# Test Strategy

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| **Project Name:** | **BEST SELL** | | |
| **Prepared By:** | **JENAB VOHRA** | **Date:** | **13/10/2018** |
| **Current Test / Project Phase:** | **Initial** | | |

**Revision History**

| Version | Description of Revision | Date | Author |
|---|---|---|---|
| 1.0 | Introduction and test strategy of project | 13/10/18 | Jenab Vohra |
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## 1 Introduction to Project

The two best companies Tesla Self Driving car company and Best Buy stores merged together to form the new store Best Sell stores across Canada. The project needs to grow 20% per year for the upcoming 5 years. The business context is to maintain the standard of both best companies of Canada. The purpose of the project is to co-ordinate from one place o the different sub-system in Canada. The store needs to enter the data manually for every Sale person Sales and create a daily file so that the Best Sell Head office which is located in London can process and create new sales report everyday. The project is mainly developed in JAVA, JavaScript and the processing & sales report developed in COBAL.The data base will be maintaining in database server. The main thing is to maintain the system and that fund will be gather buy introducing the new system and making stores use them for entering their regular data. The cost of the project will be gathered from the new Sales data entry sub-system. The features of new subsystem is totally web based, coded in java which is an independent platform runs on every machine and JavaScript with SQL database server directly updated at head office.

## 2 Testing Objectives

The new web-based data entry subsystem connected with SQL server will encourage the store person to use functionality in new data entry-based products being developed for Best Sell on java platform with the SQL database and testing in mainframe. Testing will cover functionality testing for data entry sales main menu changes using the test interface. This will validate base functions of the new code as it relates to the standard best sell subsystem architecture model of presentation for data and user entered data.

There are 3 sub system in the architecture on which the testing objectives are carried:

1) The old data entry subsystem which will have **black box testing.** The new and update database entry will be checking the data formats and data types that is consistent to the old one.
2) The new system will perform **Unit System testing** at the beginning of the testing phase.

The **unit system testing** will have the following testing:

- **Condition testing** – Testing data entry which has condition.
- **Line Checking testing** – Testing each statement at least once.
- **Branch testing** – Checking branch condition at decision point.
- **Loop testing** – validating and testing loop statements.
- **Error testing** – Checking the bugs.

3)The third subsystem is developing the daily salesperson files. The processing will be done in COBOL mainframe which will conduct the **System testing**, **User Acceptance testing** and **Integration testing.**

**Risk:** The major risk is to convince stores use new system so that the investment done on this project can be turned into profit soon. The usage of the new system charges will the old system do not charge, so difficult whether the stores would change to new or not. Test environment database may run into problems due to unhandled conditions in the code. **Benefit:** The benefit of the project is the maintenance will be easy because of the monthly/weekly salespersons file. This strategy will help to check flaws at very basic level and help to take right decision. ISO/IEC/IEEE 29119-2 is the testing standards.

## 3 Resource / Environment Dependencies

The test environment develops one for functional test team and another for the customers or the UAT team. The dependencies are the things which relate to the project that is dependent on each other for the project to run. This helps in accessing the role of the persons included as the resources.

The dependencies for the best sell project are: -

- Project plans
- Requirements Analysis
- Test Scripts
- JDK 1.7
- Installation of the JDK and JDE environment.
- Mainframe setup
- SQL server
- Coding of the project
- EAS software for security purpose

In resource major role is also of the **economic feasibility** that is the **capital.** The investors are investing money in developing the project so the need to get so profit from it. They will receive the money from the entry of new database servers in stores across Canada. The scope of the project is to maintain the daily/monthly file of the salespersons. The time will be not much consisted because already the old database is present.

There are two types of resources:
1)direct resources
2) Indirect resources

The **direct resources** are: -

- **Coders in JAVA language expertise:** Code the project and maintain all the specification for maintaining the daily base file and to access easily by the persons using it.
- **Testers:** The testing of 3 subsystem and find the defects and give to the coders.
- **Technical supporter teams:** supporting the coders and managers and finding the bugs and help testers to create the test environment and developing the project.

The **indirect resources** are: -

- **Users:** to give the feedback and judge the product
- **Sponsors:** Best buy and Tesla Self Driving are the sponsors of the project.
- **Lead manager:** Majorly to have right to access and responsible to answer to the sponsors and the best sell company.
- **Quality assurance manager:** maintaining the checking the quality of the project

## 4 Test Methodologies

- **Smoke Test**: To see the components working properly.
- **Black Box Testing**: This is carried on the old database system for knowing its features.

There are functional and Non-functional testing methodologies:

**1)Functional testing:**

- **Unit Testing**: It is performed on the new database entry system which consists of the loop -condition checking, error statement checking, dataflow, statement checking.
- **Integration Testing** is performed on the old data and on the new data entry to integrate with each other and then integrate to produce the daily salespersons files.
- **System Testing:** It is performed when the developers gives the code to test and the code develop matches the test environment and works on the installed mainframe and runs successfully or give some error that is in the code or in environment.
- **User Acceptance Testing:** The main testing in all the above because to meet the expected results vs actual results and to be successful in these criteria leads to the success in this testing.

**2)Non -Functional Testing:**

- **Performance Testing:** It is performed to evaluate the database server response time and testing environments. Also, to handle the java script validation working accurately. The datatypes and data format need to be consistent to maintain the same performance as the old database system.

- **Usability Testing:** Usability testing tests the ease with which users can learn and use a product. The documentation is created for the managers and customers how to use them. The both documentations are different because both handle different context of using the system.

## 5 Deliverables / Procedures

The deliverables of the project are:

- **Test Plan:** The plan contains a detailed understanding of the flow of the project and from where to get input and what results we obtain from it.
- **Test Procedures:** It is a specification of test cases that need to be developed for more than one programming divisions as the old java database is the test case and by making it more efficient with the adding the web based and java script to it can work more accurately but both can be checked at one test case.
- **Testcase:** for user and for the testers.
- **Test environment:** for UAT and testers
- **Test strategy:** for the developers, testers, managers.
- **Test Status Report:** It contains work done till date and work remains pending and generates the weekly report.
- **Release Note:** contains release of software and fixes bugs
- **Test summary report:** Summary of test activities and final report

The documentation is been done for the managers and the users for the using of the new web-based entry subsystem. Also, the planning of the project, Requirement specification lists, expected outputs, the project charter, stakeholder register are the key documentation needed in the project.

- **Severity Criteria: -** The degree of impact that a defect has on the development or operation of a component or system.

The various defects with its criteria.

| **Defect** | **Severity Classification** |
|---|---|
| Installation of mainframe or JDK | S3(Minor) |
| Code error | S3(Major) |
| Test environment error | S3(Major) |
| Functionality error | S1(Critical) |
| Interface | S4(Trivial) |
| Displaying error | S4(Trivial) |
| Validation error | S3(Minior) |

## 6 Suspension / Resumption & Exit Criteria

The suspension criteria are:

- **Lack of resources:** The proper test environment or test case are not built, lack of expertise in java.
- **Smoke test not working:** The software fails to run on the PC because of the PC defects

- **System Integration testing is unsuccessful:** The integration of the system with the code is not done properly, error in the COBOL program files, issues of memory required for the code to run.
- **Failure of SQL database**: The database fails to connect the running code. It shows the entry of the files but cannot maintain the storage of the files.

The re-assumption criteria:

- Functionality from the old entry system releases will be tested in all phases of testing. Any changes to configuration of the new web-based entry system that will be added in the current phase of developing and testing and then it will be tested for impact to previous phases.

The exit criteria for the project:

- **Component stability**: The operating system and the PC supports the new developed software if does not the test fails, and it is the exit criteria for it.
- **SQL database approval**: The database stores the file enter by the sales persons.

## 7 Approvals

**Roles and Responsibilities**

| Role | Name | Organization/ Position | Contact Information | Sign off | Comments (Y/N) |
|---|---|---|---|---|---|
| Investing the money | Miley White | Investor | 2245785634 | | |
| Managing the overall project | Mike Green | Project Manager | 5194567321 | | |
| Developing the code as per requirements | Krista Ham<br>Paul Change<br>Maria Christa<br>Josh Loblaw | Coders | 6745234561<br>6793782456<br>5678324675<br>6578943562 | | |
| Implements and executes the tests. | Jenab Vohra<br>Renu Dave<br>Sam Dhingra | Testers | 2346781945<br>5678930123<br>2345678097 | | |
| Analysing the overall project | Drake Bill<br>Bob Smith | Analyst | 5462893452<br>5678120432 | | |

**Responsibilities:**

1) Testers
   - implement of test cases
   - execute test environment
   - analyze and solves the bugs
   - documents the failure of the test cases.

2)Analyst:

- develops the test ideas
- testing details
- try to determine the expected results
- evaluation of product quality

3)Manager:

- planning
- acquire resources
- management reporting
- evaluates the interests of test

4)Coders:

- Meeting requirements
- Determine the logic
- Check the flaws for the code

5)Sponsors

- Investing money
- Regular check of the project

**Sign-off:** (Signatures of all above stakeholders.)

**Comments:**

(Include space here for specific comments/concerns/suggestions from stakeholders):