University Student Management System

|  |  |
| --- | --- |
| **FUNCTIONALITY** | |
| **STUDENT** | **ADMIN** |
| Instantiate self (add personal details) AND SELECT COURSE (select 2 majors) | Create another admin |
| View their own details | View their own details |
| Change their own personal details | View a students details (but not change) |
|  | Change their own details |
| Change password | Change password |
|  | ADD Discipline, Module & Course |
|  |  |
| New registration | ~~Change a students Registration~~ |
| View past registrations | Capture (add) results |
| View their results | View reports (individual [1 students results] and total) |

IDEA: WE ARE MAKING A STUDENT REGISTRATION/MANAGEMENT SYSTEM FOR A SMALL PRIVATE TERTIARY INSTITUTION (TARGET MARKET)

* A friend of ours complained of their faulty reg system at his private college

\*\*\*STUDENT REGISTRATION CANNOT BE CHANGED

\*\*STUDENT/ADMIN **CAN’T** CHANGE THE COURSE ONCE SET

\*NO DOUBLE MAJORS ALLOWED

* Disciplines that have more than 4 modules for year 3 -> students have a choice which modules to select

\*For engineering: the second Major is Engineering Science (for all Engineering courses)

\*For Health Sciences: the 2nd major is Natural Science (for all HS Courses)

\*\*\*PREREQUISITES: (besides first year) the preq for a module in a particular semester is the respective/corresponding module in the prev. year in the same semester (e.g. prereq of comp2002 (year 2 semester 2) is comp10002 (year 1 semester 2). i.e. year 2 semester 2 modules is not dependent on year 2 semester 1 modules, and likewise for 3rd year (also for 3rd year, 2 modules have the same prereq module)  
 First year there are no prereqs, even for semester 2

[GUI] One/same form where the student and staff can view and edit their personal details -> thus they all need to have the same PD fields

|  |  |  |
| --- | --- | --- |
| **STUDENT** | | |
| StudentNo (PK) | | |
| IDNumber | | |
| Name | | |
| Surname | | |
| CellNumber | | |
|  | | |
| password | | |
| FirstStudyYear (can take null, gets filled in when registering) | | |
| CourseID (FK) | | |
| **ADMIN STAFF** | |
| StaffNo (PK) | |
| Personal Details | |
| password | |
|  | |
| **DISCIPLINE** |
| DisciplineID (PK) |
| Name |
| Faculty (FK) |

|  |
| --- |
| **FACULTY** |
| ABBReviation (PK) |
| Name |

|  |
| --- |
| **MODULE** |
| ModCODE (PK) |
| Name |
| Discipline (FK) |
| AcademicLevel |
| Credit |
| Prerequisite |
| Semester |
| **REGISTRATION** (Association Class bet. Student and Module) | |
| RegID (PK) | |
| StudentNo (FK) | |
| ModCode (FK) | |
| Year [taken from GUI -> current computer year] | |
| ModuleMark (can take null, populated later on by Academic) | |
|  | |

|  |
| --- |
| **COURSE** (Degree) [Associtation class of all majors combinations] |
| CourseID |
| Faculty (FK) |
| Credits (total credits to complete degree) |
| ~~DegreeLength (min time)~~ |
| DisciplineID (FK) [Major 1] |
| DisciplineID (FK)  [Major 2] |

|  |
| --- |
| **COURSE-MODULE [AC]** (all other modules that can be done for a specific major besides the majors own modules) |
| ID |
| CourseID (FK) |
| ModuleCode (FK) |
|  |
|  |
|  |

(simplification) ALL DEGREES ARE 3 years in length (Academic Level from 1 to 3)

(Simplification) ALL Courses will have 4 modules per semester (8 per year)

\*\*a module can either be done in either semester 1 or 2

AC L1 = 10 credits => Year 1 = 8 \* 10 = 80 credits

AC L2 = 15 credits => Year 2 = 8 \* 15 = 120 credits

AC L3 = 20 credits => Year 3 = 8 \* 20 = 160 credits

Total Credits – 80 + 120 + 160 = 360

Select Faculty -> Select 2 (different) majors(disciplines) -> Select Modules

Selecting a major will display all modules for that major (and academic level) and also all other modules)

There can be more modules for a discipline than required so that the student has the option to choose (check total credits to see if complete)

[GUI] (New student) When creating a new student, they select a Faculty then the majors they are doing (Display majors after selecting Faculty)

(Registrations) they go straight to new reg,

(degree completed) grey out everything and say degree completed

[how to know if degree Is completed] check total credits and if all AC L3 modules completed

Atleast two SQL aggregation queries: avg student mark, avg ‘class’ mark, student credits

For now leave out changing degree

|  |
| --- |
| **TEACHING**\*\* |
| ID |
| AcademicStaff(FK) |
| Module(FK) |
|  |
|  |

For simplification we are removing School from the Academic hierarchy and just having Discipline to Faculty

|  |
| --- |
| **AcademicStaff** |
| AcademicID (PK) |
| School (FK) |
|  |

\*\*