**QUALITY ASSURANCE PLAN**

**PROBLEM SOLVERS**

**CONFIGURATION MANAGEMENT** **SUPPORT (ML2)**

The purpose of Configuration Management (CM) is to establish and maintain the integrity of work products using configuration identification, configuration control, configuration status accounting, and configuration audits.

**SG 1 Baselines of identified work products are established.**

* The SRS (Requirement Specification) has been documented, reviewed and successfully approved by the User

**SG 2 Changes to the work products under configuration management are tracked and controlled.**

* We use Wikipedia for document Version Control. On our team wiki, versioning of file takes place. A file upload history is maintained on wiki.
* We use Bit Bucket as a code repository and every change to any file is recorded. This is used for source code management.

**SG 3 Integrity of baselines is established and maintained.**

* SRS has been reviewed by the end user to ensure all the requirements and the functionalities that fulfill those requirements are properly documented for later reference.

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**PROJECT MONITORING AND CONTROL** **PROJECT MANAGEMENT (ML2)**

The purpose of Project Monitoring and Control (PMC) is to provide an understanding of the project’s progress so that appropriate corrective actions can be taken when the project’s performance deviates significantly from the plan.

**SG 1 Actual project performance and progress are monitored against the project plan.**

* Team meetings are conducted on every Saturday between 9:30 am – 12 pm.
* Minutes of the meeting are taken down, followed by review of the progress in tasks assigned to every member, against the project plan.

**SG 2 Corrective actions are managed to closure when the project’s performance or results deviate significantly from the plan.**

* The current phase of the development is identified and accordingly The Project Manager assigns new tasks and redistributes pending tasks depending upon the progress of work conducted by every team member.
* Redistribution of pending task is done in parallel to the earlier scheduled task in order to complete the Project in the given time.

**PROJECT PLANNING** **PROJECT MANAGEMENT (ML2)**

The purpose of Project Planning (PP) is to establish and maintain plans that define project activities.

**SG 1 Estimates of project planning parameters are established and maintained.**

* Project manager has created Work Breakdown Structure (WBS), splitting the entire project into smaller subtasks, to estimate the scope of the project.
* Project manager has created the Gantt chart to estimate the project’s effort based on the estimation rationale and assigned tasks accordingly to the member to complete the whole project within deadline.

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**SG 2 A project plan is established and maintained as the basis for managing the project.**

* The Project Manager has created the Project Plan, estimated the schedule for timely delivery and instructs every team member to punctually submit his/her allotted task in accordance with the project plan.

**SG 3 Commitments to the project plan are established and maintained.**

* The team members have been made aware of the project plan and the deadlines that each branch (development and Quality) needs to adhere to.
* Inputs from the team members helped the Project Manager make the project plan more realizable.
* Delayed tasks are completed, erroneous tasks are corrected, or any other task related problems are solved and finally they are updated into the repositories.

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| **REQUIREMENTS MANAGEMENT** | **PROJECT MANAGEMENT (ML2)** |

The purpose of Requirements Management (REQM) is to manage requirements of the project’s products and product components and to ensure alignment between those requirements and the project’s plans and work products.

**SG 1 Requirements are managed and inconsistencies with plans and work products are identified.**

* The SRS document which comprises of the requirements specific to the end users are reviewed and checked with them.
* As per the instruction our SRS is Atomic, Verifiable and Traceable.
* On receiving affirmation, the team submitted the final documentation.
* We will be maintaining bidirectional traceability among use case and sequence diagram and other requirements and work products.
* Donor will contribute their products in NGO .And tutor has to move to the required position for the tution.
* Design document (Class Diagram and Sequence Diagram) has been made as per the Use Cases which were mentioned in Use Case Diagram.

**VERIFICATION** **ENGINEERING (ML3)**

The purpose of Verification (VER) is to ensure that selected work products meet their specified requirements.

**SG 1 Preparation for verification is conducted.**

* The Lead Developer would initiate unit testing.
* One of the developers would perform unit testing and document all bugs.

**SG 2 Peer reviews are performed on selected work products.**

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|  | * The bugs found during unit testing are well documented and discussed. * SRS, project plan, test plan and QA plan will be reviewed and feedback will be noted accordingly and the lead developer will create a test environment to test the code. * System testing shall be done to evaluate the system's compliance with its specified requirements, and all the bugs shall be documented. |
| **SG 3 Selected work products are verified against their specified requirements.** | |

* SRS version 1.0 has been reviewed, verified and uploaded on wiki page.
* System code and Test Cases are designed and verified in accordance with the specifications mentioned in the SRS document by development team.
* The development team refers to SRS during unit testing.

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| Work Product | Reference | Verification |
| System Requirement Specification | - | Review |
| Design Document | SRS/USE CASE | Review |
| Project Plan | SRS | Review |
| Test Case | SRS/USE CASE | Review |
| Binaries | SRS | Test Case |