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Test plan

Test plan for Sweden Bank Website

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1. **Purpose of the document**

The Test Plan outlines the scope, approach, resources, and schedule of all testing activities. It identifies the items and features to be tested; types of testing; resource requirements; and an approach to project management.

1. **Test Objectives**

The objectives of this test are to verify the functionality of Sweden Bank website and furthermore to ensure that the various banking operations (See features to be tested) validates the business requirements.

1. **Test strategy**
   1. **Scope of testing**
      1. **Features to be tested**

|  |  |
| --- | --- |
| **Module Name** | **Description** |
| Log in | A customer can log into his account |
| salary | A customer can get his salary inserted to his salary account every month |
| Credit card purchase | A customer’s Card buys are withdrawn from his card account |
| Transfer between accounts | A customer can transfer between his own accounts |
| Mini statement | A customer can see a mini statement displaying last 10 transactions |
| Account history ‘Show all transactions’ | A customer can see all transaction for each account by clicking on ‘show more’ button |
| Edit Account name | A customer can create, delete or change name on their account |
| New accounts | A customer can decide which account is used as salary- card- or saving account |
| Money transfer | A customer can transfer to other’s accounts |
| Saving account | A customer can setup regular scheduled transfer to saving account |
| Account balance summary | A customer can see a summary of all his accounts balances including his last 5 transactions |
| PG & BG payments | A customer can create future transactions to PG and BG accounts |
| Auto Giro | A customer can pay phone bill with auto giro |
| Transfer limit | A customer has a balance ceiling that prevents more than SEK 30.000 is transferred within 7 days. This amount can be reset in settings |

* Sweden bank project only focuses on testing of all the functions. However, some functions will be tested in a simulated environment and It should be noticed that the behavior of these functions can deviate when the system is in production.
  + 1. **Features not to be tested**

Non-functional testing i.e. stress-, performance- and logical database is not included in this testing.

Hardware and external interfaces are also out of scope!

Neither is regression testing performed in this testing.

* 1. **Test type & Techniques**

In the testing of Sweden Bank website following test types will be conducted:

* Functional testing
* Automated testing
* Exploratory testing
  1. **Functional testing**

Functional testing is a process that are designed to confirm that all components of a code or software are working properly. We will focus on testing the interface of the application to ensure that all user requirements for a properly functioning application are met. For this purpose, we will use black box testing.

* 1. **Automated testing**

The basic aim of Test automation is the process of identifying recordable test cases through all appropriate paths of a website, creating repeatable scripts (for regression testing, that is not performed in this testing), interpreting test results and reporting to the project management. For this project the test team will focus on positive- & functional testing. Automated test results will be generated and provided after each iteration to the project management.

Tests will only be automated if it adds value to the project (i.e. positive ROI).

* 1. **Exploratory testing**

ET is a simultaneous learning, test design and test run. It shall be applied to catch defects that have failed in the predefined test cases(scripted) and furthermore to ensure maximum test coverage.

ET will be conducted in a structure manner with use of Test charter and Session Based Testing.

Furthermore, ET should be performed by "experienced" testers with the right attitude.

* 1. **Project Method**

The project is using an agile approach and we specifically work with the SCRUM framework with weekly iterations.

* 1. **Defect Reporting**

Issues/defect shall be tracked for resolution with following guideline:

* Issues will be reported by the testing team, reported and entered in a separate bug reporting document.
* Issues will be fixed by development team based on priority/severity assigned by the testing team
* All critical/priority defect will be fixed before release to production
  1. **Risk and Issues**

|  |  |
| --- | --- |
| **Risk** | **Mitigation** |
| Team members are not skilled enough to perform various tests(automation and exploratory) | Educate employees with necessary skills before start |
| Tight Project schedule might result in project not completed on time | Each test activity prioritized.  Progress of each individual tracked on daily basis. |
| Productivity affected by a lack of cooperation among team members! | Clarity in responsibilities and assignments delegated to project team members and understood by them. |
| Cost of writing and maintaining scripts is high | Careful test case selection for automated test where it provides value for business and software development and generate a better ROI(Return on Investment) in comparison to the manual route |
| Improper assessment of required tool resources | Pre-study and pre-test of various tools to narrow down to the ones that are selected for the project |

1. **Entry- and Exit Criteria**

**4. 1 Entry Criteria**

* Complete or partially testable code is available
* Business and functional requirements are defined and approved
* Test cases are developed and ready
* Test environment has been set-up and pre-tested. Furthermore all necessary resource, tools software are available
  1. **Exit Criteria**
* All tests have been executed
* Desired and sufficient coverage of the requirements and functionalities under the test.
* All the identified defects are corrected and closed.
* No high priority/severity or critical bug has been left out
* Pass rate is 90%. Reaching it is mandatory.

1. **Resource Planning**

**5.1 System resources**

**5.1.1 Hardware**

Any computer with a windows environment with Google Chrome browser

**5.1.2 Software/components**

Selenium Webdriver will be used for the testing of the Sweden Bank website. Selenium is a browser automation tool, that will be used for interacting with the HTML elements of the web application to simulate user activity.

Cucumber will be used as the testing framework for behaviour driven development (BDD), that bridges gap between software developers and business managers. Here Test cases are placed in feature files that covers one or more test scenarios written in Gherkin Form.

Ares Dashboard is a web-based portal shall be used to provide automation results and their analysis via a live dashboard.

**5.1.3 Test data**

Test data will be created by the testing team for this test. Here it is necessary to mention, test result might differ when we use data from production.

**5.1.4 Version Control – Configuration Management**

Github will be used for tracking changes in source code during software development. The tool can be used for free by all user which reduces the costs

* 1. **Human Resources**
     1. **Roles and Responsibilities**

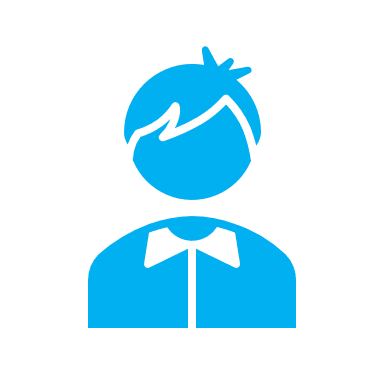
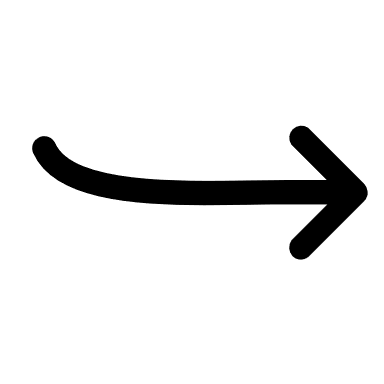
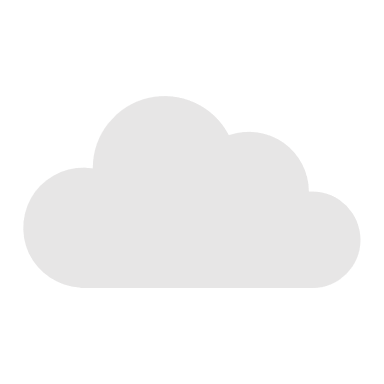
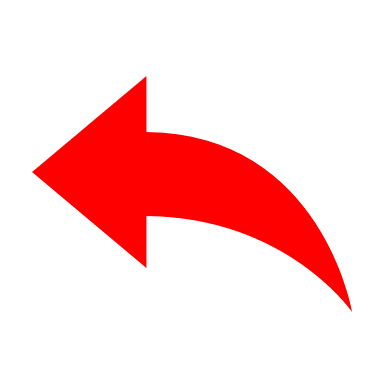
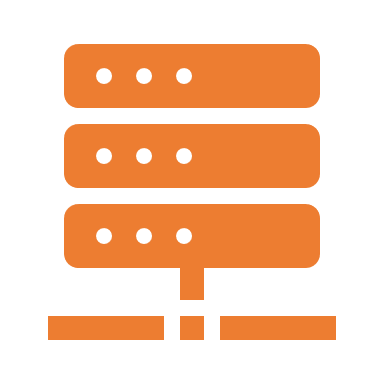
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| --- | --- | --- |
| **Resource Type** | **Responsibilities** | **Names** |
| Project/Test Manager | * Provide guidance of the testing project * The link between the testing team and rest of the project organization * Track all project activities and resources, ensure project remain within scope |  |
| Testers | * Create test cases * Perform Manual/automated testing * Rapport bugs to Test Manager |  |
| Developers | * Write application code * Resolve defects * Support testers |  |

1. **Test Environment**

The setup of test environment will be as seen below:

**Client Server for**

**User** Installed to Simulate Webserver **Internet Sweden Bank App**

**  **  ** **

1. **Milestones/deliverables**

**7.1 Test Schedule**

|  |  |  |
| --- | --- | --- |
| **Task name** | **Estimated Effort** | **Member** |
| Test Planning | 20 hrs | Javad |
| * Review Requirement documents | 2 hrs | AMA, Mohammed & Javad |
| * Create Initial test estimates | 2 hrs | AMA, Mohammed & Javad |
| * Setup and test of Test environment | 2 hrs | AMA, Mohammed & Javad |
| Functional testing | 20 hrs | Mohammed, AMA & Javad |
| Test report | 14 hrs | Javad |
| Test delivery | 20 hrs | AMA, Mohammed & Javad |
| Total | 80 hrs |  |

* 1. **Schedule to complete these tasks**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | 2019-09-03 | 2019-09-04 | 2019-09-05 | 2019-09-06 | 2019-09-07 | 2019-09-08 | 2019-09-09 | 2019-09-10 | 2019-09-11 | 2019-09-12 | 2019-09-13 | 2019-09-14 | 2019-09-15 | 2019-09-16 |
| **Task name** | **Start date** | **End date** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Test plans | 03-Sep | 06-Sep |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Milestone | 06-Sep | 06-Sep |  |  |  | **M** |  |  |  |  |  |  |  |  |  |  |
| Perform task execution | 07-Sep | 10-Sep |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Milestone/iteration 1 | 10-Sep | 10-Sep |  |  |  |  |  |  |  | **It1**  **M** |  |  |  |  |  |  |
| Test report & other artifacts | 11-Sep | 14-Sep |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Milestone | 14-Sep | 14-Sep |  |  |  |  |  |  |  |  |  |  |  | **M** |  |  |
| Test Delivery | 15-Sep | 16-Sep |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Milestone/Iteration 2 | 16-Sep | 16-Sep |  |  |  |  |  |  |  |  |  |  |  |  |  | **It2M** |

* 1. **Deliverables**
* Test plan
* Link to Git Repo (containing code, manual and exploratory test cases, Test Traceability Matrix)
* Test report
* Ares visual test results
* Individual account of the end report

**Appendix**

**We assume that user stories are requirements.**

**Requirements is shown below**

|  |  |
| --- | --- |
| **Req-001** | Som kund behöver jag logga in i banken. |
| **Req-002** | * Som kund vill jag få min lön insatt på mitt lönekonto varje månad. |
| **Req-003** | * Som kund vill jag att mina kortköp dras ifrån mitt kortkonto. |
| **Req-004** | * Som kund vill jag kunna flytta pengar mellan mina konton. |
| **Req-005** | * Som kund vill jag se kontohistorik för varje konto som visar de senaste 10 transaktionerna. |
| **Req-006** | * Som kund vill jag kunna klicka på “visa mer” för att få se alla transaktioner för varje konto. |
| **Req-007** | * Som kund vill jag kunna skapa, ta bort och byta namn på mina konton. |
| **Req-008** | * Som kund vill jag bestämma vilka konton som ska användas som lönekonto, kortkonto och sparkonto. |
| **Req-009** | * Som kund vill jag kunna skicka pengar till andras konton. |
| **Req-010** | * Som kund vill jag kunna sätta upp regelbundna överföringar till mitt sparkonto. |
| **Req-011** | * Som kund vill jag se en sammanfattning av alla mina kontons saldon samt mina senaste 5 transaktionerna som skett (oavsett konto). |
| **Req-012** | Som kund vill jag kunna skapa framtida transaktioner till PG & BG kontonummer. |
| **Req-013** | Som kund vill jag betala min telefonräkning med autogiro. |
| **Req-014** | * Som kund vill jag ha ett saldotak som förhindrar att det överförs mer än 30’000 SEK från mitt kortkonto inom 7 dagar, beloppet ska gå att ändra i inställningar. |