2.1.3.2 Development Relevant Legislation

2.1.3.2.1 Equality Act:

The Equality Act of 2010 legally protects people against discrimination in the workplace and in society as a whole. We've replaced pre- taboos with a single law that's easier to understand and, in certain cases, enhances protection. It shows the various ways in which it is illegal to treat someone.

Equality Act provisions, effective October 1, 2010:

1) Basis for protection against direct and indirect discrimination, harassment and harm in public, office, work, education, association and traffic. Frames.

2) Modifying the definition of sex reassignment by removing the requirement for medical supervision. 3) Protects people who are believed to have protected characteristics or who are discriminated against because of their relationship with someone with protected characteristics.

4) More obvious protection for nursing mothers.

5) Applying a stable definition of indirect discrimination to all protected establishments.

6) Harmonizing the regulations that allow voluntary and positive behavior.

2.1.3.2.2 General Data Protection Regulations (GDPR):

The supplied software or system for Woodland University College will contain many types of data and information regarding students, academic staff, modules, or persons who are directly or indirectly associated with the college and its new computerized system. Because the information gathered is so sensitive, it must be handled responsibly and in accordance with particular rules and regulations.

Different requirements should be enforced under the Data Protection Act 2018 of the United Kingdom (UK), as stated by the General Data Protection Regulation (GDPR) required in law. According to GOV.UK, 2018, the following are the regulations of privacy and protection of data and information maintained inside the system.

1) Data should be used lawfully and transparently.

2) Data should only be collected for specific and stated purposes.

3) Relevant data should be used sparingly.

4) The information should be used in a suitable and applicable manner.

5) Unnecessary data storage should be limited.

6) The data should only be used within a certain organization's system.

7) Only certified employees of the organization should have access to the organization's key data and information.

2.1.3.2.3 Education Relevant Legislation:

The Education Act 2011 helps teachers raise the standards of their education. It includes new legal authority to help teachers eliminate bad behavior, tackle inefficiencies and improve how schools are held accountable. The provisions of Law are as follows:

1) Permit the search of students for dangerous or prohibited items without the school's consent.

2) Raise restrictions that prohibit schools from notifying students written birth without notice.

3) New advance notice Tax notice Student limitation Crime against teachers.

4) Authorization to facilitate free early childhood education for underprivileged children hardship 2 years old.

5) New school process reform and academy establishment Priority free schools.

6) Refocus Regular school assessment on the four key areas most important to parents.

7) Eligibility for schools to be exempted from regular Ofsted assessments Expand

8) New agency for underperforming schools including.

9) State minister's authority to close these schools.

10) Abolish five independent schools e existing agencies, some of their functions more efficient and report directly to the Secretary of State 44 44 Transferred to law enforcement.

**2.2.2 Functional Requirements**

A functional requirement is a definition of behavior between inputs and outputs that describes a function of a system or its component. Calculations, technical details, data manipulation, processing, and other specific functionality that define what a system is expected to perform are examples of functional requirements. Behavioral requirements are used to describe all of the scenarios in which the system applies the functional requirements, which are represented in use cases.

**2.2.2.1.1 Records Management Systems**

A records management system manages the administration of records for an organization throughout the records-life cycle. This facilitates the methodical and efficient management of record deletion, deletion, and related business transactions. It is a precise, simple, and safe system that includes features such as monitoring and updating student records. The various records management systems are listed below.

* **Student Records managements**

1. All information about the students is recorded in an organized manner in this management.
2. With just a few clicks, users may locate and retrieve student information.
3. Students can manage their personal information in Student Records, and academic and administrative staff can view student information and perform student administration tasks.

The student records operation list is provided below.

|  |  |  |  |
| --- | --- | --- | --- |
| Operation | Admins | Staff | Student |
| Create | Create a new record | No access | No access |
| Amend | Add a record to the achieve list | No access | No access |
| Archive | Transfer a record to the achieve | No access | No access |
| Display | Displays a list of all records, with all information displayed when an item is clicked | Students name and contact details are visible. | They can see their own name and rank. |
| Assign | Assign a course to a student | No access | No access |

1. System Analysis and Design (Record Management System)

Here, the current system is analysed and with the help of the requirement specification that is created, better procedures and methods are designed to make the system more effective. Here, the system will implement the Business Object Notation (BON).

* 1. Preliminary Design Stages
     1. Textual Analysis

Textual analysis will model the possible classes of the system as well as the behaviours of those classes. This is done with the help of the documents provided and the necessary researches.

|  |  |
| --- | --- |
| Candidate Class | Class Responsibilities/Behaviours |
| Student | create\_student, amend\_student, archive\_student, display\_student, assign\_student |
| Staff | create\_staff, amend\_staff, archive\_staff, display\_staff,  assign\_staff |
| Course | create\_course\_structure, amend\_course, display\_course, delete\_course, assign\_course |
| Module | create\_module, amend\_module, delete\_module, archive\_module, display\_module, assign\_module |
| Assignment | create\_assignment, amend\_ assignment, delete\_ assignment, archive\_ assignment, display\_ assignment, assign\_ assignment, mark |
| Attendance | create\_attendance, amend\_ attendance, archive\_ attendance, monitor, display\_ attendance, action\_poor\_attendance |
| PersonalTutor | create\_tutor, amend\_tutor, assign\_tutor, display\_tutor |
| Timetable | create\_timetable, amend\_timetable, delete\_timetable, archive\_timetable, display\_timetable |
| Diary | create\_diary, amend\_diary, display\_diary, prompt\_diary, initiate\_automated\_action |
| Report | create\_report, display\_report, print\_report |

* + 1. Significant Event Analysis

Here, the possible classes in the system is identified with the help of significant events in the system. In other words, actions that will result to change in the system state.

|  |  |  |
| --- | --- | --- |
| Event | Performer | Candidate Attributes |
| Login to the system | Administrator | User Id  Password |
| Log out of the system | Administrator | - |
|  | | |
| Add student record | Administrator | Id  Full Name  Address  Contact  DOB  Course ID |
| Update/Amend student record | Administrator |
| Archive student record | Administrator |
| View student record | Administrator, Student | Id |
| Assign student | Administrator |
|  | | |
| Add staff record | Administrator | Id  Full Name  Address  Contact  Module Id |
| Update/Amend staff record | Administrator |
| Archive staff record | Administrator |
| View staff record | Administrator, Staff | Id |
| Assign staff | Administrator |
|  | | |
| Add course structure | Administrator | Id  Course Name |
| Update/Amend course | Administrator |
| Archive course | Administrator |
| View course | Administrator, Staff, Student | Id |
| Delete course | Administrator |
|  | | |
| Add module | Administrator | Id  Module Name |
| Update/Amend module | Administrator |
| Delete module | Administrator |
| Archive module | Administrator |
| View module | Administrator, Staff, Student |
| Assign module | Administrator |
|  | | |
| Add assignment | Administrator | Id  Assignment Name  Initialized Date  Deadline  Information |
| Update/Amend Assignment | Administrator |
| Delete Assignment | Administrator |
| Archive Assignment | Administrator |
| View Assignment | Administrator, Staff, Student | Id |
| Assign assignment | Administrator, Staff | Id  Student Id |
| Mark | Administrator, Staff | Id  Student Id |
|  | | |
| Generate attendance record | Administrator | Attendance percent  Student Id  Student Name |
| Update/Amend attendance | Administrator, Staff |
| Archive attendance | Administrator |
| View attendance | Administrator, Staff |
| Action poor attendance | Administrator |
| Monitor | Administrator | - |
|  | | |
| Add personal tutor | Administrator | Id  Full Name  Contact  Module Id  Student Id |
| Update/Amend tutor | Administrator |
| View tutor | Administrator, Student |
| Assign tutor | Administrator | Id  Student Id |
|  | | |
| Add timetable | Administrator | Course  Day  Time  Module |
| Update/Amend timetable | Administrator |
| Archive timetable | Administrator |
| Delete timetable | Administrator | Course |
| View timetable | Administrator, Staff, Student | Course |
|  | | |
| Generate report | Administrator | Staff Id  Student Id |
| View report | Administrator, Staff, Student |
| Print report | Administrator | - |
|  | | |
| Create diary | Administrator |  |
| Update/Amend diary | Administrator |  |
| View diary | Administrator |  |
| Prompt | Administrator |  |
| Initiated Automated Action | Administrator |  |

* + 1. Commands, Queries and Constraints

**Login**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | LOGIN | | PART 1/1 |
| TYPE OF OBJECT  A login object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | | User Id, Password | |
| Commands | | Login | |
| Constraints | | * The user Id and password must be correct. * There is three possible user types: administrator, staff and student. | |

**Student**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | STUDENT | | PART 1/1 |
| TYPE OF OBJECT  A student record object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | | Id, Full Name, Address, Contact, DOB | |
| Commands | | Create, Amend, Archive, Display, Assign | |
| Constraints | | * Id must be unique. * DOB should of valid date. * Should not be able to enrol to more than one course. * Contact must be unique. * Administrator can access every command. * Student can only view his/her record. | |

**Staff**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | STAFF | | PART 1/1 |
| TYPE OF OBJECT  A staff record object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | | Id, Full Name, Address, Contact | |
| Commands | | Create, Amend, Archive, Display, Assign | |
| Constraints | | * Id must be unique. * Contact must be unique. * Administrator can access every command. * Staff can only view their own record. | |

**Course**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | COURSE | | PART 1/1 |
| TYPE OF OBJECT  A course record object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | | Id, Course Name | |
| Commands | | Create, Amend, Archive, Display, Delete | |
| Constraints | | * Id must be unique. * Administrator can access every command. * Staff and student can only view the course Id and name. | |

**Module**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | MODULE | | PART 1/1 |
| TYPE OF OBJECT  A module management object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | | Id, Module Name | |
| Commands | | Create, Amend, Archive, Display, Delete | |
| Constraints | | * Id must be unique. * Administrator can access every command. * Staff and student can only view the module Id and name. | |

**Assignment**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | ASSIGNMENT | | PART 1/1 |
| TYPE OF OBJECT  An assignment management object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | | Id, Assignment Name, Initialized date, Deadline, Information | |
| Commands | | Create, Amend, Archive, Display, Delete, Assign, Mark | |
| Constraints | | * Id must be unique. * Initialized date and deadline must be valid. * Administrator can access every command. * Staff can assign and mark. * Student can only view the assignment queries. | |

**Attendance**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | ATTENDANCE | | PART 1/1 |
| TYPE OF OBJECT  An attendance record object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | | Attendance percent | |
| Commands | | Create, Amend, Archive, Display, Monitor, Action Poor Attendance | |
| Constraints | | * Students with attendance percent less than 40% shall face appropriate actions. * Administrator can access every command. | |

**Personal Tutor**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | PERSONAL\_TUTOR | | PART 1/1 |
| TYPE OF OBJECT  A personal tutor management object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | | Id, Full Name, Contact | |
| Commands | | Create, Amend, Assign, Display | |
| Constraints | | * Id must be unique. * Contact must be unique * Administrator can access every command. * Student can only view the personal tutor queries. | |

**Timetable**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | TIMETABLE | | PART 1/1 |
| TYPE OF OBJECT  A timetable management object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | | Id, Course Name | |
| Commands | | Create, Amend, Archive, Display, Delete | |
| Constraints | | * Id must be unique. * Administrator can access every command. * Staff and student can only view the timetable. | |

**Report Generation**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | REPORT\_GENERATION | | PART 1/1 |
| TYPE OF OBJECT  A report generation object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | |  | |
| Commands | | Create, Display, Print | |
| Constraints | | * Administrator can access every command. * Staff and student can only view their own report. | |

**Diary**

|  |  |  |  |
| --- | --- | --- | --- |
| CLASS | DIARY | | PART 1/1 |
| TYPE OF OBJECT  A diary management object in the system. | | Author - Saurab Khadka  Created – 9 May, 2022 | |
| Queries | |  | |
| Commands | | Create, Amend, Display, Prompt, Initiate Automated Action. | |
| Constraints | | * Administrator can access every command. | |