Assumptions: Every Schedule Hour expended on this project will average 30 minutes of adding features, 15 minutes of debugging and refactoring, and 15 minutes of non-productivity. The “adding features” hours and “debugging and refactoring” hours combine to produce the total Labor Hours. Each programmer will work at most for 2-3 Schedule Hours each weekday.

|  |  |  |
| --- | --- | --- |
| Task | Labor Hours | Schedule Hours |
| * GUI | 23 | 29.9 |
| * General Page | 9 | 11.7 |
| * Description Panel | 1 | 1.3 |
| * Display Description |  |  |
| * Edit Description |  |  |
| * Manager Panel | 3 | 4 |
| * Display Manager |  |  |
| * Edit Manager |  |  |
| * Create new Manager |  |  |
| * Promote Team Member to Manager |  |  |
| * Members Panel | 3 | 4 |
| * Display Team Members |  |  |
| * Add Team Member |  |  |
| * Edit Team Members |  |  |
| * Display Team Members Effort |  |  |
| * Delete Team Member (just archives them) |  |  |
| * Risks Panel | 2 | 2.6 |
| * Display Risks |  |  |
| * Add Risk |  |  |
| * Edit Risk |  |  |
| * Delete Risk |  |  |
| * Requirements Page | 4 | 5.3 |
| * Display Requirements | 1 | 1.3 |
| * Edit Requirements (Including to mark complete?) | 2 | 2.6 |
| * Delete Requirements | 1 | 1.3 |
| * Effort Tracking and Monitoring Page | 4 | 5.3 |
| * Display expended Effort | 2 | 2.6 |
| * Display Total Effort |  |  |
| * Display effort by EffortType |  |  |
| * Submit new Effort | 2 | 2.6 |
| * Force by schedule standards (day or week) |  |  |
| * Add effort by contributing Person and EffortType |  |  |
| * Help Page | 2 | 2.6 |
| * Pop-up Stage |  |  |
| * About Page | 1 | 1.3 |
| * Pop-up Stage |  |  |
| * Display information about us! :D |  |  |
| * Settings Page | 3 | 4 |
| * Pop-up Stage |  |  |
| * Settings for: |  |  |
| * Day/Week standard |  |  |
| * # of Managers |  |  |
|  |  |  |
| * Load/Save Pages | 4 | 5.3 |
| * Pop-up Stage |  |  |
| * If loading, prompt user to save first |  |  |
| * On first “Save” or “Save As”, prompt user to specify file name/location. On subsequent uses of “Save”, use that location and filename (persist across opening/closing of GUI) |  |  |
| * On “Save As”, save as the specified filename/location each time |  |  |
| * Back-end System | 10.1 | 13.33 |
| * Team organization | 6 | 8 |
| * Team class | 3 | 4 |
| * Add Person instances |  |  |
| * Remove Person instances |  |  |
| * Provide Total Team Effort |  |  |
| * Provide Team Effort for given EffortType |  |  |
| * *Person* abstract class | 1 | 1.3 |
| * Report Effort to ProjectEffort |  |  |
| * Programmer class | 1 | 1.3 |
| * Promote to Manager |  |  |
| * Manager class | 1 | 1.3 |
| * Demote to Programmer |  |  |
| * Effort Monitoring and Tracking System | 4.1 | 5.33 |
| * ProjectEffort class | 3 | 4 |
| * Stores all Effort instances for the project |  |  |
| * Can provide List<Effort> of |  |  |
| * Effort class | 1 | 1.3 |
| * EffortType enum | .1 | .13 |
| * Load/Save Status | 2 | 2.6 |
| **TOTAL:** | **33.1** | **43.23** |

Time until Project Completion:

|  |  |  |
| --- | --- | --- |
| Number of Programmers | Best Case Duration | Worst Case Duration |
| 1 | 14.41 days | 21.615 days |
| 2 | 7.205 | 10.81 days |
| 3 | 4.8 days | 7.205 days |
| 4 | 3.6 days | 5.4 days |
| 5 | 2.88 days | 3.32 days |