Course: Relational Databases

Master’s Program, EPITA

DB Project - Modeling

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**EPITA International Programs\_Relational Database Modeling - Report**

The EPITA International Programs welcome every year many students. Admins control the entire database and are represented by a unique ID, an email and a password. To be registered at EPITA for the first time, each candidate is uniquely defined by a number and based on a title, a firstName, a middleName, a lastName, a date of birth, an address, a country, a mobile number, a payment status and an email address. Once the candidate pays the inscription fee, he/she will appear in the system as a boolean value “Yes” for recruited otherwise “No”. Each candidate has access to the payment status to check if the payment is correctly made.

After payment completion the candidate is promoted where he/she is seen as student by the system. Each student possesses a unique UID and respectively represented by a loginName, a password and a specific intake. Many students can be enrolled to only one program for a specified intake but there could be a chance to have a student’s program changed based on their academic performance. Every program has a unique name and represented by a number, a duration and a fee that differ from one program to another. A program contains a list of courses where a many to many relations between courses and programs are represented by a new table named Program\_Course that has two keys the program name and the course code.

Every course has several sessions and is uniquely identified by a code and composed of a name and a duration. A session can be attended by a group and must be included for one course only. Each group is uniquely identified by a number and respectively have a name and a color. Every session has a unique number and identified by a type, a duration, a start datetime and an end datetime. It is given by only one teacher at a time.

Every recruited teacher has a unique email and defined by a firstName, a middleName, a lastName, a recruitment type and a payment detail. Teacher could cover the same course, but cannot give several sessions at the same time. There exists a M-to-M relation between teacher and course tables where we need to create a new table called Teacher\_Course that have as keys teacher email and course code and a one-to-one relation between teacher and session tables. Many students are included in only one group and has access to only an attendance module per session. There are different room with a unique number and has respectively a capacity and a surface to handle many sessions per day but one at a time.

Each course is composed of several exam where every exam is uniquely recognized by a reference number and described by a date, a type, a weight and a coefficient that can differs from a course to another. During each program, defined by many admins. Each student has many attendances module that is distinctively defined by a number and composed of a specific datetime. This M-to-M relation creates a table between student and attendance module that has as keys student ID and attendanceMod No.