Review on Automated Testing Framework of Bank Financial Services Based on QTP

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Abstract- *The current automate testing in the aspects of industrial benefits gradually causes the attention of the domestic financial bank. The innovation of software technology, the increase of software scale and the shortened developing period make the traditional manual testing meeting enormous challenges, while the development of automated testing technology has promoted the progress of the software testing industry. Because of the particularity of financial and banking services, the bank is under an obligation to ensure the quality and reliability of software. Number of services that banks offer customers, has been increased significantly in recent years. There is a variety of services available through the different channels like internet bank, mobile bank, telephone bank, ATM and so forth. The need to personalize these services for customers is felt more than before since people are busier than ever and have a limited time to do their daily tasks. So this is a new method testinga kind of software automation testing framework based on QTP, mainly targeting on the core of the bank, credit, online banking to test the function.*

Keywords- software testing, testing framework, QTP automated testing tool, Banking services

I. INTRODUCTION

The continuous development of banking and financial services put forward higher requirements to the bank of financial management, especially the quality and efficiency of software, which is vital to the market competitiveness of banks. It is the process of exercising and evaluating a system or system components by manual automatic means to verify that it satisfies specified requirements or to identify differences between expected and actual results. Manual testing carried out by the testers. Testers test the software manually for the defects. It requires a tester to play the role of an end user, and use most of all features of the application to ensure its correct behavior. They follow a written test plan that leads them through a set of important test cases. The problems with manual testing are, it is very time consuming process, not reusable, has no scripting facility, great effort required, and some errors remain uncovered Software testing is a vital phase in software development cycle. Automated testing framework is a collection of all the processes in the automated testing process. A good testing framework is conducive to the test, as well as the cost of the reduction, post maintenance convenience. Therefore there is put forward a kind of automation testing framework based on QTP (Quick Test Professional).Test Automation Framework (TAF) is a tool agnostic framework and can be used across multiple applications ,mobile devices with minimal re-work. is also in partnership with HP and has delivered QA Automation solutions to over 30+ satisfied banking customers. This framework is reusable & modular, reducing effort .

II. LITERATURE REVIEW

In recent years the importance of well-designed User Interfaces has increased a lot. Nowadays User Interfaces have to deal much more than before with untrained people sitting in front of their computers. So it is no wonder that not only the "automation behind the scenes" gained in importance, but also the automation of User Interface Tests with all its boon and bane.

Khaled M. Mustafa, Rafa E. Al-Qutaish, Mohammad I. Muhairat in 2009 the classify and distribute a set of testing tools over the types of testing (testing methods) for three types of software products (web application, application software, and network protocol) [1].

Kaur M, Kumari Rin 2011 has proposed a set of tools that support the testing process in a variety of ways. Some tools simulate the final execution environment as a way of expediting test execution, others automate the development of test plans, and still others collect performance data during execution [2].

Himan Abdollahpouri in 2013 has introduced An Approach for Personalization of Banking Services in Multi-channel Environment Using Memory-based Collaborative Filtering [3].

Ms. Rigzin Angmo, Mrs. Monika Sharma in 2014 has introduced Selenium Automation Framework increases automation efficiency by reducing initial coding effort. It is a

script less framework used for automation testing of web applications that is developed in many programming languages like java, .NET, Php etc. The framework provides a platform to execute data driven framework by spreadsheet template. It can be used in the current automation project [4].

Michael T. Grater in 2005 has published and study analyzes selected literature to provide an analysis of benefits of automated software testing tools to increase software quality assurance.The increasing complexity of software development demands that developers use automated software testing tools. Benefits are presented for software engineers and business analysts and classified in relation to five quality factors.[9]

III. RELATED WORK

The design of the automated testing framework involves three systems including the core business of the bank, credit and online banking. The objective is to define the interface, interaction, data validity and storage of the system under the premise of each function of three different systems in normal. Test cases and data will cover all kinds of normal and abnormal conditions, including different card states verification, verification of discrete contract, cost information verification, to assure the successful application of the framework. Then it puts forward a kind of automation testing framework based on QTP, which mainly includes five parts: test driver layer, data layer, abstraction layer, test case layer and object layer, operate layer.[14]

Framework in general means something real or based on a conceptual structure that is used to provide a support or guide line for the building of something that expands the structure into something useful.In computer language, a framework is a layered structure indicating what kind of programs can or should be built and how they would interrelate to one another. A framework may be for a set of functions within a system that interrelate the layers of an operating system and the layers of an application subsystem as well as how communication should be standardized at some level of a network. Some frameworks in computer system also include programming interfaces, programs, or can also offer programming tools for using the frameworks. A framework is more comprehensive than a protocol and more prescriptive than a structure. Today everything is web based thus it is becoming more and more complex. For this huge information platform and quick release cycle as well as quick regeneration is required. This requires the web application to be comprehensive, expansibility and efficiency.

Banking customers are increasingly looking for digital channels to access products & services. It has become the primary engagement point with the bank and it has enabled banks to offer more services through digital channels. Banks now have to deal with complex testing scenarios for IT teams.

IV.PROPOSED WORK

Along with the continuous development of software automation testing technology and the unceasing expansion of user needs, automated testing has become ever more noticeable. QTP automated testing technology has become the mainstream of software automation testing tools, because of its powerful object library, supporting a variety of different programming platforms and plug-ins and so on. The financial services of banking multiple facilityare available and test automatically all over data.
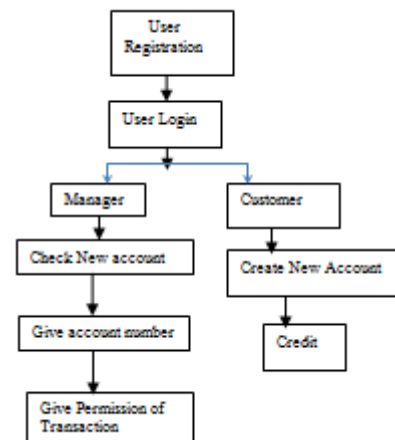

Fig1.Process of Bank Financial Services

First step is user registration. In user registration fill the information about user details. User Register as a customer or a manager. Information is like User name, Contact No, Address, Password, etc. Then customer login fill the information the user is created. Then next step is user login. User submit the data then login successful. User account is created. Then user as a customer,customer create a new account of bank using the financial services and credit is deposited to the account. Then User login as a manager, Manager check a new account of customer and also check money has deposited or not.Money has deposited then manager is give account number of customer and account is activated. The manager is rights to give the permission of transaction.

In customer account credit is available the transaction is possible means to customer withdraw money in user account then transaction is successful. Credit is not available

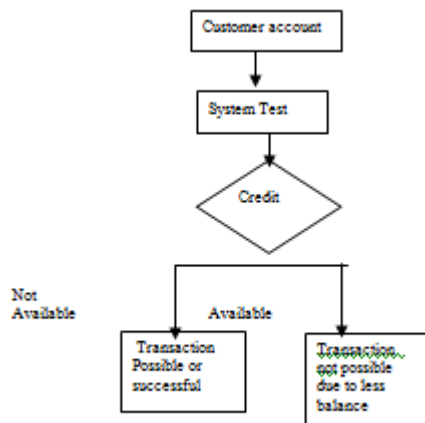in customer account the transaction is not possible due to less balance.

Fig 2.Process of customer account

System is automatically test this function the balance is available or not in customer account. System is testing in customer account balance is available or not. Credit is important for withdraw money in users account.
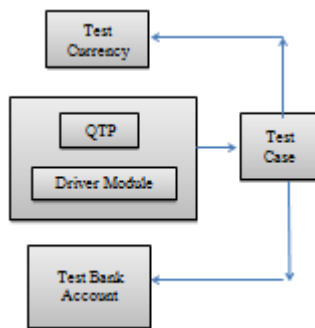

Fig.3 Process of Automation Testing Framework based on QTP

Automated testing framework is a collection of all the processes in the automated testing process. A good testing framework is conducive to the test, as well as the cost of the reduction, post maintenance convenience. Therefore we put forward a kind of automation testing framework based on QTP, mainly including two parts, i.e., test case and framework test design.

V. CONCLUSION

A suitable framework for automated testing can ensure the Smooth progress of the test work, avoid the risk of automated testing and make the testing process quite clear and obvious.

By choosing proper framework one can save time as well as money and can improve software quality. So this automation testing framework for bank financial services based on QTP is good.

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