Course registration database

1)Business Rules:
1. Student may enroll more than one course.
2. Student must be enrolled atleast to one course.
3. Course/courses may be enrolled by student
4. Course must have atleast one section
5. one or more sections may be assigned to a course
6. Faculty can be part of one or more department
7. Atleast one faculty should be assigned to the department.
8. Department may have many faculties
9. Atleast one faculty should be part of the department
10. Department offers many courses
11. Atleast one course should be offered in each department
12. Few Courses may be not offered in department
13. Department employs one or more staffs
14. Atleast one staff should be part of department.
15. Staffs employed to more than one department
16. One or more faculties teaches student
17. Student must have atleast one faculty

2)Data and Entities:
Entity Name: Student

Attributes	Datatype
Student Id	char(4)
Student Name	varchar(20)
Address	varchar(50)
Major	char(10)
GPA	double(4)
Age	int(2)
Gender	char(2)

Entity Name: Course

Attributes	Datatype
Course Id	char
Course Name	varchar(10)
Course Hours	time(8)

Entity Name: Section

Attributes	Datatype
Section number	char(2)
semester	char(2)
class time	time(8)
class strength	int(2)

Entity Name: Faculty

Attributes	Datatype
Faculty Id	int(5)
Faculty Name	varchar(15)
Designation	char(15)
Address	varchar(20)

Entity Name: Department

Attributes	Datatype
Dept id	char(5)
Department Name	char(10)
Location	varchar(15)
Office Number	int(10)

Entity Name: Staff

Attributes	Datatype
Staff Id	char(5)
Staff name	varchar(15)
Address	varchar(20)
Phone number	int(10)

3) Metadata:

Entity : Student

Attributes	Datatype	Description
Student Id	char(4)	Student Id with alpha numeric charaters (primary key)
Student Name	varchar(20)	Student first name and last name
Address	varchar(50)	Student address
Major	char(10)	Student Major of the degree
GPA	double(4)	Average Grade details
Age	int(2)	Age of the student
Gender	char(6)	Male or felame

Entity : Course

Attributes	Datatype	Description
Course Id	char	Course Id as alpha numeric character(primary key)
Course Name	varchar(10)	course name as variable chracter
Course Hours	time(8)	Course time window in hours

Entity : Section

Attributes	Datatype	Description
Section number	char(2)	Section number of the course as identifying key
semester	char(2)	semester details (fall/spring/summer) as identifying key
class time	time(8)	Section time window
class strength	int(2)	Total strength of each section

Entity : Faculty

Attributes	Datatype	Description
Faculty Id	int(5)	Faculty Id in numbers(primary Key)
Faculty Name	varchar(15)	Faculty first name and last name
Designation	char(15)	Designation of the faculty
Address	varchar(20)	Address of the faculty

Entity : Department

Attributes	Datatype	Description
Dept id	char(5)	Department Id(primary key)
Department Name	char(10)	Department Name
Location	varchar(15)	Department building name
Office Number	int(10)	Office phone number with extension number

Entity : Staff

Attributes	Datatype	Description
Staff Id	char(5)	staff member id (primary key)
Staff name	varchar(15)	staff member name
Address	varchar(20)	Address of the staff member
Phone number	int(10)	10 digit phone number

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