# SPMP-Cargo Tracing And Business Analysis

**1. INTRODUCTION**

**1.1 PROJECT OVERVIEW**

Today’s world is growing at a very faster rate with the help of Technology. A lot of different industries are using the latest technology to increase their growth, thus boosting globalization. The sellers are producing goods in one country and selling the same in other country, thus making huge profits. As huge quantity of cargo is shipped everyday by different sellers, people tend to lose some of it. Besides, such a huge transport of material from once place to another can also be studied thoroughly and the trade can be modified to maximize profit. Thus to help the sellers, we are proposing a **Cargo Tracing and Business Analysis System**.

**1.2 PROJECT DELIVERABLES**

| **Deliverables** | **Description** | **Delivery Date** |
| --- | --- | --- |
| Software Project Management Plan | A complete formal project plan, including technical and managerial processes that will be implemented in the development and delivery of the system | September 30, 2019 |
| Software Requirements Specification | A formal document detailing the functional and non-functional requirements of the system | September 30, 2019 |
| Software Design Specification | A formal document detailing the component designs as well as the relationships among components |  |
| Test Manual | Formal documentation detailing scenarios that must be followed in order to ensure that the product software is satisfactorily tested. |  |
| Executable Code | The java files to execute the web app functionalities and apk file to install the app |  |
| User Guide | A formal document describing, for each user type, how to use the entire system |  |
| Final Presentation | A demonstration of the product software and a presentation of the project experience |  |

**2. PROJECT ORGANIZATION**

**2.1 ROLES AND RESPONSIBILITES**

| Roles | Responsibilities |
| --- | --- |
| Project Manager | Plans, organizes, and coordinates the team project.  Schedules and prepares team meetings.  Resolves conflicts.  Works as a liaison between team members.  Monitors and reports the weekly status of the team.  Ensures that project deliverables are met. |
| Application Designer | Designs a web application to the problem statement that satisfies the requirements.  Assists the Technical Writers in documenting the design. |
| Application Developer | Develops the web application.  Determines the data needs for the solution.  Determines what hardware and tools are necessary.  Fixes bugs found by the Testers.  Assists the Technical Writers in creating online help, and writing the user manual. |
| Database Developer | Develops and populates Databases.  Ensures proper operation and interaction with entire system/application. |
| Tester | Tests all the web modules. |
| Technical Writer | Coordinates the project documents and their review by all team members.  Collects, proofreads, and integrates document parts.  Generates the final version of all the documents. |

**2.2 TOOLS AND TECHNIQUES**

LATEX for SRS, SDD, STD

JDK 1.6/1.7 for web application back-end.

MySQL/MongoDB database to store form details and retrieve user name and password for the seller.

Apache Tomcat Server for connection between Web application and Database.

HTML,CSS and JavaScript for web application front-end.

External API like pay tm for payment.

Selenium to perform web application testing

**3. PROJECT MANAGEMENT PLAN**

**3.1 TASKS**

| **Tasks** | **Deliverables and Milestones** | **Resources needed** | **Dependencies and constraints** |
| --- | --- | --- | --- |
| 1.1.1.1.1 External Interface Requirements | SRS Document specifying the user, hardware and software interfaces | Latex | Approval from the user  Interfaces |
| 1.1.1.1.2 Functional Requirements | SRS Document specifying the functional and non-function requirements |
| 1.1.1.1.3 Non Functional Requirements |
| 1.2.2.1.1 Login Form | .java file, .class file, XML files, jar files | JDK 1.6 or 1.7,Eclipse IDE, MySQL database, Apache Tomcat server, Android phone | Approval from user |
| 1.2.2.1.2 User information detail form |
| 1.2.2.1.3  Product/Cargo detail form |
| 1.2.2.2.1 Login page | .java file, .class file, XML files, jar files, apk files |
| 1.2.2.2.2 View info |
| 1.2.2.2.3 Receive pay ment notification |
| 1.2.2.3.1 Database | .java file, .class file, XML files, jar files | Data models |
| 1.3.1.1.1 Validate Web Modules | .java file, .class file, XML files, jar files | Forms created in web |
| 1.4.1.1.1 Unit testing and J-Unit Testing | Tested modules | JDK 1.6 or 1.7, Eclipse IDE | Approval from the tester |

**3.2 RISK TABLE**

| **Risks** | **Category** | **Probability** | **Impact** |
| --- | --- | --- | --- |
| Computer Crash |  | 20% | 3 |
| Server Crash |  | 10% | 1 |
| Late delivery |  | 30% | 2 |
| Deviation from Software Engineering Standards |  | 50% | 2 |
| Poor Quality Documentation |  | 50% | 4 |
| Lack of Database Stability |  | 40% | 2 |
| Software failure |  | 20% | 1 |
| No internet connection |  | 10% | 1 |
| Conflict with other traffic |  | 10% | 1 |
| Staff is inexperienced |  | 40% | 3 |
| Failure of Scanner |  | 30% | 2 |
| Damage of RFID |  | 20% | 2 |

**Impact Values**:

1–Catastrophic

2–Critical

3 - Marginal

4 -Negligible

**RISK TEMPLATE**

| **Risk information sheet** | | | |
| --- | --- | --- | --- |
| **Risk ID:** 1 | **Date:** September 30, 2019 | **Probability:** 40% | **Impact:** 2 |
| **Description:**  The database maintained may not be stable which may lead to Database Instability. | | | |
| **Refinement/Context:**  **Sub-condition 1:** The information gathered was misinterpreted. | | | |
| **Mitigation/Monitoring:**  1. Re-gather the information from the user.  2. Understand with modules are improper and correct them. | | | |
| **Management/Contingency plan/Trigger:**  Contact the team leader and make a new increment with all the respective changes needed. | | | |
| **Current status:**  Mitigation steps have been initialized. | | | |

| **Risk information sheet** | | | | |
| --- | --- | --- | --- | --- |
| **Risk ID:** 2 | **Date:** September 30, 2019 | | **Probability:10%** | **Impact:** 1 |
| **Description:**  The internet connection fails. | | | | |
| **Refinement/Context:**  **Sub-condition 1:** Connection fails due to fault at the ISP.  **Sub-condition 2:** There is some lose contact of cables to the modem. | | | | |
| **Mitigation/Monitoring:**  1. Contact the ISP provider and resolve the issues.  2. Fix the cable properly | | | | |
| **Management/Contingency plan/Trigger:**  Provide some alternative solution for internet like hotspot. Or make a provision for offline data storage. | | | | |
| **Current status:**  Mitigation steps have been initialized. | | | | |
| **Originator:** | | **Assigned:** | | |

| **Risk information sheet** | | | |
| --- | --- | --- | --- |
| **Risk ID:** 3 | **Date:** September 30, 2019 | **Probability:30%** | **Impact:** 2 |
| **Description:**  The scanners fail to read the RFIDs. | | | |
| **Refinement/Context:**  **Sub-condition 1:** RFID / Scanner interface is tampered.  **Sub-condition 2:** Incompatible scanner and RFIDs | | | |
| **Mitigation/Monitoring:**  1. Make sure the interface is clean. Check if the RFID is not damaged.  2. Try scanning the same RFID on another sensor or scan another RFID on the sensor. | | | |
| **Management/Contingency plan/Trigger:**  Get technical assistance as soon as possible. Find out the problem location (Scanner or RFID) and take actions accordingly. | | | |
| **Current status:**  Mitigation steps have been initialized. | | | |

| **Risk information sheet** | | | |
| --- | --- | --- | --- |
| **Risk ID:** 4 | **Date:** September 30, 2019 | **Probability:20%** | **Impact:** 2 |
| **Description:**  RFID tag gets damaged. | | | |
| **Refinement/Context:**  **Sub-condition 1:** The RFID tag is missing from a cargo when it reaches a scanner.  **Sub-condition 2:** The tag is damaged due to weather conditions / mishandling, etc. | | | |
| **Mitigation/Monitoring:**  1. Try to identify the cargo with the marking on it.  2. Wait for the user to raise a ticket when he notices that one of his cargo containers has not reached the desired destination yet. The cargo can then be linked with the ticket and the right identity of it can be found. A new RFID can be associated to it at this point and the tracing can continue as before. | | | |
| **Management/Contingency plan/Trigger:**  Have spare RFIDs at all counters. | | | |
| **Current status:**  Mitigation steps have been initialized. | | | |

**3.4 TIMETABLE**

/\*Make Gnatt Chart based on table given below\*/

