DBMS PROJECT 2 PHASE 2 PART 2

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KOUSHIK MUTHYAPU

```
CREATE TABLE PROFESSOR
(Pro_fname              VARCHAR(15)                 NOT NULL,
Pro_mname               VARCHAR(15),
Pro_lname               VARCHAR(15)                 NOT NULL,
Pro_email               VARCHAR(20)  CHECK (Pro_email LIKE '%_@_%')   NOT NULL,
PRIMARY KEY(Pro_email));

 CREATE TABLE PROGRAM_OF_STUDY
 (Study_program         VARCHAR(20)                 NOT NULL,
 Total_grade_req        DECIMAL(3,2)  CHECK(Total_grade_req<=4.00)    NOT NULL,
 Total_credits_req      INT                         NOT NULL,
 PRIMARY KEY(Study_program));

CREATE TABLE TUTOR
 (Tutor_id              INT                         NOT NULL,
T_start_sem             VARCHAR(10)                 NOT NULL,
T_start_year            INT                         NOT NULL,
T_rating                DECIMAL(3,2),
S_id                    INT                         NOT NULL,
PRIMARY KEY(Tutor_id),
FOREIGN KEY(S_id) REFERENCES STUDENT(S_id));

CREATE TABLE ALL_COURSES
 (Course_number         VARCHAR(7)                  NOT NULL,
Course_name             VARCHAR(15)                 NOT NULL,
Credit_hours            INT     CHECK(Credit_hours<=30)       NOT NULL,
Department              VARCHAR(20)                 NOT NULL,
PRIMARY KEY(Course_number));

CREATE TABLE CourseSem
 (Course_number         VARCHAR(7)                  NOT NULL,
Semester                VARCHAR(7)                  NOT NULL,
PRIMARY KEY(Course_number,Semester),
FOREIGN KEY(Course_number) REFERENCES ALL_COURSES(Course_number)
ON UPDATE CASCADE ON DELETE CASCADE);

CREATE TABLE STUDENT
(S_id                   INT                         NOT NULL,
S_fname                 VARCHAR(10)                 NOT NULL,
S_mname                 VARCHAR(10),
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S_lname                 VARCHAR(10)              NOT NULL,
S_univ_email            VARCHAR(20)              NOT NULL,
S_dob                   DATE    CHECK(S_dob< CURRENT_DATE)      NOT NULL,
S_start_date            DATE                     NOT NULL,
S_end_date              DATE    CHECK(S_start_date>S_end_date),
S_currently_pursuing    VARCHAR(10)              NOT NULL,
S_credits_earned        INT                      NOT NULL,
S_current_gpa           DECIMAL(3,2)             NOT NULL,
Pro_email               VARCHAR(15)              NOT NULL,
Sex                     CHAR(1)                  NOT NULL,
PRIMARY KEY(S_id),
FOREIGN KEY(S_currently_pursuing) REFERENCES PROGRAM_OF_STUDY(Study_program)
ON UPDATE CASCADE ON DELETE RESTRICT,
FOREIGN KEY(Pro_email) REFERENCES PROFESSOR(Pro_email)
ON DELETE SET NULL ON UPDATE CASCADE);
```

```
CREATE TABLE EMPLOYEES
(S_id                   INT                      NOT NULL,
Work_organisation       VARCHAR(30)              NOT NULL,
No_of_hours_per_week    INT NOT NULL   CHECK(No_of_hours_per_week<=20),
Position                VARCHAR(20)              NOT NULL,
PRIMARY KEY(S_id,Work_organisation),
FOREIGN KEY(S_id) REFERENCES STUDENT(S_id)
ON UPDATE CASCADE ON DELETE CASCADE);
```

```
CREATE TABLE SPhone
(S_id                   INT                      NOT NULL,
AreaCode                INT                      NOT NULL,
Phone_num               INT                      NOT NULL,
PRIMARY KEY(S_id,AreaCode,Phone_num),
FOREIGN KEY(S_id) REFERENCES STUDENT(S_id)
ON DELETE CASCADE ON UPDATE CASCADE);
```

```
CREATE TABLE SPreMajors
 (S_id                  INT                      NOT NULL,
Pre_major               VARCHAR(20)              NOT NULL,
PRIMARY KEY(S_id,Pre_major),
FOREIGN KEY(S_id) REFERENCES STUDENT(S_id)
ON DELETE CASCADE ON UPDATE CASCADE);
```

```
CREATE TABLE SMajor
(S_id                   INT                      NOT NULL,
Major                   VARCHAR(20)              NOT NULL,
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PRIMARY KEY(S_id,Major),
FOREIGN KEY(S_id) REFERENCES STUDENT(S_id)
ON DELETE CASCADE ON UPDATE CASCADE);


CREATE TABLE SMinor
(S_id                   INT                     NOT NULL,
Minor                   VARCHAR(20)             NOT NULL,
PRIMARY KEY(S_id,Minor),
FOREIGN KEY(S_id) REFERENCES STUDENT(S_id)
ON DELETE CASCADE ON UPDATE CASCADE);

CREATE TABLE pre_requisites
(Course_number          VARCHAR(7)              NOT NULL,
Pre_req_number          VARCHAR(7)  CHECK(Pre_req_number != Course_number)
                NOT NULL,
PRIMARY KEY(Course_number,Pre_req_number),
FOREIGN KEY(Course_number) REFERENCES ALL_COURSES(Course_number)
ON UPDATE CASCADE ON DELETE CASCADE,
FOREIGN KEY(Pre_req_number) REFERENCES ALL_COURSES(Course_number)
ON UPDATE CASCADE ON DELETE CASCADE);

CREATE TABLE takes
(S_id INT NOT NULL,
Course_number           VARCHAR(7)              NOT NULL,
Taken_sem               VARCHAR(7)              NOT NULL,
Taken_year              INT                     NOT NULL,
Grade_obtained          VARCHAR(5),
PRIMARY KEY(S_id,Course_number,Taken_sem,Taken_year),
FOREIGN KEY(S_id) REFERENCES STUDENT(S_id)
ON UPDATE CASCADE ON DELETE CASCADE,
FOREIGN KEY(Course_number) REFERENCES ALL_COURSES(Course_number)
ON UPDATE CASCADE ON DELETE NO ACTION);


CREATE TABLE parts_in
(Study_program          VARCHAR(10)             NOT NULL,
Course_number           VARCHAR(7)              NOT NULL,
Min_grade               DECIMAL(3,2),
PRIMARY KEY(Study_program,Course_number),
FOREIGN KEY(Study_program) REFERENCES PROGRAM_OF_STUDY(Study_program)
ON UPDATE CASCADE ON DELETE CASCADE,
FOREIGN KEY(Course_number) REFERENCES ALL_COURSES(Course_number)
ON UPDATE CASCADE ON DELETE CASCADE);

CREATE TABLE teaches
(Course_number          VARCHAR(7)              NOT NULL,
```

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```
Pro_email               VARCHAR(20)                 NOT NULL,
Teach_sem               VARCHAR(10)                 NOT NULL,
Teach_year              INT                         NOT NULL,
PRIMARY KEY(Course_number,Pro_email,Teach_sem,Teach_year),
FOREIGN KEY(Course_number) REFERENCES ALL_COURSES(Course_number)
ON UPDATE CASCADE ON DELETE CASCADE,
FOREIGN KEY(Pro_email) REFERENCES PROFESSOR(Pro_email)
ON UPDATE CASCADE ON DELETE CASCADE);

CREATE TABLE helps_with
(Tutor_id               INT                         NOT NULL,
Course_number           VARCHAR(7)                  NOT NULL,
Semester                VARCHAR(7)                  NOT NULL,
Year                    INT                         NOT NULL,
PRIMARY KEY(Tutor_id,Course_number),
FOREIGN KEY(Tutor_id) REFERENCES TUTOR(Tutor_id)
ON UPDATE CASCADE ON DELETE CASCADE,
FOREIGN KEY(Course_number) REFERENCES ALL_COURSES(Course_number)
ON UPDATE CASCADE ON DELETE CASCADE);

CREATE TABLE Consults
(S_id                   INT                         NOT NULL,
Tutor_id                INT                         NOT NULL,
Course_number           VARCHAR(7)                  NOT NULL,
Rates_tutor             DECIMAL(4,2)  CHECK(Rates_tutor<=10.00)   NOT NULL,
PRIMARY KEY(S_id,Tutor_id,Course_number),
FOREIGN KEY(S_id) REFERENCES STUDENT(S_id)
ON UPDATE CASCADE ON DELETE CASCADE,
FOREIGN KEY(Tutor_id) REFERENCES TUTOR(Tutor_id)
ON UPDATE CASCADE ON DELETE CASCADE,
FOREIGN KEY(Course_number) REFERENCES ALL_COURSES(Course_number)
ON UPDATE CASCADE ON DELETE CASCADE);
```