**6. Estimation**

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| **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) | Sections grouped by the semester they are offered in |
|  | Kind |  |
|  | Sections |  |
|  | Days |  |
|  | Start\_time |  |
|  | End\_time |  |
|  | semester |  |
| **Subsection** | sectionID | Subsections grouped by the semester they are offered in |
|  | 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 | 6 |

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| **External Interface Files** | | |
| **Files** | **DETs** | **RETs** |
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| **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 | User\_schedule (repeat) |
|  | studentID | Section (repeat) |
|  |  | Subsection (repeat) |
| **updateSequence** | courseID |  |
| **addToList** | studentID | Section (repeat) |
| **removeStudent** | studentiD | Section (repeat) |
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| **Total** |  |  |

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| **External Outputs** | | |
| **Method** | **DETs** | **FTRs** |
| **getFreeCredits** | studentID | User\_schedule |
| **isBlockFree** | startTime | User\_Schedule |
|  | endTime |  |
| **removeCourse** | SectionID | User\_schedule |
|  | studentID (repeat) | Section |
|  |  | Subsection |
| **checkPassed** | prereqs | Courses\_complete |
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|  |  |  |
| **Total** | 5 | 4 |

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| **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 | Section (repeat) |
| **getTimes** | sectionID (repeat) | Section (repeat) |
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| **Total** | 8 | 5 |