Problem Domain:  
Problem domain mainly inspect the problem that owner needs to achieve. It basically emphasizes on the things that are to be fixed and solved as per the client requirement. Therefore, to find out the solution, we should be known to the current situation and current business practices.

Functional Requirements:

We'll explain about the multiple functions featured in our system here. This section covers all of the functionalities. The functions are maintained in accordance with the client's requirements. Our system includes all of the essential functions required for running a school. The only change is that it has become in digital format. This section also contains all of the admin, module leader, and student access levels.

Students’ records:

The software will also include student information, which will hold all student-related data. Students' data is captured from the time they enter the school. All of their information must be kept secure throughout their time at the university. Students can have access to all the necessary information and the learning materials. The system will be accessible only to the students currently enrolled at the university

Staff records:

Records of all the staffs linked to the university will be maintained in this section. All the required data of the all the staffs will be saved and only the person having the authority can have access to it. Only the admin can edit the information of the staffs.

Course records:

The system will also include the information of the ongoing courses. These records can be maintained according to the enrollment of the students. Only authorized personnel can have access to it. Courses will have their respective modules assigned in it.

Module management:

Module management is also featured in this system where the admin or authorized person can have access. They can edit, delete and add the modules according to the students enrolled to the particular courses. All the module leader and the enrolled students are assigned to it.

Assignment management:

This section will display the specified assignments. The module leader will have the authority to update and delete assignments as needed. The module leaders deliver the assignments, submission links and the deadline. Students can use this platform to submit their given work.

Attendance records:

The attendance system will keep record of all the students present in the class. The attendance of all the students is visible to the module leader and they will be in charge of marking the students’ attendance.

Personal Tutor management:

In this segment, every students will be assigned to a personnel tutor. Students can directly chat with the tutor and the tutor can drop any important announcement here.

Timetable management:

The admin will have the permission to add any schedule or routine details in this section. All the staff and students will have access to view the schedules.

Report management:

Respective module leader will only be capable of adding the reports/grades of the assigned students. Students can view their respective reports and also can print it.

1. Student Records:

|  |  |  |  |
| --- | --- | --- | --- |
| Tasks | Admin | Staff | Student |
| Create | Can add a new data. | Cannot access. | Cannot access. |
| Amend | Can edit any student information. | Cannot access. | Cannot access. |
| Archive | Can archive any students’ information. | Cannot access. | Cannot access. |
| Display | Can view any student’s details. | Cannot access. | Can view their own profile. |
| Assign | Can assign any students to a course. | Cannot access. | Cannot access. |

|  |  |  |
| --- | --- | --- |
| Attributes | Dataype | Remarks |
| Student\_id | INT | Primary key for students. |
| password | VARCHAR | Student’s Password to login. |
| First\_name | VARCHAR | First name of the student. |
| Middle\_name | VARCHAR | Middle name of the student. |
| Last\_name | VARCHAR | Last name of the student. |
| Email\_id | VARCHAR | Email id of the student. |
| DOB | DATE | Date of birth of student. |
| Gender | CHAR | Gender of the student. |

2. Staff Record:

|  |  |  |  |
| --- | --- | --- | --- |
| Tasks | Admin | Staff | Student |
| Create | Can add a new data. | Cannot access. | Cannot access. |
| Amend | Can edit any staff’s information. | Cannot access. | Cannot access. |
| Archive | Can archive any data. | Cannot access. | Cannot access. |
| Display | Can view any staff’s details. | Can view their own data. | Cannot access. |
| Assign | Can assign any staff to particular tasks. | Cannot access. | Cannot access. |

|  |  |  |
| --- | --- | --- |
| Attributes | Dataype | Remarks |
| Staff\_id | INT | Primary key for staff. |
| password | VARCHAR | Staff password to login. |
| First\_name | VARCHAR | First name of the staff. |
| Middle\_name | VARCHAR | Middle name of the staff. |
| Last\_name | VARCHAR | Last name of the staff. |
| Email\_id | VARCHAR | Email id of the staff. |
| Year\_active | DATE | Date staff joined. |
| Gender | CHAR | Gender of the staff. |

3. Course records:

|  |  |  |  |
| --- | --- | --- | --- |
| Tasks | Admin | Staff | Student |
| Create | Can add a new course. | Cannot access. | Cannot access. |
| Amend | Can edit any existing course. | Cannot access. | Cannot access. |
| Archive/delete | Can archive and delete any course. | Cannot access. | Cannot access. |
| Display | Can view any course details. | Cannot access. | Cannot access. |

|  |  |  |
| --- | --- | --- |
| Attributes | Dataype | Remarks |
| Course\_id | INT | Primary key for courses. |
| Course\_name | VARCHAR | Name of the course. |

4. Module management:

|  |  |  |  |
| --- | --- | --- | --- |
| Tasks | Admin | Staff | Student |
| Create | Can add a new module to the course. | Cannot access. | Cannot access. |
| Amend | Can edit any existing module. | Cannot access. | Cannot access. |
| Archive | Can archive any module. | Cannot access. | Cannot access. |
| Display | Can view any module and module leader. | Can only access the module they are assigned to. | Can only access the module they are assigned to. |
| Assign | Can assign teachers and students to any module. | Cannot access. | Cannot access. |

|  |  |  |
| --- | --- | --- |
| Attributes | Dataype | Remarks |
| module\_id | INT | Primary key for modules. |
| module\_name | VARCHAR | Name of the module. |
| Module\_leader\_id | INT | Foreign key for modules. |
| credit | INT | Module credit. |

5. Assignment Management:

|  |  |  |  |
| --- | --- | --- | --- |
| Tasks | Admin | Module leader | Student |
| Create | Cannot access. | Can create a new assignment. | Cannot access. |
| Amend | Cannot access. | Can edit assignments. | Cannot access. |
| Archive/delete | Cannot access. | Can archive and delete assignments. | Cannot access. |
| Display | Cannot access. | Can display the assignments. | Can view and submit the assignment assigned by module leader. |
| Assign | Cannot access. | Can assign assignments to the students. | Cannot access. |
| Mark/grade | Cannot access. | Can mark the assignments. | Cannot access. |

|  |  |  |
| --- | --- | --- |
| Attributes | Dataype | Remarks |
| assignment\_id | INT | Primary key for modules. |
| module\_id | INT | Module id of the given assignment. |
| Module\_leader\_id | INT | Id of the module leader whor assigned the assignment. |
| deadline | DATE | Submission deadline. |

6. Attendance management:

|  |  |  |  |
| --- | --- | --- | --- |
| Tasks | Admin | Module leader | Student |
| Create | Cannot access. | Can add the attendance of the students. | Cannot access. |
| Amend | Cannot access. | Can edit attendance record. | Cannot access. |
| Archive | Cannot access. | Can delete attendance record. | Cannot access. |
| Display | Cannot access. | Can view the attendance record of the students. | Can view their own attendance record. |
| Monitor | Can monitor the attendance records if the students. | Can monitor the attendance records of the students. | Cannot access. |

|  |  |  |
| --- | --- | --- |
| Attributes | Dataype | Remarks |
| attendance\_id | INT | Primary key for attendances. |
| module\_name | VARCHAR | Attendance record of the particular module. |
| student\_id | INT | Student id to record the attendance. |
| status | CHAR | To mark the student is present or absent. |
| date | DATE | Attendance recorded date. |

7. Personal tutor management:

|  |  |  |  |
| --- | --- | --- | --- |
| Tasks | Admin | staff | Student |
| Create | Can add personal tutor and students’ data. | Cannot access. | Cannot access. |
| Amend | Can edit personal tutor and students’ data. | Cannot access. | Cannot access. |
| Display | Can view the personal tutor assigned to a student. | Can view their assigned student. | Can view their assigned tutor. |
| Assign | Can assign a tutor to a student. | Cannot access. | Cannot access. |

|  |  |  |
| --- | --- | --- |
| Attributes | Dataype | Remarks |
| tutor\_id | INT | Primary key for tutors. |
| tutor\_name | VARCHAR | Personal tutor name. |
| student\_id | INT | Id of student assigned with tutor. |
| Student\_name | VARCHAR | Name of student assigned with the tutor. |

8. Report management:

|  |  |  |  |
| --- | --- | --- | --- |
| Tasks | Admin | Module leader | Student |
| Create | Cannot access | Can create/add the report of the students. | Cannot access. |
| Display | Cannot access. | Can view the grades/report of students. | Can view their own grades/report. |
| Print | Can access. | Can print the report of students. | Can print their own report. |

|  |  |  |
| --- | --- | --- |
| Attributes | Dataype | Remarks |
| report\_id | INT | Primary key for Reports. |
| module\_name | VARCHAR | Module name of the reports. |
| module\_id | INT | Module id of the reports. |
| Student\_name | VARCHAR | Name of the student receiving the reports. |
| Student\_id | INT | Id of the student receiving the reports. |
| Submission\_id | VARCHAR | Submission id . |