherwise, System will give a message (Not enough money).
* It will also show a message to the user; would you like to pay or not.
* If the user selects pay option, then it will take them to next page for payment.
* Where, he/she will use their debit card or credit card etc., for online payment.
* Then they are ready to go for next step in the game.

**System Test 2**

In next step user will provide some of his personal details his name, date of birth and gender.

* If the user already provided their details, then he/she can move forward to the next step of the game.
* Else, he/she can select new player where the will see couple of things below.
  + Please write your name less than six words (if it goes over the six words it shows a message no more than six words).

**If (name>6) {**

**JOptionPane.showMessageDialog(null, “Please no more than 6 words”);**

**}**

* + Then, they will write their date of birth only in numbers (if they write in the alphabet will show a message no alphabet only numbers please).
  + At last, they will select their gender
    - Male
    - Female
    - Prefer not to say (Privacy)

**System Test 3**

Next step for the user is to buy a car.

System will test that if the user has enough funds in their account then, they can buy new car, but it will also depend on the level they cannot use level two car in the level 8 or others.

If they press buy new car, system take them to the new page where they will use their card for purchasing.

Else, they can modify their existing car depends how much coins or points they have:

* + They can change car engine.
  + They can change car wheels.
  + They can change Bumpers.
  + They can change Turbo.

**System Test 4**

Next step for the user is to check the choose track.

Tester will test couple of things.

* Is track available that user select.
* Verify the lap that user select.
* To make sure that user selected a car before moving to the choose track.

**System Test 5**

Next step for the user is to play race.

Tester will play race and make sure that all the functions are working well, that was defined or according to the user meets. He/she will test all the software or hardware from beginning to the end.

* Software test
* Graphics test

**System Test 6**

Final step for the user is to get prizes

System tester will check that system is working well in prizes

**Advantages of software testing**

* It will provide the confidence in the development of the product and guarantee of the quality of the systems.
* It will provide the insight of the gap in the software and effect to user.
* It will provide the parameter like functionality, performance, usability and acceptance.
* It also works on the security parameter of the product which is on the top priority to avoid vulnerability and back door of hackers.

**Disadvantages of software testing**

A system testing or a software testing has no dis-advantage, but anything is done badly is bad. There is nothing essential that could call disadvantage.

* But it requires High skilled staff.
* Costly.
* Time in testing.

**Bibliography**

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