

PROJECT MANAGEMENT PLAN
FOR THE
COMFORT STUDIES
[[DOCUMENT CONFIGURATION IDENTIFIER]]
01/24/2019

Place project logo here

Team Name: CarRamRod
Team Member 1: Clay Akins - Project Manager
Team Member 2: Andrew Unger
Team Member 3: Link Maynard
Team Member 4: Josh King

[[Project Name, Code]]

PREFACE

This Project Management Plan (PMP) is intended to provide guidance on the management of the Comfort Studies.

The template conforms to the Institute of Electrical and Electronics Engineers (IEEE) Standard for Software Project Management Plans, IEEE Std 1058-1998, for format and content. The template and its standard were selected as they are flexible enough to be applied to any type of project. The management, technical, and supporting processes comply with the guidance provided by Standard for Information Technology - Software Life Cycle Processes, IEEE/Electronic Industries Association (EIA) 12207 Series; Systems Engineering – System Life Cycle Processes, International Organization for Standardization (ISO)/International Electrotechnical Commission (IEC) 15288; or the Processes for Engineering a System, Electronic Industries Alliance (EIA) Standard 632.

DOCUMENT CONVENTIONS

The outline of this Project Management Plan (PMP) has been tailored from the Institute of Electrical and Electronics Engineers (IEEE) Standard for Software Project Management Plans, IEEE Std 1058-1998.

Standard conventions are used within this document to direct the reader to specific sections of the text. These sections provide instructions and explanations and require users to insert their own project-specific information. The conventions used in this document are shown below.

- [[text]] Global changes. Items that appear in regular text and are surrounded by double brackets represent changes that can be made globally throughout the document.
- Italics* Instructions and explanations. Each section of the template has been annotated with a guidance box, derived from the IEEE 1058-1998 standard, to assist the reader in drafting the content. For example:

IEEE Std 1058-1998 Guidance

The guidance box provides instructions and explanations from the IEEE 1058-1998 Standard, in italics, as required to assist the user in drafting their own information.

Guidance boxes should be deleted from the final PMP.

RECORD OF CHANGES

**A - ADDED M - MODIFIED D - DELETED*

VERSION NUMBER	DATE	NUMBER OF FIGURE, TABLE OR PARAGRAPH	A* M D	TITLE OR BRIEF DESCRIPTION	CHANGE REQUEST NUMBER
1	01/24/19				
2	2/12/19			Update the Master Schedule to contain actual dates.	

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SECTION 1. OVERVIEW

1.1 PROJECT SUMMARY

Our project will be to build a web app that has two main features:

1. The study room scheduling feature allows for users to examine which rooms are available at any given time. A user can reserve any free room and is required to verify that they are in the study room at the given time. If a single person has a reservation, their reservation can be overridden by a group. An available tutor can be asked to help with the study session. An email will be sent as a confirmation or denial from the tutor.
2. The emporium food ordering feature allows the user to make an order at the emporium and pick up the food at a designated time. The food and beverage can also be delivered to your study room. An admin user can adjust the menu.

1.1.1 Purpose, Scope, and Objectives

The purpose of this document is to serve as a guide for development for the Comfort Studies(CS) ordering and reservation system. The project management plan will detail the schedule, milestones, resources, and major events for developing the CS system. The objective of this project is to provide a reservation system to allow students to reserve study rooms, and to request a tutor if available. There will also be a food ordering system for the emporium that will allow students to pick their food up at a designated time, and to order catering from the emporium to be delivered to their study room.

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(Subclause 1.1.1) Purpose, scope, and objectives

The purpose of this document is to serve as a guide for development for the Comfort Studies(CS) ordering and reservation system. The project management plan will detail the schedule, milestones, resources, and major events for developing the CS system. The objective of this project is to provide a reservation system to allow students to reserve study rooms, and to request a tutor if available. There will also be a food ordering system for the emporium that will allow students to pick their food up at a designated time, and to order catering from the emporium to be delivered to their study room.

1.1.2 Assumptions and Constraints

Schedule:

Planning to be done on Tuesdays and Thursdays from 5:30 P.M. to 7:45 P.M.
Rest of the project to be done throughout the school week.
Constraint will be that we won't work during the weekends.

Budget:

We currently have no plans to spend any money.

Resources:

Professor Guercio
www.w3schools.com

Components to be reused:

None has been determined at the time.

Acquirer components to be incorporated:

A possible QR reader plugin.

Technology to be employed:

HTML - Markup language
CSS - Style Sheet
Bootstrap - Framework
Javascript - Client side language
PHP - Server side language
Mariadb - Database

Products interfaces to other products:

None has been determined at the time.

1.1.3 Project Deliverables

1.1.3.1 Software Deliverables

Web application for the use of students to reserve a study room, and request an available tutor to assist during a study session. This application also includes a feature that allows the user to order food from the campus center to pick up at a designated time, or have a catering service deliver to the users specific study room.

1.1.3.2 Document Deliverables

A number of documents will be delivered by the CarRam Rod team during the course of the project. Some of the documents are intended for team use and are required by the CS program, while other documents are part of the deliverable to the client.

1.1.3.3 Client Documents

ER Diagram for database

1.1.3.4 Delivery Date

May, 2019

1.1.3.5 Delivery Location

Kent State University at Stark Campus, Main Hall, Room 306

1.1.3.6 Delivery Media

Web Application, KSU Web Server

1.1.4 Master Schedule

1. January 28 - February 21 - Planning the project - This part of the process will include brainstorming and design. We will figure out what is needed for our application and if our planned ideas will work with the technology that we plan to use.
 - a. Determine what tables will be necessary in the database.
 - b. Write up the UML for the application.
 - c. ER Diagram for database
 - d. State Machine Diagram
2. February 19 - March 5 - Building the database
 - a. Write up the tables for the study room feature of the application.
 - b. Write up the tables for the food ordering feature of the application.
3. February 26 - TBD - Building the application
 - a. Build a general website for the application using HTML.
 - b. Build the application features
 - i. Build a login feature.
 - ii. Build the study room feature.
 - iii. Build the food ordering feature.
 - c. Use CSS and Javascript to make the application look more appealing.

1.2 EVOLUTION OF THE PLAN

IEEE Std 1058-1998 Guidance

(Subclause 1.2) Evolution of the Plan

This subclause shall specify the plans for producing both scheduled and unscheduled updates to this planning document. Methods of disseminating the updates shall be specified. This subclause shall also specify the mechanisms used to place the initial version under configuration management and to control subsequent changes to the planning document.

The project plan will be updated frequently, but frequency will decrease as time goes on. A new version will be produced every two weeks.

1.3 DOCUMENT STRUCTURE

This plan is organized as follows:

- a. Section 1, Project Overview. This section provides an overview of the scope and objectives of the project, the project's assumptions and constraints, reference to the project deliverables, schedule and budget, and a description of the evolution of the plan.
- b. Section 2, References. This section provides a list of all documents, policies, templates, processes, and other sources of information referenced in the plan.
- c. Section 3, Definitions. This section contains the abbreviations and acronyms required to properly understand this planning document.
- d. Section 4, Project Organization. This section identifies interfaces to organizational entities external to the project, the project's internal organizational structure, and defines roles and responsibilities for the project.
- e. Section 5, Management Process. This section describes the planning, measurement, tracking, reporting, risk control mechanisms needed to provide management control over the technical processes and product quality, and appropriate project initiation and closeout procedures.
- f. Section 6, Technical Process. This section describes the technical solution in terms of a process model and implementation methods, tools, and techniques to be used to develop the various work products, plans for establishing and maintaining the project infrastructure, and the product acceptance.
- g. Section 7, Supporting Processes. This section describes processes that are employed to facilitate and control the technical processes and the state of the product. These include, but are not limited to, configuration management, verification and validation, documentation, quality assurance, reviews and audits, problem resolution, and contractor management, and methods to ensure continuous process improvement.
- h. Section 8, Additional Plans. This section addresses the logistic support strategy to be applied to increase the system's operational effectiveness.
- i. Appendix A. Comfort Studies Master Schedule (Microsoft Project)
- j. Appendix B. Comfort Studies Facilities Plan
- k. Appendix C. Comfort Studies Project Training Plan
- l. Appendix D. Comfort Studies Measurement Plan
- m. Appendix E. Comfort Studies Product Engineering and Qualification Process
- n. Appendix F. Comfort Studies Quality Assurance Plan
- o. Appendix G. Comfort Studies Configuration Management Plan

SECTION 2. REFERENCES

IEEE Std 1058-1998 IEEE standard

<https://www.w3schools.com/>

Professor Angela Guercio- in room 422 at the main hall at days and times Tue/Thur 9:45-10:45am, 2:50-3:20pm, 4:50-5:20pm, other times by appointment, and email aguercio@kent.edu

Capstone Syllabus- Authored by Angela Guercio

Capstone Syllabus can be found on this link:

<https://drive.google.com/drive/folders/1QRkQUB7KrFW-fpwbyOZ-Mvy-2dLv71a6>

2.1 STANDARDS AND DOCUMENTS

The standards and documents listed below are referenced in this document:

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SECTION 3. DEFINITIONS

CS - Comfort Studies

DB - Database

SPMP - Software Project Management Plan

SRS - Software Requirements Specification

SECTION 4. PROJECT ORGANIZATION

4.2 INTERNAL STRUCTURE

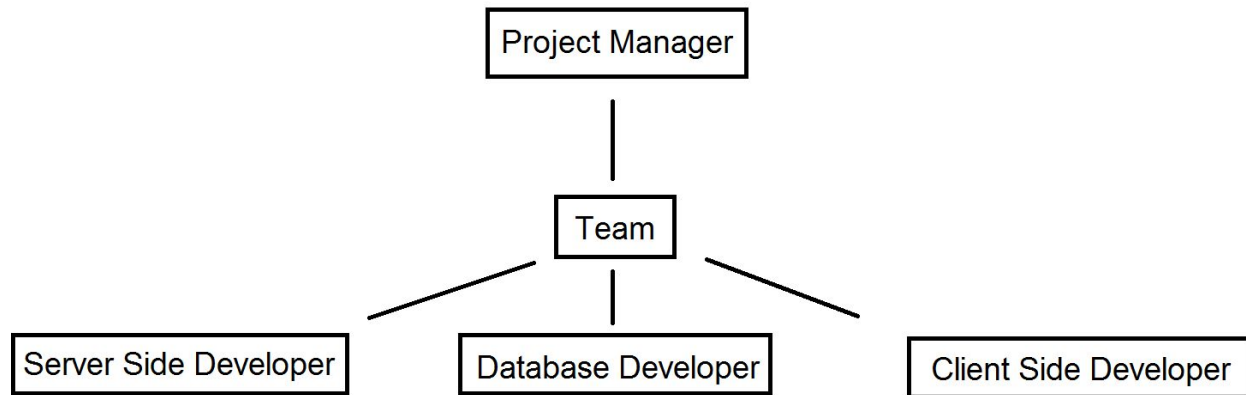


Figure 1 shows the internal team structure with the team roles separated.

The team structure is hierarchical. There is a team leader, and the rest of the roles are assigned to all other team members. All members have their own area of responsibility and everyone is expected to contribute equally to the project.

Each member of the team is encouraged to provide input for each decision that the team makes. The team will engage in regular weekly meetings on Tuesdays and Thursdays at 5:30 p.m. where personal communication between team members is strongly encouraged.

4.2.1 The Project Manager- Clay Akins

4.2.1.1 Scope of Authority.

Late Policy-

Late penalty is 3 points per day. An assignment that is more than 7 days late will be accepted but it will be considered missing and will receive a 0 grade.

Individual Work, Research and Plagiarism-

Students are encouraged to engage in discussion, use resources, such as research papers, library books, internet articles, for their project but they must provide their own writing and provide references to the resources used. At any time, student must not reproduce code/writing from other resources (as is). Any plagiarism (even partial work) or cheating on home works, assignments, quizzes, and exams is NOT acceptable and will result in an immediate failure for the class. Read the Academic Honesty paragraph in the University Policy Section below for further details.

Presentation-

The course culminates in the presentation of your project. Presentation of the work is a very important part of the overall project. The presentation of your project is required. If you miss the presentation I will assign a grade 0 (zero) to the entire project. You are also required to be present at the presentation of all the other students' projects of your class. If you miss the presentation of any other student project of your class, I will assign a grade 0 (zero) to your entire project.

Academic Honesty-

Use of the intellectual property of others without attributing it to them is considered a serious academic offense. Cheating or plagiarism will result in a failing grade for the work or for the entire course. Repeat offenses result in dismissal from the University. University guidelines require that all infractions be reported to the Student Conduct Officer on our campus. Kent State University policy on academic honesty can be found at: <https://www.kent.edu/policyreg/chapter-3-teaching-research-and-publicservice>

Conduct-

Students and faculty behavior at the Kent State University is governed by the guidelines summarized in the Code of Conduct page that you can find at <http://www.kent.edu/studentconduct/code-student-conduct>.

4.2.1.2 Scope of Responsibility.

Clay Akins will be responsible for turning in each iteration in a timely manner, documentation, and is the team leader.

Andrew Unger will be responsible for documentation and client side web development.

Josh King will be responsible for documentation and database administration.

Link Maynard will be responsible for documentation and server side development.

4.2.1.3 Internal Responsibilities.

Clay Akins, Andrew Unger, Link Maynard, and Josh King will be responsible for all internal responsibilities.

4.2.1.4 External Responsibilities.

Our client for this project is Angela Guercio. Communication between the client and team will be facilitated by the team leader Clay Akins, or anyone the team leader assigns to do so.

4.3 PROJECT ROLES AND RESPONSIBILITIES .

Clay Akins- Project Manager - Scrum Master

- Facilitating jobs for each of the other individual managers.
- Set and run team meetings
- Working on whatever needs to be done at the moment.

Link Maynard- Server Side Development Manager

- Building the connections to the database from the application using PHP.
- Writing server side MySQL and client side code that uses MySQL

Andrew Unger- Client Side Development Manager

- Designing the structure of the application using HTML.

- Working on the cosmetics of the application with bootstrap and CSS.

Josh King- Database Administrator

- Building the tables for the database.
- Filling the tables with known information.

SECTION 5. MANAGEMENT PROCESS

5.1 START-UP

IEEE Std 1058-1998 Guidance

(Subclause 5.1) Project start-up plan

This subclause shall specify the estimation plan, staffing plan, resource acquisition plan, and training plan. Depending on the size and scope of the project, these plans may be incorporated directly or by reference to other plans.

The Start-Up Management Process (SPMP) will outline all of the resources required to start the project. This will include the Estimation Plan, Resource Acquisition, and Staff Training.

5.1.1 Estimation

IEEE Std 1058-1998 Guidance

(Subclause 5.1.1) Estimation plan

This subclause shall specify the cost and schedule for conducting the project as well as methods, tools, and techniques used to estimate project cost, schedule, resource requirements, and associated confidence levels. In addition, the basis of estimation shall be specified to include techniques such as analogy, rule of thumb, or local history and the sources of data. This subclause shall also specify the methods, tools, and techniques that will be used to periodically re-estimate the cost, schedule, and resources needed to complete the project. Re-estimation may be done on a monthly basis and/or periodically as necessary.

The size estimation plan will be developed once we have created our low level architecture.

There shall be no cost for the project. The estimated finishing date for the project will be the end of the semester.

5.1.3 Resource Acquisition

IEEE Std 1058-1998 Guidance

(Subclause 5.1.3) Resource acquisition plan

This subclause shall specify the plan for acquiring the resources in addition to personnel needed to successfully complete the project. The resource acquisition plan should include a description of the resource acquisition process, including assignment of responsibility for all aspects of resource acquisition. The plan should include, but not be limited to, acquisition plans for equipment, computer hardware and software, training, service contracts, transportation, facilities, and administrative and janitorial services. The plan should specify the points in the project schedule when the various acquisition activities will be required. Constraints on acquiring the necessary resources shall be specified.

All team members will have access to computers, software, books, and other facilities at Kent State University at Stark as well as the other campuses.

The resources required for the Comfort Studies web application will be separated into the following categories.

- Software resources
- Hardware resources
- Other resources

5.1.4 Staff Training

IEEE Std 1058-1998 Guidance

(Subclause 5.1.4) Project staff training plan

The main source of training for this project will be from course work taken from the Computer Science program at Kent State.

5.2 WORK PLANNING

IEEE Std 1058-1998 Guidance

(Subclause 5.2) Work plan

This clause shall specify the work activities, schedule, resources, and budget details for the project.

5.2.1 Work Activities

IEEE Std 1058-1998 Guidance

(Subclause 5.2.1) Work activities

This subclause shall specify the various work activities to be performed in the project. A work breakdown structure shall be used to depict the work activities and the relationships among work activities. Work activities should be decomposed to a level that exposes all project risk factors and allows accurate estimate of resource requirements and schedule duration for each work activity. Work packages should be used to specify, for each work activity, factors such as the necessary resources, estimated duration, work products to be produced, acceptance criteria for the work products, and predecessor and successor work activities. The level of decomposition for different work activities in the work breakdown structure may be different depending on factors such as the quality of the requirements, familiarity of the work, and novelty of the technology to be used.

Team Member	Task	Start Date	End Date
All Team Members	Complete Project Management Plan V1 through Google Docs	01/17/2019	01/29/2019
Clay Akins	Create Google Doc for CS Documents	01/17/2019	01/17/2019
Link Maynard	Create Github	01/27/2019	01/27/2019
Clay Akins	Create State Diagram V1 using Viseo	01/29/2019	01/29/2019
Andrew Unger	Create Class Diagram V1 using Star UML	01/29/2019	01/29/2019
Link Maynard	Create Readme and Licensing on Github	01/29/2019	01/29/2019
Josh King	Create ER Diagram V1	01/29/2019	
Josh King	Create Schema V1	01/29/2019	
Link Maynard	Create SRS Documentation	01/29/2019	

5.2.2 Schedule Allocation

IEEE Std 1058-1998 Guidance

(Subclause 5.2.2) Schedule allocation

This subclause shall provide scheduling relationships among work activities in a manner that depicts the time-sequencing constraints and illustrates opportunities for concurrent work activities. Any constraints on scheduling of particular work activities caused by factors external to the project shall be indicated in the work activity schedule. The schedule should include frequent milestones that can be assessed for achievement using objective indicators to assess the scope and quality of work products completed at those milestones. Techniques for depicting schedule relationships may include milestone charts, activity lists, activity Gantt charts, activity networks, critical path networks, and PERT.

The schedule for each member of the team will be established at the beginning of each phase of the project. The team will make adjustments to the schedule for each member depending on the workload that each member has for the given phase of the project. This ensures that the team workload is balanced as fairly as possible.

Phase 1	
Clay Akins	Create a Google Docs. Work on Documentation and State Diagram
Andrew Unger	Work on Documentation and Class Diagram
Link Maynard	Create Github, add Licensing and Readme to it. Start the SRS Documentation
Josh King	Work on Documentation. Start ER Diagram and Schema for the Database.
Phase 2: To be determined	

5.2.3 Resource Allocation

IEEE Std 1058-1998 Guidance

(Subclause 5.2.3) Resource allocation

This subclause shall provide a detailed itemization of the resources allocated to each major work activity in the project work breakdown structure. Resources shall include the numbers and required skill levels of personnel for each work activity. Resource allocation may include, as appropriate, personnel by skill level and factors such as computing resources, tools, special testing and simulation facilities, and administrative support. A separate line item should be provided for each type of resource for each work activity. A summary of resource requirements for the various work activities should be collected from the work packages of the work breakdown structure and presented in tabular form.

Resource Name	Type of Resource	Summary of Resource	Responsibility to obtain resource
Google Docs	Other	This resource will house all of the documentation so it can be worked on simultaneously by team members	Clay Akins
Github	Other	This resource will be used as a repository for Documentation and Software Code.	Link Maynard
NotePad++	Software	This resource will be used to create code for HTML and CSS	Each team member

Star UML	Software	This software will be used to create Class Diagrams	Andrew Unger
Viseo	Software	This software will be used to create State Machines diagrams..	Clay Akins

5.3 PROJECT CONTROLS

IEEE Std 1058-1998 Guidance

(Subclause 5.3) Control plan

This subclause shall specify the metrics, reporting mechanisms, and control procedures necessary to measure, report, and control the product requirements, the project schedule, budget, and resources, and the quality of work processes and work products. All elements of the control plan should be consistent with the organization's standards, policies, and procedures for project control as well as with any contractual agreements for project control.

The Software Project Management Plan will specify the control procedures necessary to report and control the project requirements, schedule, resources and quality of work processes. Software development will be done incrementally and iteratively during the overall course.

5.3.1 Requirements Control

IEEE Std 1058-1998 Guidance

(Subclause 5.3.1) Requirements control plan

This subclause shall specify the control mechanisms for measuring, reporting, and controlling changes to the product requirements. This subclause shall also specify the mechanisms to be used in assessing the impact of requirements changes on product scope and quality, and the impacts of requirements changes on project schedule, budget, resources, and risk factors. Configuration management mechanisms shall include change control procedures and a change control board. Techniques that may be used for requirements control include traceability, prototyping and modeling, impact analysis, and reviews.

The requirements for the Comfort Studies project will be documented in the Comfort Studies SRS and will include two major aspects of the requirements control plan which are Change control and Traceability.

Traceability means that every document that is produced by the project should be able to be traced back to the documents stating the requirements. Traceability will be addressed during each weekly meeting to review progress.

Change control means that even though there are no major changes that are expected, once the SRS is released, all changes will be approved and documented.

5.3.2 Schedule Control

The schedule for the Comfort Studies team shall be maintained and updated on our team's github page under Project- Comfort Studies.

During the team's weekly meetings, the project manager will provide an update on the status of the plan. The project manager will report on tasks that are late, and or future tasks to be completed for the following week. Each team member is responsible for providing an accurate status update for his/her tasks.

The following paragraphs define the management approach for schedule control of the Comfort Studies.

5.3.2.1 Schedule Tracking.

The schedule will be tracked on the CS Github. Each team member will be assigned a new task(s) at each new phase. The team leader will make adjustments to the schedule as needed to help ensure we have a balanced workload.

5.3.2.2 Schedule Performance Reports.

Each week, each team member will submit a Weekly Individual Contribution form to our client, Dr. Guercio. Every two weeks, each member will present what they have done to the class.

5.3.2.3 Schedule Reviews.

Every two weeks, each member will present what they have done to the class.

5.3.2.4 Progress Variance Monitoring.

The progress variance monitoring will be established when Phase 1 is complete.

5.3.2.5 Progress Variance Resolution.

The progress variance resolution will be established when the progress variance monitoring is completed.

5.3.2.6 Follow Up on Corrective Action.

The Follow-up Process (Management Corrective Actions) After the final report is issued, agreed upon Management Corrective Actions (MCA's) are entered into Audit Service's MCA tracking database.

5.3.4 Quality Control

IEEE Std 1058-1998 Guidance

(Subclause 5.3.4) Quality control plan

This subclause shall specify the mechanisms to be used to measure and control the quality of the work processes and the resulting work products. Quality control mechanisms may include quality assurance of work processes, verification and validation, joint reviews, audits, and process assessment.

Software quality control has a significant role in all stages of the Comfort Studies Project. The main focuses are making sure that the project meets certain quality criteria. The documentation and final

project will provide the ability to verify that the project satisfies the requirements, as well as finding and removing defects in the early stages of development/design.

5.3.5 Project Reporting and Communication

IEEE Std 1058-1998 Guidance

(Subclause 5.3.5) Reporting plan

This subclause shall specify the reporting mechanisms, report formats, and information flows to be used in communicating the status of requirements, schedule, budget, quality, and other desired or required status metrics within the project and to entities external to the project. The methods, tools, and techniques of communication shall be specified in this subclause. The frequency and detail of communications related to project measurement and control shall be consistent with the project scope, criticality, risk, and visibility.

The SPMP outlines the reporting mechanisms that have been put in place for the CarRamRod team. There are both internal and external reporting mechanisms.

The following paragraphs define the management plan for ensuring the broadest communication of needed information for project coordination.

5.3.5.1 Electronic Media.

All electronic media will be through Google Doc and Github.

5.3.5.2 Meetings.

Meetings will occur every Tuesday and Thursday from 5:30pm to 7:45pm.

5.3.5.3 Information Repository.

The information repository for the CS Web Application will be located on Github.

5.3.5.4 Reviews.

Reviews will be scheduled after the completion of phase 1.

5.3.5.5 Status Reporting.

Status Report is documentation describing the situation of something such as a project at the present time. This will be established after phase 1.

5.3.6 Metrics Collection

IEEE Std 1058-1998 Guidance

(Subclause 5.3.6) Metrics collection plan

This subclause shall specify the methods, tools, and techniques to be used in collecting and retaining project metrics. The metrics collection plan shall specify the metrics to be collected, the frequency of collection, and the methods to be used in validating, analyzing, and reporting the metrics.

Each member will submit weekly personal contribution plan every Thursday about their progress and contribution to Comfort Studies. At our bi-weekly meetings each member will present on the tasks that were assigned, either completed or not, future tasks, and any problems that have or may occur. The project manager will review the results of each team member.

5.4 RISK MANAGEMENT

IEEE Std 1058-1998 Guidance

(Subclause 5.4) Risk management plan

This subclause shall specify the risk management plan for identifying, analyzing, and prioritizing project risk factors. This subclause shall also describe the procedures for contingency planning, and the methods to be used in tracking the various risk factors, evaluating changes in the levels of risk factors, and the responses to those changes.

Risk factors that should be considered include risks in the acquirer-supplier relationship, contractual risks, technological risks, risks caused by the size and complexity of the product, risks in the development and target environments, risks in personnel acquisition, skill levels and retention, risks to schedule and budget, and risks in achieving acquirer acceptance of the product.

The main risk for the project will be if we can finish it within the timeframe. This shall be low risk though if we are able to plan properly.

5.5 PROJECT CLOSEOUT

IEEE Std 1058-1998 Guidance

(Subclause 5.5) Project closeout plan

This subclause shall contain the plans necessary to ensure orderly closeout of the project. Items in the closeout plan should include a staff reassignment plan, a plan for archiving project materials, a plan for postmortem debriefings of project personnel, and preparation of a final report to include lessons learned and analysis of project objectives achieved.

The CarRamRod team will have a project closeout on April 30, 2018.

SECTION 6. TECHNICAL PROCESS

6.1 PROCESS MODEL

IEEE Std 1058-1998 Guidance

(Subclause 6.1) Process model

This subclause shall define the relationships among major project work activities and supporting processes by specifying the flow of information and work products among activities and functions, the timing of work products to be generated, reviews to be conducted, major milestones to be achieved, baselines to be established, project deliverables to be completed, and required approvals that span the duration of the project. The process model for the project shall include project initiation and project termination activities. To describe the process model, a combination of graphical and textual notations may be used. Any tailoring of an organization's standard process model for a project shall be indicated in this subclause.

Major Milestones:

1. Produced all of the different diagrams needed to effectively build the application.
2. Built the database for the application.
3. Built the general framework for the website.
4. Connected the website to the database with SQL using PHP.
5. Finished the website by adding styles using CSS.

6.2 METHODS, TOOLS AND TECHNIQUES

IEEE Std 1058-1998 Guidance

(Subclause 6.2) Methods, tools, and techniques

This subclause shall specify the development methodologies, programming languages and other notations, and the tools and techniques to be used to specify, design, build, test, integrate, document, deliver, modify and maintain the project deliverable and non-deliverable work products. In addition, the technical standards, policies, and procedures governing development and/or modification of the work products shall be specified.

Our project will be using a scrum methodology. We will be using Javascript and PHP as our main programming languages. We will be using Github for our version control, but each team member may be using different IDEs.

6.3 PROJECT INFRASTRUCTURE

IEEE Std 1058-1998 Guidance

(Subclause 6.3) Infrastructure plan

This subclause shall specify the plan for establishing and maintaining the development environment (hardware, operating system, network, and software), and the policies, procedures, standards, and facilities required to conduct the project. These resources may include workstations, local area networks, tools for analysis, design, implementation, testing, and project management, desks, office space, and provisions for physical security, administrative personnel, and janitorial services.

Our project does not have any specific infrastructure because each of us will be only be using our personal machines.

6.4 PRODUCT ACCEPTANCE

IEEE Std 1058-1998 Guidance

(Subclause 6.4) Product acceptance plan

This subclause shall specify the plan for acquirer acceptance of the deliverable work products generated by the project. Objective criteria for determining acceptability of the deliverable work products shall be specified in this plan and a formal agreement of the acceptance criteria shall be signed by representatives of the development organization and the acquiring organization. Any technical processes, methods, or tools required for product acceptance shall be specified in the product acceptance plan. Methods such as testing, demonstration, analysis, and inspection should be specified in this plan.

Acceptance Criteria:

- Website must be connected to the Database.
- Database must contain the full menu from the Kent State Stark Emporium.
- Must have every study room on campus.

SECTION 7. SUPPORTING PROCESSES

7.1 CONFIGURATION MANAGEMENT

IEEE Std 1058-1998 Guidance

(Subclause 7.1) Configuration management plan

This subclause shall contain the configuration management plan for the project, to include the methods that will be used to provide configuration identification, control, status accounting, evaluation, and release management. In addition, this subclause shall specify the processes of configuration management to include procedures for initial baselining of work products, logging and analysis of change requests, change control board procedures, tracking of changes in progress, and procedures for notifying concerned parties when baselines are first established or later changed. The configuration management process should be supported by one or more automated configuration management tools.

7.2 INDEPENDENT VERIFICATION AND VALIDATION

IEEE Std 1058-1998 Guidance

(Subclause 7.2) Verification and validation plan

This subclause shall contain the verification and validation plan for the project to include scope, tools, techniques, and responsibilities for the verification and validation work activities. The organizational relationships and degrees of independence between development activities and verification and validation activities shall be specified. Verification planning should result in specification of techniques such as traceability, milestone reviews, progress reviews, peer reviews, prototyping, simulation, and modeling. Validation planning should result in specification of techniques such as testing, demonstration, analysis, and inspection. Automated tools to be used in verification and validation should be specified.

Our verification plan will mostly be supported by the weekly progress reports and the once every two week presentations. We will also have specific tasks assigned to each person, so we will know if that person hasn't done their job.

7.3 DOCUMENTATION

IEEE Std 1058-1998 Guidance

(Subclause 7.3) Documentation plan

This subclause shall contain the documentation plan for the project, to include plans for generating non-deliverable and deliverable work products. Organizational entities responsible for providing input information, generating, and reviewing the various documents shall be specified in the documentation plan. The documentation plan should include a list of documents to be prepared, the controlling template or standard for each document, who will prepare it, who will review it, due dates for review copy and initial baseline version, and a distribution list for review copies and baseline versions.

TABLE 7-1. COMFORT STUDIES DOCUMENTATION

Document Type	Format Standard	Estimated Page Count	Peer Review Type
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7.4 QUALITY ASSURANCE

During the early parts of this project, the team will be building various diagrams such as a class diagram, ER diagram, and state diagram. As the team begins to develop the web application, they will be able to periodically compare the current work to the original diagrams. The team will then determine if they need to make adjustments to the application or adjust the original diagrams to a better or more plausible version. Dr. Guercio, the client, will also be checking periodically to see if the application is up to her standards.

7.5 REVIEWS AND AUDITS

IEEE Std 1058-1998 Guidance

(Subclause 7.5) Reviews and audits plan

This subclause shall specify the schedule, resources, and methods and procedures to be used in conducting project reviews and audits. The plan should specify plans for joint acquirer-supplier reviews, management progress reviews, developer peer reviews, quality assurance audits, and acquirer-conducted reviews and audits. The plan should list the external agencies that approve or regulate any product of the project.

This reviews will mainly come in the form of the weekly evaluations and every other week presentations.

7.6 PROBLEM RESOLUTION

IEEE Std 1058-1998 Guidance

(Subclause 7.6) Problem resolution plan

This subclause shall specify the resources, methods, tools, techniques, and procedures to be used in reporting, analyzing, prioritizing, and processing problem reports generated during the project. The problem resolution plan should indicate the roles of development, configuration management, the change control board, and verification and validation in problem resolution work activities. Effort devoted to problem reporting, analysis, and resolution should be separately reported so that rework can be tracked and process improvement accomplished.

We shall have a very open environment for communicating with each other. By openly discussing our ideas with the whole group, we can attempt to resolve issues through compromise.

7.8 PROCESS IMPROVEMENT

IEEE Std 1058-1998 Guidance

(Subclause 7.8) Process improvement plan

This subclause shall include plans for periodically assessing the project, determining areas for improvement, and implementing improvement plans. The process improvement plan should be closely related to the problem resolution plan; for example, root cause analysis of recurring problems may lead to simple process improvements that can significantly reduce rework during the remainder of the project. Implementation of improvement plans should be examined to identify those processes that can be improved

without serious disruptions to an ongoing project and to identify those processes that can best be improved by process improvement initiatives at the organizational level.

7.8.1 Systems/Software Process Improvement Lead

7.8.2 Systems Engineering Process Group

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SECTION 8. ADDITIONAL PLANS

IEEE Std 1058-1998 Guidance

(Clause 8) Additional plans

This clause shall contain additional plans, or activities, required to satisfy product requirements and contractual terms.

Additional plans for a particular project may include plans for assuring that safety, privacy, and security requirements for the product are met, special facilities or equipment, product installation plans, user training plans, integration plans, data conversion plans, system transition plans, product maintenance plans, logistic engineering approach, or product support plans.

APPENDICES

IEEE Std 1058-1998 Guidance

Annexes may be included, either directly or by reference to other documents, to provide supporting details that could detract from the document if included in the body.

General Guidance

In this template, the following appendices are used for reference purposes only. It should not be assumed that the referenced documents exist as an example.

APPENDIX A. COMFORT STUDIES MASTER SCHEDULE (MICROSOFT PROJECT)

Guidance

The objective of the Comfort Studies master schedule is to provide management with the task map and tracking tool needed to guide the project in the performance of its mission.

The Comfort Studies master schedule's Microsoft Project representation of the WBS would be tailored from the templates available from the SSC Pacific Process Asset Library (PAL) in the "SW-CMM Archive". Draft Microsoft Project templates are found under the "Process Assets by SW-CMM KPA", "Software Project Planning (SPP)" in the "Tools" section. These templates can be tailored up or down to meet specific project needs.

APPENDIX B. COMFORT STUDIES FACILITIES PLAN

Guidance

The objective of the Comfort Studies Facilities Plan is to document the environmental needs of the project. These needs include space, equipments, security, safety, support tools, and the staff necessary to maintain and operate an environment needed for project operations.

The facilities requirements for projects vary broadly, often with several projects sharing both facilities and computer resources. There currently are no templates available from the SSC Pacific PAL to assist in developing a facilities plan. However, recommended issues to address in a Facilities Plan would include, but not be limited to, the following list:

- 1. Facility Objectives/General Description*
- 2. Facility Locations (i.e., Building Locations)*
- 3. Facility Diagrams*
 - a. Floor Plans (i.e., lab, work cubicles)*
 - b. Environmental Requirements i.e. Heating, Lighting*
- 4. Facilities Equipment Requirements*
 - a. Equipment Lists (i.e., work stations, development, test)*
 - b. Equipment Interface Diagrams*
 - c. Space Equipment Layouts*
 - d. Inspections and Records Requirements*
- 5. Facilities Software Requirements*
 - a. Software by Development/Test Host Equipment*
 - b. Software by Workstation*
- 6. Facilities Operating Personnel Requirements*
- 7. Facilities Operating Personnel Training Requirements*
- 8. Security Measures*
 - a. Internal*
 - b. External*
- 9. Safety Measures*
- 10. Maintenance Requirements (i.e., spaces, per equipment)*
- 11. Facilities Performance Measurements*

APPENDIX C. COMFORT STUDIES PROJECT TRAINING PLAN

The objective of the Comfort Studies Project Training Plan is to develop the skills and knowledge of the project staff so they can perform their roles effectively and efficiently.

The Comfort Studies Project Training Plan would be tailored from the Department/Project Training Plan Template available from the SSC Pacific Process Asset Library (PAL). The template is located in the “Process Assets” sub-page under the “Organizational Training” PA in the “Plans” section. The template can be tailored up or down to meet specific project needs.

APPENDIX D. COMFORT STUDIES MEASUREMENT PLAN

Guidance

The objective of the Comfort Studies Measurement Plan is to develop and present the data needed to support project management information needs necessary to ensure objective decision-making.

The Comfort Studies Measurement Plan would be tailored from the Software Measurement Plan Template available from the SSC Pacific Process Asset Library (PAL) in the “SW-CMM Archive”. This template can be found under the “Process Assets by SW-CMM KPA”, “Software Project Tracking and Oversight (SPTO)” KPA in the “Tools” section. The template can be tailored up or down to meet specific project needs.

APPENDIX E. COMFORT STUDIES PRODUCT ENGINEERING AND QUALIFICATION PROCESS

Guidance

The objective of the Comfort Studies Product Engineering and Qualification (PE&Q) Process is to document the processes comprising a technical solution for development, maintenance, test, and product qualification.

The Comfort Studies PE&Q Process would be tailored from the Product Engineering and Qualification Process available from the SSC Pacific Process Asset Library (PAL). The process is located in the “Process Assets” sub-page under the “Technical Solution” PA in the “Process” section. The PE&Q Process can be tailored up or down to meet specific project needs.

APPENDIX F. COMFORT STUDIES QUALITY ASSURANCE PLAN

Guidance

The objective of the Comfort Studies Quality Assurance Plan is to provide staff and management with objective insights into processes and associated work products, ensuring their conformance to documented requirements.

The Comfort Studies Quality Assurance Plan would be tailored from the Quality Assurance Plan Template available from the SSC Pacific Process Asset Library (PAL). The process is located in the “Process Assets” sub-page under the “Process and Product Quality Assurance (PPQA)” PA in the “Plans” section. The template can be tailored up or down to meet specific project needs.

APPENDIX G. COMFORT STUDIES CONFIGURATION MANAGEMENT PLAN

Guidance

The objective of the Comfort Studies Configuration Management Plan is to establish and maintain the integrity of Comfort Studies work products using configuration identification, configuration control, configuration status accounting, and configuration audits.

The Comfort Studies Configuration Management Plan would be tailored from the Configuration Management Plan Template available from the SSC Pacific Process Asset Library (PAL). The template is located in the “Process Assets” sub-page under the “Configuration Management (CM)” PA in the “Plans” section. The template can be tailored up or down to meet specific project needs.

DOCUMENT CHANGE REQUEST (DCR)

Document Title: Comfort Studies Project Management Plan	Tracking Number:
Name of Submitting Organization:	
Organization Contact:	Phone:
Mailing Address:	
DCR Description:	Date:
Change Location: (use section #, figure #, table #, etc.)	
Proposed change:	
Rationale for Change:	
<p>Note: For the <i>appropriate authority</i> to take appropriate action on a change request, please provide a clear description of the recommended change along with supporting rationale.</p> <p>Send to: Commanding Officer, Space and Naval Warfare Systems Center, Code [[xxx]], 53560 Hull Street, San Diego, CA 92152-5001</p> <p>Fax to: <i>indicate appropriate fax number</i></p> <p>Email to: <i>indicate appropriate email</i></p> <p>Submit online: <i>indicate appropriate URL</i></p> <p>DCR Form 1/2009</p>	