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| *Project Name* |
| **Project Plan Document** |
| **SE 6387 Advanced Software Engineering Project**  **R.Z. Wenkstern**    ***Date*** |

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| **Group *X*** |
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# Revision History

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| --- | --- | --- | --- |
| **Version** | **Date** | **Decription** | **Authors** |
| 1.0 |  | Completed initial draft |  |

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# 4. Technical process plans

## 4.1 Process Model

Milestone 1: The system requirement will be gathered and the cost estimation for system engineering will be done in a span of 1 month. Acceptance is needed here from Professor, Teaching Assistant. Also the project vision, problem statement, Software Requirements Specification (SRS) document and project plan documents will be delivered with the gathered details.

Milestone 2: Once the requirement gathering is done and a plan is formulated, System Engineering will be taken care of. The various component interactions and integration of various modules will be done for a span of 14 days along with exploring Amazon Web Service(AWS) which will serve as the server for the software component. The deliverables for the period will be taken care of in parallel.

Milestone 3: After exploring the system components, actual tuning of the hardware will be done to meet the requirements of our project. The developer will work on creating the software modules along with hardware modules. Parallelism will go for 1.5 month until the entire system is developed. Frequent reviews of the code with the Professor and Teaching assistant will be done. In addition, the deliverables for the period will be taken care.

Milestone 4: Testing will start on the system once the development is finished. Testing is planned for a period of 2 weeks. Once the testing is complete, the system will be prepared for the demo in real world environment.

**4.2 Methods, Tools and Techniques**

4.2.1 Development Environment

The product will be developed on Windows 7 at University of Texas at Dallas campus. The development servers will have Intel I5 processors and Eclipse/Net beans IDE.

4.2.2 Target Environment

The product will run on Amazon Web Service (AWS) cloud environment. The AWS free tier has 750 hours of free hours. It hosts both Linux and Windows environment.

4.2.3 Development and Documentation Standard

The standards, which we plan to follow, are the ones outlined in the IEEE 1058-1998 standards with some minor modifications to suit the need of our project.

4.2.4 Testing Standard

All modules will be tested for both functionality and performance testing and the application and the server will be tested for functionality and performance capability.

4.2.5 Team Structure

The method the group plans to go about completing this project is through equal distribution of the workload. The team structure shall consist of a project manager and developers. The project manager will be the main point of contact to the professor. It is the duty of each member in the team to take responsibility and ownership of the deliverables and the milestones to be completed in each sprint. All the workload will be distributed evenly to all the team members.

4.2.6 Programming languages

The major development of the software, mobile application and the hardware to software interactions will be written in Java.

**4.3 Infrastructure Plan**

4.3.1 Hardware Component

|  |  |
| --- | --- |
| Passive Infrared Sensor | HC-SR501 |
| Xbee Module | Series 1 |
| Controller | Model B |
| Cloud Server | AWS |
| Wifi Adapter | EW-7811Un |
| Battery Pack | 6V - DiaMec |
| Bread board | 400 tie-points |

4.3.2 Software Development Infrastructure

Workstation Details

|  |  |
| --- | --- |
| Development Platform OS | Windows 7 |
| RAM | 8 GB |
| Processor | Intel I5/I7 processor |
| Drives | 750GB |
| Network | Wi-Fi(Comet net) |

Policy and standards will follow those used by University of Texas at Dallas.

Facilities: 4 Workstations. Each team member with each workstation. Server will be located in cloud (Amazon Web Service) .

## 4.4 Product Acceptance Plan

The deliverables must be completed at deadlines and status demos will be done for every milestone that is listed in process model section.

# 5. Supporting Process Plans

## 5.1 Configuration Management Plan

The Configuration Management tool that we are planning to use for version control of source code and documents is github. To track the workload assignment and progress, we are using VERSIONONE project planning tool. VERSIONONE is agile project planning management tool.

5.2 Test Plan

The time allocated for the Testing is 20% of the total project time. The test coverage involves the testing of the code and hardware components used. The testing used here would be Manual, Functional and Integration Testing. The peer testing is performed by the project team members with their allocated modules.

5.3 Documentation Plan

The documents for this project will be submitted online and a hardcopy will be given. The printed documents follow the A4 sheet dimensions with no consideration of colors.

5.4 Quality Assurance Plan

The quality assurance plan starts by setting the goal. The functional and non-functional testing ensures the quality of the project. The critical areas are identified and given special attention. The goals are checked in regular intervals and assured they are met, if not the changes are made as per to reach the milestone.

5.5 Problem Resolution Plan

The project team follows a proper procedure of error reporting and tracking of the bugs. The problems encountered in the project are updated in the Issue Tracker document and tracked by their status. The functional manager will be responsible for the Issues tracking in the project.

# Appendix A: Glossary

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| **Term** | **Definition** |
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# Appendix B: References