

## **required document for online examination system**

- Each User has unique Identifier, Date of Birth, Email, password, phone, Gender, SSN, Age (derived from DOB), Name (First Name, Middle Name, Last Name), City, Government, Facebook, LinkedIn, Role and Each User must be either instructor or student.
- Each Instructor has Unique Identifier, salary, qualifications and instructors must teach one or more courses and only one instructor may supervise the track.
- Each Course has unique identifier, name and duration The courses must be taught by one or more instructors.
- Each Track has unique Identifier and Name and must be supervised by one instructor.
- Each Student Unique Identifier and college and each student must be assigned only to one track.
- Each branch has unique Identifier, location, and each branch must has one or more tracks.
- Each track must be assigned by one or more students.
- Each track must be found on one or more branch.
- Each branch must assign one or more students, and each student must be assigned by only one branch.
- Each student must take one or more courses, and each course may be taken by one or more students and each student has grade for that course.
- Each track must have one or more course, and each track must have one or more courses.
- Each course must be taught by one or more instructor, and each instructor must teach one or more courses.
- Each Certificate has unique identifier and Name, and each student may take many certificates, and one or more certificates must be taken by students, and each student takes certificate has code and date.
- Each Freelancing Job has unique identifier and job title, and each student may perform one or more freelancing Jobs and freelancing job must be performed by one or more students, and each job performed by student has date, duration, description, platform, cost and payment Method.
- Each topic has unique identifier and Name, and each topic must have one or more courses, and each course must be assigned by only one topic.
- Each Question has unique identifier, type, text, available answers and correct answer, and each question must be assigned by only one course, and each course must have one or more questions.
- Each Student must answer one or more questions, and each question must be answered by one or more students.
- Each exam has unique identifier, and each exam must generate one or more questions, and each question must be generated by one or more exams.
- Each exam must be assigned by only one course and each course must have one or more exams.
- Each Student must take one or more exams, and each exam must be taken by one or more students.
- Each student takes exam and answering questions has student answer recorded and grade for that question (status derived from student answer).

