Section 5

**Risk Plan/Assessment**

**Impact Levels**

**1**-Negligible

**2**-Moderate

**3**-Severe

**4**-Catastrophic

|  |  |  |  |
| --- | --- | --- | --- |
| Risk | Probability | Impact | Mitigation |
| Team member Leaving | 15% | 4 | Redistribute work load. Possible loss of minor features. |
| Falling behind | 25% | 2-3 | Meet and re-plan work schedule to accommodate work load. |
| Lack of skill | 25% | 2-3 | Find help, watch videos, ask someone who can help us. |

**Cost Estimation**

**Function Point Estimation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Information | Simple FP | Average FP | Complex FP | Total  FP |
| User Input | 9 | 4 | 6 | 19 |
| User Output | - | 10 | - | 10 |
| User Online  Queries | - | 8 | - | 8 |
| Logical Files | 7 | - | - | 7 |
| External Interface | - | 21 | - | 21 |
| Total Function Points | - | - | - | 65 |

|  |  |
| --- | --- |
| Reliable Backup and Recovery | 2 |
| Specialized Data Communication | 4 |
| Distributed Processing Functions | 0 |
| Critical Performance | 1 |
| Operation in Heavily Utilized Operational Environment | 0 |
| Online Data Entry | 3 |
| Online Data Entry via multiple screens | 0 |
| ILFs updated online | 2 |
| Inputs, Outputs, Files, or Inquiries Complexity | 5 |
| Internal Processing Complexity | 4 |
| Reusable Code Design | 3 |
| Conversion and Installation Inclusion | 0 |
| Designed for Multiple Installations in Different Organizations | 0 |
| Facilitate Change and Ease of Use | 5 |
| **Total** | 29 |

Total Function Points = FP = 65 X [0.65 + 0.01 X 29] = 61.5

**LOC Estimation**

|  |  |  |  |
| --- | --- | --- | --- |
| Functions | Good LOC Est. | Average LOC Est. | Bad LOC Est. |
| GUI | 250 | 500 | 750 |
| Database/API  Queries | 150 | 300 | 450 |
| Backend | 500 | 700 | 900 |
| Log-in Support | 200 | 400 | 600 |
| Estimated LOC  (\*Based on Average Case\*) |  | 1900 |  |

With the average productivity rate of 620 LOC/person-month, we can complete 1,860 LOC/month. Assuming $8,000 per person-month of labor the cost using LOC estimation is $24,000 a month. This equates to roughly $12.90 per LOC, with this the total cost of the project will be $24,510.

**COCOMO** **II**

|  |  |  |  |
| --- | --- | --- | --- |
| Objects | Quantity | Weight | Total |
| Screens | 4 | 4 | 16 |
| Reports | 3 | 6 | 18 |
| Components | 4 | 10 | 40 |
|  |  | Total OP | 74 |

NOP = (OP) X [(100 - %Reusable Code)/100]

NOP = 74 x [(100-10)/100] = 66.6

PROD = NOP/Person-Month

Effort = 66.6/13 = 5.12 Person-Months

Assuming a labor rate of $8,000 per person-month, the COCOMO II model estimates that this project will cost $40,960.

Section 6

**Non-Functional Requirements**

**Reliability**: The application will be up at all times unless it needs to be taken down for maintenance or external forces such as loss of power.

**Usability**: The user will be able to use the application with no training or reading required.

**Security**: Security for the login and passwords of users will be handled by Facebook and Google+ integration.

**Constraints**: User’s must have an update-to-date internet browser to use all the of website’s functions.

**Data Dictionary:**

Administrator – Project members will have access to unique controls allowing them access to the user and data databases as well as control over the website’s interface.

Non Registered User – Any person who is using the website’s functions but is not logged in.

Registered User - Any person using the website’s functions while being logged into an account.

Saved Searches – Searches that a register user has saved to their account for later viewing.

Rating System – User is giving their input on the relevancy of the search results.