USU CS Forum

Lightweight Project Plan

# **Project Overview**

Build a forum for the USU CS department. This forum will facilitate helping students to share their knowledge of computer science. It will be used as a reference for questions on specific assignments or topics, like programming languages or algorithm design. There will also be a section where students can show off projects that they have and ask for help with solving problems with those projects.

# **Team Organization**

For this project our team will follow the agile team paradigm. Here’s a brief description of it:

*If the people on the project are good enough, they can use almost any process and*

*accomplish their assignment. If they are not good enough, no process will repair their*

*inadequacy—“people trump process” is one way to say this. However, lack of user and*

*executive support can kill a project—“politics trump people.” Inadequate support can*

*keep even good people from accomplishing the job. A self-organizing team does not necessarily maintain a single team structure but instead uses elements of Constantine’s random, open, and synchronous paradigms.*

# **Software Development Process**

The development will precede using very simple process model that uses elements of Boehm's spiral process [Boehm-1988], iterative process models, and agile software development. The following table shows the entrance and exit criteria for these phases.

|  |  |  |
| --- | --- | --- |
| **Phase** | **Iteration** | **Tentative Exit Criteria** |
| 1. | Phase 1 -  Project Planning | Project selected, plan completed, team organized, configuration management in place |
| 2. | Phase 2 -  Requirement Capture and Analysis | A common understanding of requirements and system analysis captured in meaning documentation  A prototype complete that helped improve understanding of requirements |
| 3 | Phase 3 -  Architectural, UI, and DB Design | A system design that satisfies the requirements  A prototype that explores a design alternative |
| 4 | Phase 4 -  Detailed Design, Implementation, and Unit Testing | Initial implementation (60% - 80% of the functionality) with some unit test cases) |
| 5 | Phase 5 -  Implementation and Testing | Final implementation and Testing |

For analysis and high-level design activities, we will use a conceptual-model language, called *Unified Modeling Language* (UML). The UML is expressive and semi-formal. Its expressiveness allows it to describe a wide range of concepts in both the problem and solution domains. Its formalism is rooted in a meta-model that describes its syntax and some of its semantics.

# **Communication policies and procedures**

*We have set up a Facebook and Google groups. Facebook is for general announcements, and Google Groups is for collaborative ideas, suggestions and discussions. We also use Git and Github for sharing code and files.*

# **Initial work breakdown schedule**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Planning** |  |  |  |  | **11.5** |
|  | Dividing out tasks to each person | 1 | 2 | 3 | 2.0 |
|  | Make decisions on what tools & languages to use | 1 | 1 | 2 | 1.0 |
|  | Learning Tools | 3 | 5 | 7 | 5.0 |
|  | Time arrangements | 1 | 1 | 1 | 1.0 |
|  |  |  |  |  | *2.5* |
|  |  |  |  |  |  |
| **Design** |  |  |  |  | **15.8** |
|  | Design databases | 2 | 4 | 6 | 4.0 |
|  | Flowchart of the webpage | 5 | 8 | 10 | 8.0 |
|  | Webpage looks, colors, themes, styles | 1 | 1 | 1 | 1.0 |
|  | *Integration* |  |  |  | *2.8* |
|  |  |  |  |  |  |
| **Development** |  |  |  |  | **113.3** |
|  | User Login system/ database | 20 | 25 | 30 | 25.0 |
|  | Web Development | 20 | 25 | 30 | 25.0 |
|  | Content Management / Database | 20 | 25 | 30 | 25.0 |
|  | Priveledge/ Access structure | 20 | 25 | 30 | 25.0 |
|  | *Integration* |  |  |  | *13.3* |
|  |  |  |  |  |  |
| **Testing** |  |  |  |  | **36.7** |
|  | Testing Phases | 10 | 15 | 20 | 15.0 |
|  | Gathering Feedback & Making Changes | 10 | 15 | 20 | 15.0 |
|  | *Integration* |  |  |  | *6.7* |

# **Risk Analysis**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Risk / Mitigation Activity** | | **Probability** | **Impact** | **Estimate (additional hours if risks occurs)** |
|  |  |  |  |  |
| **R1** | **Lack of needed knowledge for Dev** | **Medium/High** | **Medium/High** | **100** |
| 1.1 | Study | High | Medium/High | 50 |
| 1.2 | Meet as group to teach each other | Medium | High | 50 |
| 1.3 |  |  |  | 0 |
|  |  |  |  |  |
|  |  |  |  |  |
| **R1** | **Time Management** | **Medium/High** | **Medium/High** | **80** |
| 1.1 | Meet More often | Medium | Medium/High | 70 |
| 1.2 | Team member not meeting dealines | Medium | Medium/High | 10 |
|  | (add more risks as needed) |  |  |  |
|  |  |  |  |  |
| **R1** | **Unexpected Complications** | **Low/Medium** | **Low/Medium** | **30** |
| 1.1 | Loss of Code | Low | Medium/High | 20 |
| 1.2 | Team member absence | Low/Medium | Low/Medium | 10 |
|  | (add more risks as needed) |  |  |  |
|  |  |  |  | 210 |

# **Project Estimate**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Area / Activity** | | **Suggested\*** | **Multipler** | **Totals** | **%** |
|  |  |  |  |  |  |
| **Management** | |  |  |  |  |
|  | Management Activities | 0.20 - 0.40 | 0.25 | 28 | *4.9%* |
|  |  |  |  |  |  |
| **Analysis** | |  |  |  |  |
|  | Analysis Activities | 0.10 - 0.30 | 0.25 | 28 | *4.9%* |
|  |  |  |  |  |  |
| **Development** | |  |  |  |  |
|  | Software Development |  | *from WBS* | 113 | *19.4%* |
|  | Unit Testing | 0.25 - 2.00 | 1.00 | 113 | *19.4%* |
|  |  |  |  |  |  |
| **System Testing** | |  |  |  |  |
|  | System Testing Activities | 0.15 - 0.5 | 0.5 | 57 | *9.7%* |
|  |  |  |  |  |  |
| **Deployment** | |  |  |  |  |
|  | Deployment Activities | 0.11 - 0.14 | 0 | 0 | *0.0%* |
|  |  |  |  |  |  |
| **Risk Mitigation** | |  |  |  |  |
|  | Risk Mitigation Activities |  | *from Risk* | 210 | *36.0%* |
|  |  |  |  |  |  |
| **Contingency Reserve** | |  |  |  |  |
|  | Known Unknowns | 0.05 - 0.20 | 0.20 | 23 | *3.9%* |
|  |  |  |  |  |  |
| **Management Reserve** | |  |  |  |  |
|  | Unknown Unknowns | 0.0 - 0.20 | 0.10 | 11 | *1.9%* |
|  |  |  |  |  |  |
| **Other Expenses** | |  |  |  |  |
|  | Other Expenses (hardware/software/etc.) | |  |  |  |
|  |  |  |  |  |  |
| **Totals** | |  |  | **584** | **100%** |

# **Hardware and Software resources**

*We use Apache, MySQL, php, html. We also have VPS to deploy the site on and test on a life environment. We use our own preferred IDEs for coding.*

# **Configuration Management**

# *Here’s the link to our Git repository:* [*https://github.com/morganporritt/CS3450.git*](https://github.com/morganporritt/CS3450.git)

# **Change Log**

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Description of Change | Review by | Review on |
| 1/17/14 | Initial Draft |  |  |