Homework #4
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Part 1: **LoadStormPro**

1. **Capabilities of LoadStormPro:**
   i. It is a cloud based application so no need to buy/download hardware or software.
   ii. LoadStormPro provides the sophisticated control and in depth reporting of the software.
   iii. It is divided in three parts: 1) customize graphs 2) Run a load test and 3) Analysis of results
   iv. We can utilize a developer tool in browser to record the script of the application and also able to navigate the application in browser using this tool. After loading the script in it, we can customize the script according to our requirements.
   v. It provides load testing feature on the application. We can test 50 to 350,000 concurrent users on the application. Interactive graphs populates automatically with summary.
   vi. It provides the functionalities to measure throughputs, errors and request per second etc.

2. **Type of problems the tool detects**:
   i. As name suggests, Loadstormpro can detect the problems generates in the application when there is a load/regression on the application at that time such as Forbidden 403, Not found 404, service unavailable 503, request read timeout etc.
   ii. Can detect stress and load problems.
   iii. Able to detect performance problems

   Type of problems it does not look for:
   i. This tool is mainly used to detect the black box testing bugs, so, it cannot be able to find the bugs which are generated while doing white box testing.
   ii. Moreover, it is not able to detect any type of coding errors.
   iii. It will not applicable to test the application on localhost.
   iv. It supports only web application. We cannot apply this tool on desktop and mobile application.

3. **Usefulness of tool to support regression testing:**

LoadStromPro provides the functionalities such as recording of script, changing of scripts, load testing etc. If we want to apply regression testing on an application using this tool. First we have to generate the test plan for it and run it on the current stage of application. Now, make a little change in script that we recorded using this tool or change the configuration and then apply the test plan you generated using this tool, if there are new bugs in application then apply the changes in the application to fix the new bugs and apply that test plan second time to perform regression testing on the application.

Part 2:

Challenges in Regression Testing of mobile application:

Regression testing is a type of a testing methods which uncovers the bugs or regression in the application by changing patches, enhancement or configuration of the application.

Mobile application testing involves incremental basis testing which covers unit, functional and integration testing methods. Incremental basis covers some errors at the early stage of the mobile application development life cycle, but sometimes it will generates errors which cannot be uncovered until the regression testing is applied on the mobile application. After applying regression testing on the application, if there are bugs in the application then we have to fix that bugs and tester has to apply regression testing again and again which is time consuming and stressful for the tester or QA.

There are many OS platforms are available in the mobile devices such as android, iOS, JAVA etc. It is difficult and stressful to apply regression testing for different mobile devises for tester.

Approaches for regression testing for mobile application:

Regression testing methods are used nowadays: 1) Minimization technique, 2) Dataflow technique, 3) Safe technique, 4) AdHoc technique etc.

Manual regression testing is widely used approach by the testers and QA because it will covers the wide scope to detect the bugs from the mobile application. But this approach takes too much time of the tester and also is a stressful task for them. It is also costly approach to apply regression testing on mobile application. Tester/QA has not mobility freedom to test application in this approach

Other approach is automated approach. It provides the mobility freedom to a tester/QA. It is also less expensive than the manual regression testing. Moreover, it provides the benefit to tester to generate the single test plan for multiple mobile platform, OS and mobile system. Moreover, it generates the test results for regression testing faster than the manual approach.

The best approach is hybrid (automated + manual). This approach combines the benefits of both automated and manual approach of the regression testing for mobile applications. The main reason to use automation in this approach is not to reduce the cost but cover the scope that being tested in mobile application.

References:

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