**Project Synopsis**

The P5T system is a computer system for the US Department of Veteran Affairs Center of Excellence for Suicide Prevention’s research program. The goal of the system is to translate the current tracking process of research projects and grants into an online version. The system will allow users to submit their project applications online and track the status and progress throughout every step of the approval process. Once a project has been approved, the system will allow users to upload research publications and project documents. The system will also implement an automated web crawler with the ability to find and map additional, external resources for automatically populating and/or linking to existing information in the system.

**Goals And Scope**

As previously stated, the primary goal of the system is to allow the CoE to track and update project status and documentation. Additional, critical goals and objectives are as follows:

1. The ability to store and map individual research programs, including tracking of Institutional Review Board status, manuscript, presentation, and grant submission, and publications.
2. The ability to store and retrieve electronic documents associated with individual research programs and to provide electronic notification and updates of status and required actions.
3. The ability to provide electronic review and approval tracking.
4. The ability to find and map additional, external resources for automatically populating and/or linking to existing information in the tracking tool.

Each of these listed system goals maintains its own set of secondary objectives and scope within the context of the project system. [Describe]

**Deliverables**

On the project level, we shall provide the following official documents and other deliverables:

* Requirements Document
* Project Plan
* Project Synopsis
* Weekly Status Report / Metrics / Time Tracking
* Project Team Website

On the product level, we shall deliver the following:

* Application Database
* Primary Web Application
* Secondary Web Crawler Application

**Risk Management**

~~See document -- Software Risk Management Plan~~

**Measurements and Metrics**

**Product Metrics**

* Comment Density
* Avg. Value of features
* Avg. LOC per feature
* Population(count of all classes and methods)
* Volume(count of all instantiated objects at a given time)
* Length(depth of the inheritance tree)
* Total number of features

**Process Metrics**

* Delta Work = (Hours per Week - Avg Hours per Week) / Avg Hours Spent per Week \* 100
* Time between cycles
* Avg. features per release
* Avg. LOC per release
* Delta Risk = (Risk Exposure - Avg Risk Exposure) / Avg Risk Exposure \* 100
* Delta Work Breakdown of time spent in Requirements, Design, Construction, Testing & Maintenance
* Avg. time spent per feature
* Delta SMI per release = [MT - (Fa + Fc + Fd)]/MT

where

MT = #modules in the current release

Fa = #modules in the current release that have been added

Fc = #modules in the current release that have been changed

Fd = #modules from the preceding release that were deleted in the current release

**Technical Process**

We will be using a staged evolution/spiral process. Within each cycle of the spiral we will perform several activities: define project artifacts to be completed at the end of each cycle, risk assessment and management, analysis of new and changed requirements, and get approval from project stakeholders of each spiral. It is important to note that the risk determines the level of effort and level of detail in each project activity. The activities should be completed in a way that minimizes overall risk. Each cycle will provide us with an evolutionary prototype that the project sponsor will be able to provide feedback on and allow us to change our prototype and documentation accordingly.

The reasoning behind choosing this technical process is the ability to provide the project sponsor with a prototype at the end of each cycle, and to make decisions based on risk assessment and mitigation. This allows us to maintain a very stable but easily changed project, and keeps the sponsor informed and involved at each step.

**Project Milestones**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Activity | Description | Estimated Duration | Start Date | [Actual]  End Date | Hours | Deliverables |
| 1 | Requirements and Process Methodology |  |  |  | 500 | Project Plan; Requirements Document; Risk Management Plan; Team Website |
| 1.1 | Assessment of Risks | 1 week | 9/22 | 9/30 |  | Risk Assessment Spreadsheet |
| 2 | Database Design | 2 days |  |  | 4 | schema; diagram |
| 3 | System Architecture Design | 2 days |  |  |  | diagram; stub classes |
| 4 | Database implementation | 1 day |  |  |  | SQL server up and running |
| 5 | R1 - Core | 5 weeks | 9/25 | 10/30 |  | Basic UI implementation; Login functionality; file submission to database; core system functionality; |
| 5.1 | Tables/Entity classes |  |  | 10/7 |  |  |
| 5.2 | HTML for CRUD |  |  | 10/9 |  |  |
| 5.3 | “Glue” pages |  |  | 10/14 |  |  |
| 5.4 | Form Usability/Accessibility |  |  | 10/16 |  |  |
| 5.5 | Search Functionality | 1 week |  | 10/21 |  |  |
| 5.6 | Cleanup/Slack time | 1 week |  | 10/30 |  |  |
| 6 | R2-Core | 5 weeks | 10/30 | 12/4 |  |  |
| 7 | Design Crawler | 2 weeks | 1/26 |  |  |  |
| 8 | Crawler-R1 | 2 weeks |  |  |  |  |
| 9 | Crawler-R2 | 2 weeks |  |  |  |  |
| 10 | Crawler-R3 | 2 weeks |  |  |  |  |