Part 1

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name

building   phone   code   room   courseNum   credits   name

instructorWIN   Department   description

college   Courses

In Dept   deptCode

In Dept   Section 2 Course

win

firstName

sectionNum   Instructors   lastName

Teaches

Home Dept   grade

win   sectionNum

Students   Enrolled In   Sections   year

instructorWIN   courseNum

Current Addr   Perm Addr   semester   sectionNum

Addresses

id   addrPermanent   addrCurrent
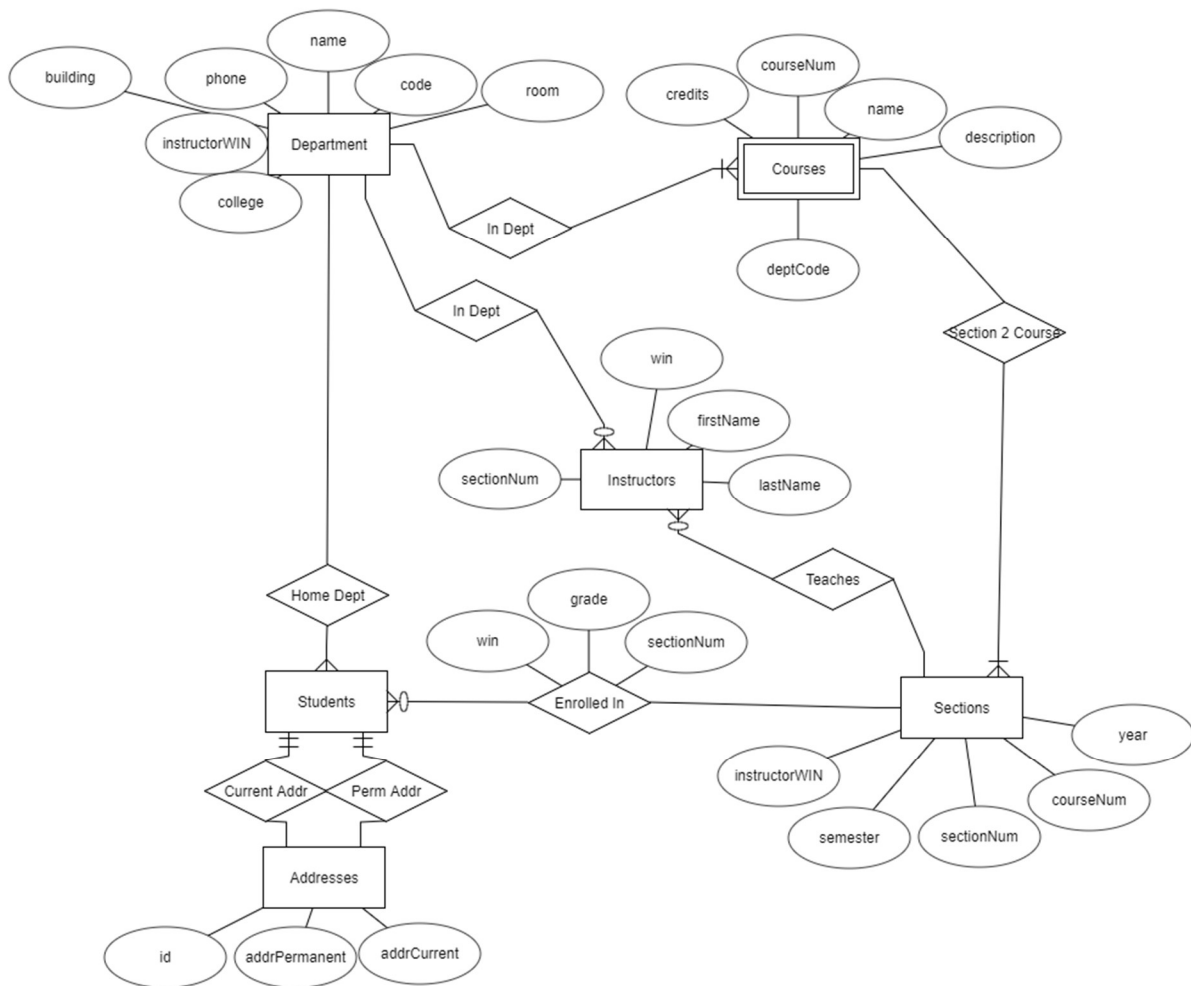
CREATE TABLE `Departments` (

`name`   varchar(25),

`code`   char(4),

`building`   varchar(10),

`room`   varchar(6),

`phone`   int(10),

`college`   varchar(10),

`instructorWIN` int(9),

```sql
  PRIMARY KEY (`code`),

  KEY `FK_instructorWIN` (`instructorWIN`)

);


CREATE TABLE `Courses` (

`courseNum`            varchar(10),

`name`                 varchar(20),

`desc`                 varchar(100),

`credits`              int(1),

`deptCode`             char(4),

PRIMARY KEY (`courseNum`),

CONSTRAINT `FK_courseDept` FOREIGN KEY (`deptCode`) REFERENCES `Departments` (`code`)

);


CREATE TABLE `Sections` (

`instructorWIN` int(9),

`semester`             int(1),

`year`                 int(4),

`courseNum`            varchar(10),

`sectionNum`    int(5),

PRIMARY KEY (`sectionNum`),

KEY `FK_instructorWIN` (`instructorWIN`)

CONSTRAINT `FK_courseNum` FOREIGN KEY (`courseNum`) REFERENCES Courses(`courseNum`)

);


CREATE TABLE `Instructors` (

`win`                  int(9),

`fName`                   varchar(15),

`lName`                varchar(15),
```

```
`sectionNum`    int(5),

PRIMARY KEY (`win`),

CONSTRAINT `FK_winDept` FOREIGN KEY (`win`) REFERENCES `Departments` (`instructorWIN`),

CONSTRAINT `FK_sectionNum` FOREIGN KEY (`sectionNum`) REFERENCES `Sections` (`instructorWIN`)

);


CREATE TABLE `Students` (

`win`                   int(9),

`fName`                     varchar(15),

`lname`                 varchar(15),

`phone`             int(10),

`birthday`          date DEFAULT NULL,

`sex`               char(1),

`level`             varchar(10),

`major`             int(4),                 # This corresponds to Department code

`homeDept`          int(4),                 # Also corresponds to Department code

PRIMARY KEY (`win`),

CONSTRAINT `FK_homeDept` FOREIGN KEY (`homeDept`) REFERENCES `Departments` (`code`)

);


CREATE TABLE `StudentAddress` (

`win`               int(9),

`curCity`           varchar(10),

`curState`          char(2),                # 2char state abbrev.

`curZIP`        int(9),

`permCity`          varchar(10),

`permState`         char(2),

`permZIP`           int(9),

PRIMARY KEY (`win`),
```

CONSTRAINT `FK_studentWIN` FOREIGN KEY (`win`) REFERENCES `Students`(`win`)

);

CREATE TABLE `Enrolled` (

`win`   int(9),

`sectionNum`   int(5),

`grade`   varchar(2),

PRIMARY KEY (`win`),

CONSTRAINT `FK_studentWIN` FOREIGN KEY (`win`) REFERENCES `Students` (`win`)

);

Part 2

1

    a) B

    b) 2NF

    c) AC, BC, CD

2

    a) BD

    b) 1NF

    c) AD, BC, BD

3

    a) ABC, BCD

    b) 3NF

    c) Not possible

4

    a) A

    b) 2NF

c) BCD, ABC

5

a) AB, BC, CD, AD

b) 3NF

c) Not possible