**6. Estimation**

|  |  |  |
| --- | --- | --- |
| **Internal Logical Files** | | |
| **Files** | **DETs** | **RETs** |
| **Completed Courses** | UserID | Courses grouped by User |
|  | CourseID |  |
| **Course** | Course\_code | Courses grouped by Course Code (example: COMP, SOEN, etc) |
|  | Course\_description |  |
|  | cType |  |
|  | Credits |  |
| **Prerequisite** | courseID (repeat) | Courses grouped by the course they are the prerequisite for |
|  | prerequisiteID |  |
| **Section** | courseID (repeat) |  |
|  | Kind |  |
|  | Sections |  |
|  | Days |  |
|  | Start\_time |  |
|  | End\_time |  |
|  | semester |  |
| **Subsection** | sectionID |  |
|  | courseID (repeat) |  |
|  | Kind |  |
|  | Sections (repeat) |  |
|  | Days (repeat) |  |
|  | Start\_time (repeat) |  |
|  | End\_time (repeat) |  |
|  | Semester (repeat) |  |
| **User** | Username |  |
|  | Firstname |  |
|  | Lastname |  |
|  | netName |  |
|  | Password |  |
| **User\_schedule** | ID | Schedules grouped by the user they belong to |
|  | userID (repeat) |  |
|  | sectionID(repeat) |  |
|  | Year |  |
|  |  |  |
| **Total:** | 22 | 4 |

|  |  |  |
| --- | --- | --- |
| **External Interface Files** | | |
| **Files** | **DETs** | **RETs** |
|  |  |  |
| **Total** | 0 | 0 |

|  |  |  |
| --- | --- | --- |
| **External Inputs** | | |
| **Method** | **DETs** | **FTRs** |
| **saveSchedule** | scheduleID | User\_schedule |
| **addCourse** | courseID | User\_schedule (repeat) |
|  | sectionID | Section |
|  |  | Subsection |
| **deleteSchedule** | scheduleID (repeat) | User\_schedule (repeat) |
| **freeTimeBlock** | startTime |  |
|  | endTime | User\_schedule (repeat) |
| **removeCourse** | sectionID (repeat) | User\_schedule (repeat) |
|  | studentID | Section (repeat) |
|  |  | Subsection (repeat) |
| **updateSequence** | courseID (repeat) |  |
| **addToList** | studentID (repeat) | Section (repeat) |
| **removeStudent** | studentiD (repeat) | Section (repeat) |
| **Login** | adminID | User |
|  | studentID (repeat) |  |
|  | password |  |
| **Logout** | adminID (repeat) | User (repeat) |
|  | studentID (repeat) |  |
|  |  |  |
| **Total** | 8 | 4 |

|  |  |  |
| --- | --- | --- |
| **External Outputs** | | |
| **Method** | **DETs** | **FTRs** |
| **getFreeCredits** | studentID | User\_schedule |
| **isBlockFree** | startTime | User\_Schedule (repeat) |
|  | endTime |  |
| **removeCourse** | SectionID | User\_schedule (repeat) |
|  | studentID (repeat) | Section |
|  |  | Subsection |
| **checkPassed** | prereqs | Courses\_complete |
| **createCourseSequence** | StudentID (repeat) | Course |
|  |  | Section (repeat) |
| **getCourseList** |  | Course (repeat) |
| **getCourseInfo** |  | Course (repeat) |
|  |  | Section (repeat) |
|  |  | Prerequisite |
| **generateSchedule** | studentID (repeat) | Course(repeat) |
|  |  | Section (repeat) |
|  |  | Subsection (repeat) |
|  |  | Prerequisite (repeat) |
|  |  |  |
| **Total** | 5 | 6 |

|  |  |  |
| --- | --- | --- |
| **External Queries** | | |
| **Method** | **DETs** | **FTRs** |
| **getSavedSchedule** | scheduleID | User\_schedule |
| **searchCourse** | courseID | Course |
|  |  | Section |
|  |  | Subsection |
| **selectWeek** | Day | User\_schedule (repeat) |
|  | Month |  |
| **viewAcademicRecord** | studentID | Courses\_complete |
| **bookTimeSlot** | startTime | User\_schedule (repeat) |
|  | endTime |  |
| **getSchedule** | scheduleID (repeat) | User\_schedule (repeat) |
| **getWeeklyView** | Day (repeat) | User\_schedule (repeat) |
|  | Month (repeat) |  |
| **gatherCoursesPassed** | studentID (repeat) | Courses\_complete (repeat) |
| **getAllSections** | courseID (repeat) | Course (repeat) |
|  |  | Section (repeat) |
| **getCredits** | courseID (repeat) | Course (repeat) |
| **getSection** | sectionID (repeat) | Section (repeat) |
| **getTimes** | sectionID (repeat) | Section (repeat) |
| **viewCourseSequence** | studentID(repeat) | User\_schedule (repeat) |
|  |  |  |
| **Total** | 7 | 5 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Function Type** | | **Functional Complexity** | | | | | |  | | **Complexity Totals** | | | | | | **Function Type Totals** | |
| ILF | | 0 Low | | | | | | X 7 | | 0 | | | | | |  | |
|  | | 10 Average | | | | | | X10 | | 100 | | | | | |  | |
|  | | 0 High | | | | | | X15 | | 0 | | | | | | 100 | |
|  | | | | | | | | | | | | | | | | | |
| EIF | | | | 0 Low | | | X 5 | | 0 | | | | | |  | | |
|  | | | | 0 Average | | | X7 | | 0 | | | | | |  | | |
|  | | | | 0 High | | | X10 | | 0 | | | | | | 0 | | |
|  | | | | | | | | | | | | | | | | | |
| EI | | | | | 0 Low | | | X3 | | | 0 | | | | |  | |
|  | | | | | 4 Average | | | X4 | | | 16 | | | | |  | |
|  | | | | | 0 High | | | X6 | | | 0 | | | | | 16 | |
|  | | | | | | | | | | | | | | | | | |
| EQ | | | 0 Low | | | | X 3 | | | | | | 0 |  | | | |
|  | | | 0 Average | | | | X4 | | | | | | 0 |  | | | |
|  | | | 6 High | | | | X6 | | | | | | 36 | 36 | | | |
|  | | | | | | | | | | | | | | | | | |
| EO | 0 Low | | | | | X 4 | | | | | | 0 | |  | | | |
|  | 5 Average | | | | | X5 | | | | | | 25 | |  | | | |
|  | 0 High | | | | | X7 | | | | | | 0 | | 25 | | | |
|  | | | | | | | | | | | | | | | | | |
| **Unadjusted Function Point Count** | | | | | | | | | | | | | | | | | 177 |
| **SLOC/FP for PHP [1]** | | | | | | | | | | | | | | | | | 67 |
| **Total SLOC** | | | | | | | | | | | | | | | | | 11859 |
| **COCOMO II estimated person-months effort** | | | | | | | | | | | | | | | | | 42.2 |
| **Months of effort per person (team of 12)** | | | | | | | | | | | | | | | | | 3.52 |

[1] taken from <https://www.cs.helsinki.fi/u/taina/ohtu/fp.html>