

CPSC 332 File Structures and Database Systems

California State University, Fullerton

Summer 2019

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Project Link:

<http://wang.ecs.fullerton.edu/~cs332z11/index.html>

User: cs332z11

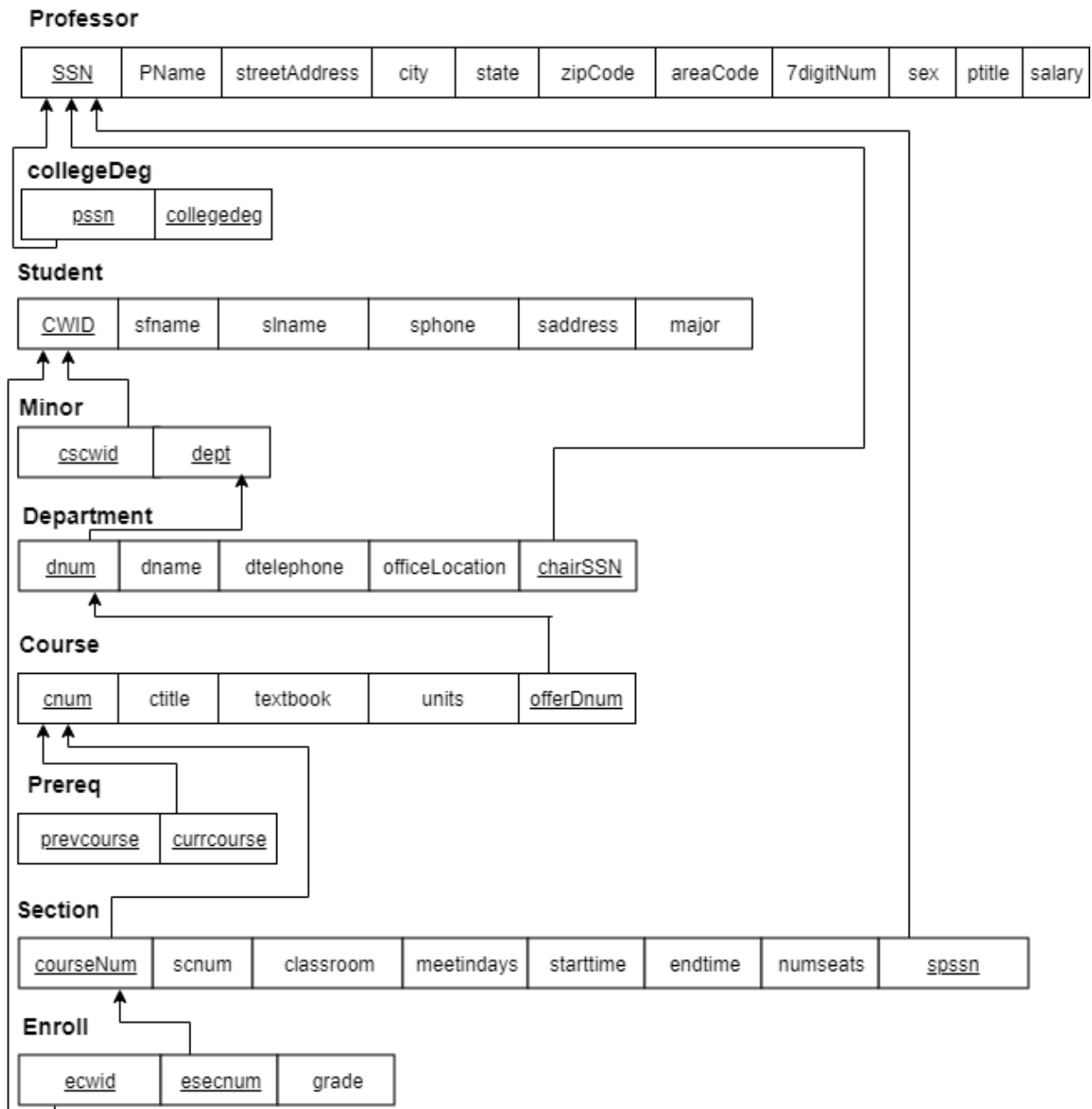
Password: TohzaoL5

TABLE OF CONTENTS

DATABASE CODE	5
SQL QUERIES	7
Requirement 1	7
Requirement 2	7
Requirement 3	8
Requirement 4	8
PHP IMPLEMENTATION	9
INTERFACE	10
Professor Interface	10
Student Interface	10
SAMPLE RUNS	11
Professor Lookup - Input	11
Professor Lookup - Output	11
Student Grade Count - Input	12
Student Grade Count - Output	12
Course Sections - Input	13
Course Sections - Output	13
Student Grade Input	14
Student Grade Output	14

ER DIAGRAM

RELATIONAL MODEL



DATABASE CODE

```
CREATE TABLE Professor(  
  ssn varchar(9) NOT NULL primary key,  
  pname varchar(45),  
  paddress varchar(35),  
  city varchar(25),  
  state varchar(2),  
  zipcode int(9),  
  areacode int(3),  
  7digit int(7),  
  sex enum('M','F'),  
  title char(4),  
  salary decimal(12,2));
```

```
CREATE TABLE collegeDeg(  
  pssn varchar(9),  
  collegedeg varchar(25),  
  primary key (pssn, collegedeg),  
  foreign key (pssn) references Professor(ssn));
```

```
CREATE TABLE Department(  
  dnum int(3) NOT NULL primary key,  
  chair varchar(45),  
  dname varchar(45),  
  dtelephone int(10),  
  officeLoc varchar(5),  
  foreign key (chair) references Professor(ssn));
```

```
CREATE TABLE Student(  
  cwid varchar(9) NOT NULL primary key,  
  sfname varchar(50),  
  slname varchar(50),  
  sphone int(11),  
  saddress varchar(128),  
  major int(3),  
  foreign key (major) references Department(dnum));  
CREATE TABLE Course(  
  cnum varchar(7) NOT NULL primary key,  
  cname varchar(30),  
  textbook varchar(128),  
  units tinyint(4),
```

```
dept int(3),  
foreign key (dept) references Department(dnum));
```

```
CREATE TABLE Prereq(  
prevcourse varchar(7),  
currcourse varchar(7),  
primary key (prevcourse, currcourse),  
foreign key (prevcourse) references Course(cnum),  
foreign key (currcourse) references Course(cnum));
```

```
CREATE TABLE Section(  
secnum int(5) NOT NULL primary key,  
spssn varchar(9),  
scnum varchar(7),  
classroom varchar(6),  
meetingdays varchar(16),  
starttime varchar(7),  
endtime varchar(7),  
numseats int(3),  
foreign key (spssn) references Professor(ssn),  
foreign key (scnum) references Course(cnum));
```

```
CREATE TABLE Enroll(  
ecwid varchar(9),  
esecnum int(5),  
grade enum('A+', 'A', 'A-', 'B+', 'B', 'B-', 'C+', 'C', 'C-', 'D+', 'D', 'D-', 'F', 'W'),  
primary key (ecwid, esecnum),  
foreign key (ecwid) references Student(cwid),  
foreign key (esecnum) references Section(secnum));
```

```
CREATE TABLE Minor(  
dept int(3),  
scwid varchar(9),  
primary key (dept, scwid),  
foreign key (dept) references Department(dnum),  
foreign key (scwid) references Student(cwid));
```

SQL QUERIES

Requirement 1

Given the social security number of a professor, list the titles, classrooms, meeting days and times of his/her classes.

```
$social = $_POST['pssn'];  
$mysqli = new mysqli("mariadb", $username, $password, $database);  
$sql = "SELECT cname, pname, classroom, meetingdays, starttime, endtime  
        FROM Professor, Section, Course  
        WHERE ssn = $social  
        AND cnum = scnum  
        AND ssn = spssn";
```

Requirement 2

Given a course number and a section number, count how many students get each distinct grade.

```
$cour = $_POST['cour'];  
$sec = $_POST['sec'];  
$mysqli = new mysqli("mariadb", $username, $password, $database);  
$sql = "SELECT grade, COUNT(*) as total  
        FROM Enroll e, Section se, Course c  
        WHERE se.scnum = c.cnum  
        AND se.secnum = e.esecnum  
        AND se.secnum = $sec  
        AND c.cnum = '$cour'  
        GROUP BY e.ecwid";
```

Requirement 3

Given a course number list the sections of the course, including the classrooms, the meeting days and time, and the number of students enrolled in each section.

```
$cours = $_POST['cours'];  
$mysqli = new mysqli("mariadb", $username, $password, $database);  
$sql = "SELECT classroom, meetingdays, starttime, endtime, secnum, COUNT(*) as  
total  
FROM Course c, Section s, Enroll e  
WHERE c.cnum = s.scnum  
AND s.secnum = e.esecnum  
AND c.cnum = '$cours'  
GROUP BY s.secnum";
```

Requirement 4

Given the campus wide ID of the student, list all course that student took and the grades.

```
$id = $_POST['id'];  
$mysqli = new mysqli("mariadb", $username, $password, $database);  
$sql = "SELECT cname, grade  
FROM Enroll e, Section se, Course c  
WHERE se.scnum = c.cnum  
AND se.secnum = e.esecnum  
AND e.ecwid = $id";
```


PHP IMPLEMENTATION

Implementation of the .php files in our “index.html” page.

INTERFACE

Professor Interface

University Lookup System

CSPC332 File Structure & Database

Professor

Student

Contact

Professor Lookup

Enter a Professors SSN

Example: 111111111

Submit

Available Options:

- 111111111
- 222222222
- 333333333
- 444444444

Student Grade Count

Enter a Course Number

Example: CS140

Submit

Enter a Section Number

Example: 11154

Submit

Available Options:

- Course: CPSC140 Section: 11154
- Course: CPSC250 Section: 11198, 21164
- Course: CPSC290 Section: 10054
- ENGL127 Section: 20012, 20041

Student Interface

University Lookup System

CSPC332 File Structure & Database

Professor

Student

Contact

Courses Sections

Enter a Course Number

Example: CPSC140

Submit

Available Options:

- CPSC140
- CPSC290
- CPSC290
- ENGL127

Student Grade

Enter a CWID

Example: 302492973

Submit

Available Options:

- 302492973
- 302543584
- 302421234
- 302766494
- 302876432
- 302857540
- 302302307
- 392487539

SAMPLE RUNS

Professor Lookup - Input

Professor Lookup

Enter a Professors SSN

Submit

Professor Lookup - Output

University Lookup System

Professor Lookup

Title	Name	Classroom	Meeting Days	Start Time	End Time
Computer Architecture	Fallon Blake	CS-123	TuTh	8:00AM	10:00AM
Introduction to Python	Fallon Blake	CS-321	TuTh	2:00PM	3:45PM

Student Grade Count - Input

Student Grade Count

Enter a Course Number

CPSC290

Enter a Section Number

10054

Submit

Student Grade Count - Output

University Lookup System

Student Grade Lookup

Grade	Number of Grades
C	1
B+	1

Course Sections - Input

Courses Sections

Enter a Course Number

Submit

Course Sections - Output

University Lookup System

Courses Sections

Section	Classroom	Meeting Days	Start Time	End Time	# of Students
11154	CS-321	TuTh	2:00PM	3:45PM	7

Student Grade Input

Student Grade

Enter a CWID

Submit

Student Grade Output

University Lookup System

Student Grade

Course Title	Grade
Introduction to Python	A-
Database Concepts	B
American Survey of Literature	B+