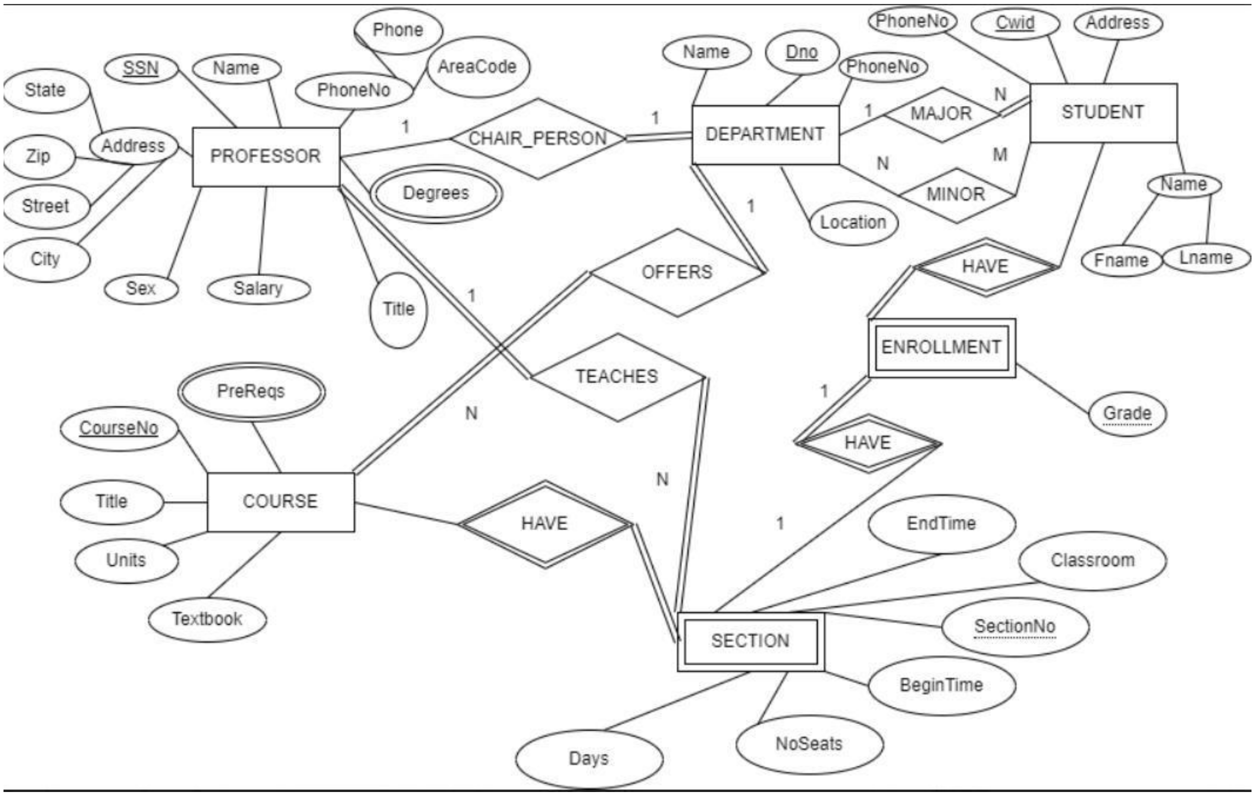
CPSC 332 Term Project

Alexander Nguyen
CWID: 9719

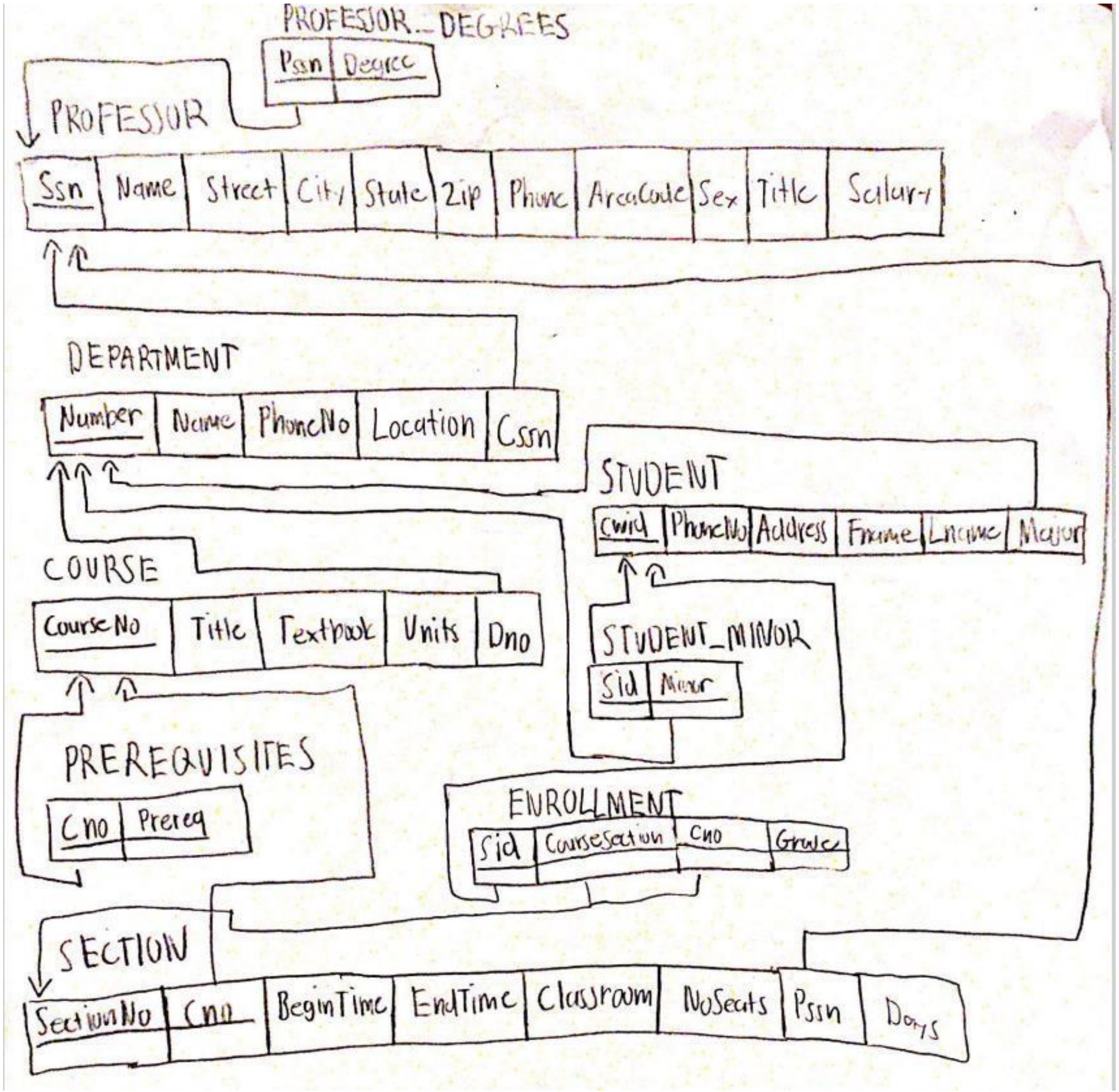
Project account:
cs332g7@shell.ecs.fullerton.edu
password: kxDR2K38
(MySQL account password is the same)

Website:
ecs.fullerton.edu/~cs332g7/

ER Diagram


Phone
AreaCode
SSN
Name
PhoneNo
State
Address
Zip
PROFESSOR
Street
City
Sex
Salary
Title
Degrees
1
CHAIR_PERSON
1
Name
Dno
PhoneNo
DEPARTMENT
Location
1
MAJOR
N
N
MINOR
M
PhoneNo
Cwid
Address
STUDENT
Name
Fname
Lname
HAVE
1
OFFERS
1
TEACHES
N
ENROLLMENT
Grade
1
HAVE
PreReqs
CourseNo
Title
COURSE
Units
Textbook
HAVE
N
1
EndTime
Classroom
SECTION
SectionNo
BeginTime
NoSeats
Days

Relational Model



Source Code

(all source code also available in the unix account inside homepage directory)

Tables:

```
CREATE TABLE `PROFESSOR` (
  `Ssn` int NOT NULL,
  `Name` varchar(40) DEFAULT NULL,
  `Street` varchar(40) DEFAULT NULL,
  `City` varchar(40) DEFAULT NULL,
  `State` varchar(40) DEFAULT NULL,
  `Zip` char(5) DEFAULT NULL,
  `Phone` char(7) DEFAULT NULL,
  `AreaCode` char(3) DEFAULT NULL,
  `Sex` char(1) DEFAULT NULL,
  `Title` varchar(50) DEFAULT NULL,
  `Salary` decimal(10,0) DEFAULT NULL,
  PRIMARY KEY (`Ssn`)
);

CREATE TABLE `PROFESSOR_DEGREES` (
  `Pssn` int NOT NULL,
  `Degree` varchar(20) NOT NULL,
  PRIMARY KEY (`Pssn`,`Degree`),
  FOREIGN KEY (`Pssn`) REFERENCES `PROFESSOR` (`Ssn`)
);

CREATE TABLE `DEPARTMENT` (
  `Number` int NOT NULL,
  `Name` varchar(40) DEFAULT NULL,
  `PhoneNo` char(10) DEFAULT NULL,
  `Location` varchar(40) DEFAULT NULL,
  `Cssn` int DEFAULT NULL,
  PRIMARY KEY (`Number`),
  FOREIGN KEY (`Cssn`) REFERENCES `PROFESSOR` (`Ssn`)
);

CREATE TABLE `COURSE` (
  `CourseNo` int NOT NULL,
  `CourseTitle` varchar(40) DEFAULT NULL,
  `Textbook` varchar(40) DEFAULT NULL,
  `Units` int DEFAULT NULL,
  `Dno` int DEFAULT NULL,
  PRIMARY KEY (`CourseNo`),
  FOREIGN KEY (`Dno`) REFERENCES `DEPARTMENT` (`Number`)
);
```

```
CREATE TABLE `PREREQUISITES` (
  `Cno` int NOT NULL,
  `Prereq` varchar(20) NOT NULL,
  PRIMARY KEY (`Cno`,`Prereq`),
  FOREIGN KEY (`Cno`) REFERENCES `COURSE` (`CourseNo`)
);

CREATE TABLE `SECTION` (
  `SectionNo` int NOT NULL,
  `Cno` int NOT NULL,
  `NoSeats` int DEFAULT NULL,
  `Pssn` int DEFAULT NULL,
  `BeginTime` varchar(10) DEFAULT NULL,
  `EndTime` varchar(10) DEFAULT NULL,
  `Classroom` varchar(10) DEFAULT NULL,
  `Days` varchar(40) DEFAULT NULL,
  PRIMARY KEY (`SectionNo`,`Cno`),
  FOREIGN KEY (`Cno`) REFERENCES `COURSE` (`CourseNo`),
  FOREIGN KEY (`Pssn`) REFERENCES `PROFESSOR` (`Ssn`)
);

CREATE TABLE `STUDENT` (
  `Cwid` int NOT NULL,
  `PhoneNo` char(10) DEFAULT NULL,
  `Address` varchar(40) DEFAULT NULL,
  `Fname` varchar(20) DEFAULT NULL,
  `Lname` varchar(20) DEFAULT NULL,
  `Major` int DEFAULT NULL,
  PRIMARY KEY (`Cwid`),
  FOREIGN KEY (`Major`) REFERENCES `DEPARTMENT` (`Number`)
);

CREATE TABLE `STUDENT_MINOR` (
  `Sid` int NOT NULL,
  `Minor` int NOT NULL,
  PRIMARY KEY (`Sid`,`Minor`),
  FOREIGN KEY (`Sid`) REFERENCES `STUDENT` (`Cwid`),
  FOREIGN KEY (`Minor`) REFERENCES `DEPARTMENT` (`Number`)
);

CREATE TABLE `ENROLLMENT` (
  `Sid` int NOT NULL,
  `CourseSection` int NOT NULL,
  `CourseNumber` int NOT NULL,
  `Grade` varchar(2) NOT NULL,
  PRIMARY KEY (`Sid`,`CourseSection`,`CourseNumber`,`Grade`),
  FOREIGN KEY (`Sid`) REFERENCES `STUDENT` (`Cwid`),
  FOREIGN KEY (`CourseSection`) REFERENCES `SECTION` (`SectionNo`),
  FOREIGN KEY (`CourseNumber`) REFERENCES `SECTION` (`Cno`)
);
```

Professor Query A:

```
<html>
<body>

<?php

$link = mysqli_connect('mariadb', 'cs332g7', 'kxDR2K38','cs332g7');
if (!$link) {
  die('Could not connect: ' . mysql_error());
  }

$query = "SELECT CourseTitle, Classroom, Days, BeginTime FROM PROFESSOR,
SECTION, COURSE WHERE PROFESSOR.Ssn = SECTION.Pssn AND SECTION.Cno
= COURSE.CourseNo AND PROFESSOR.Ssn = " . $_POST["Ssn"]; $result = $link-
>query($query);
$nor = $result->num_rows;

for($i=0; $i<$nor; $i++)
{
$row=$result->fetch_assoc();
printf("Course Title: %s<br>\n", $row["CourseTitle"]);
printf("Classroom: %s<br>\n", $row["Classroom"]);
printf("Meeting days: %s<br>\n", $row["Days"]);
printf("Time: %s<br>\n", $row["BeginTime"]);
echo "<br>";
}
$result->free_result();
$link->close();

?>

</body>
</html>
```

Professor Query B:

```
<html>
<body>
```

```
<?php

$link = mysqli_connect('mariadb', 'cs332g7',
kxDR2K38,'cs332g7'); if (!$link) {
  die('Could not connect: ' . mysql_error());
  }

$SectionNo = $_POST["SectionNo"];
$CourseNo = $_POST["Cno"];

$query = "SELECT DISTINCT grade, COUNT(grade) FROM ENROLLMENT,
SECTION WHERE SECTION.SectionNo = $SectionNo AND SECTION.Cno =
$CourseNo AND SECTION.SectionNo = ENROLLMENT.CourseSection AND
SECTION.Cno = ENROLLMENT.CourseNumber GROUP BY grade;";

$result = $link->query($query);
$nor = $result->num_rows;

for($i=0; $i<$nor; $i++)
{
$row=$result->fetch_assoc();
printf("Grade: %s<br>\n", $row["grade"]);
printf("count: %s<br>\n", $row["COUNT(grade)"]);
echo "<br>";
}
$result->free_result();
$link->close();

?>

</body>
</html>
```

Student Query A:

```
<html>
<body>

<?php

$link = mysqli_connect('mariadb', 'cs332g7',
kxDR2K38,'cs332g7'); if (!$link) {
  die('Could not connect: ' . mysql_error());
  }
```

```
$Cno = $_POST["Cno"];

$query = "SELECT SectionNo, Classroom, Days, BeginTime, EndTime, COUNT(Sid) FROM
SECTION, ENROLLMENT WHERE SECTION.Cno = '$Cno' AND SECTION.Cno =
ENROLLMENT.CourseNumber AND SECTION.SectionNo =
ENROLLMENT.CourseSection GROUP BY SectionNo;";
$result = $link->query($query);
$nor = $result->num_rows;

for($i=0; $i<$nor; $i++)
{
$row=$result->fetch_assoc();
printf("Section: %s<br>\n", $row["SectionNo"]);
printf("Classroom: %s<br>\n", $row["Classroom"]);
printf("Meeting days: %s<br>\n", $row["Days"]);
printf("Begin time: %s<br>\n", $row["BeginTime"]);
printf("End Time: %s<br>\n", $row["EndTime"]);
printf("Number of students enrolled: %s<br>\n", $row["COUNT(Sid)"]);
echo "<br>";
}
$result->free_result();
$link->close();

?>

</body>
</html>
```

Student Query B:

```
<html>
<body>

<?php

$link = mysqli_connect('mariadb', 'cs332g17',
kxDR2K38,'cs332g17'); if (!$link) {
  die('Could not connect: ' . mysql_error());
  }

$query = "SELECT CourseTitle, Grade FROM STUDENT, ENROLLMENT, COURSE
WHERE STUDENT.Cwid = ENROLLMENT.SID AND ENROLLMENT.CourseNumber
= COURSE.CourseNo AND STUDENT.Cwid = " . $_POST["Cwid"]; $result = $link-
>query($query);
$nor = $result->num_rows;
```

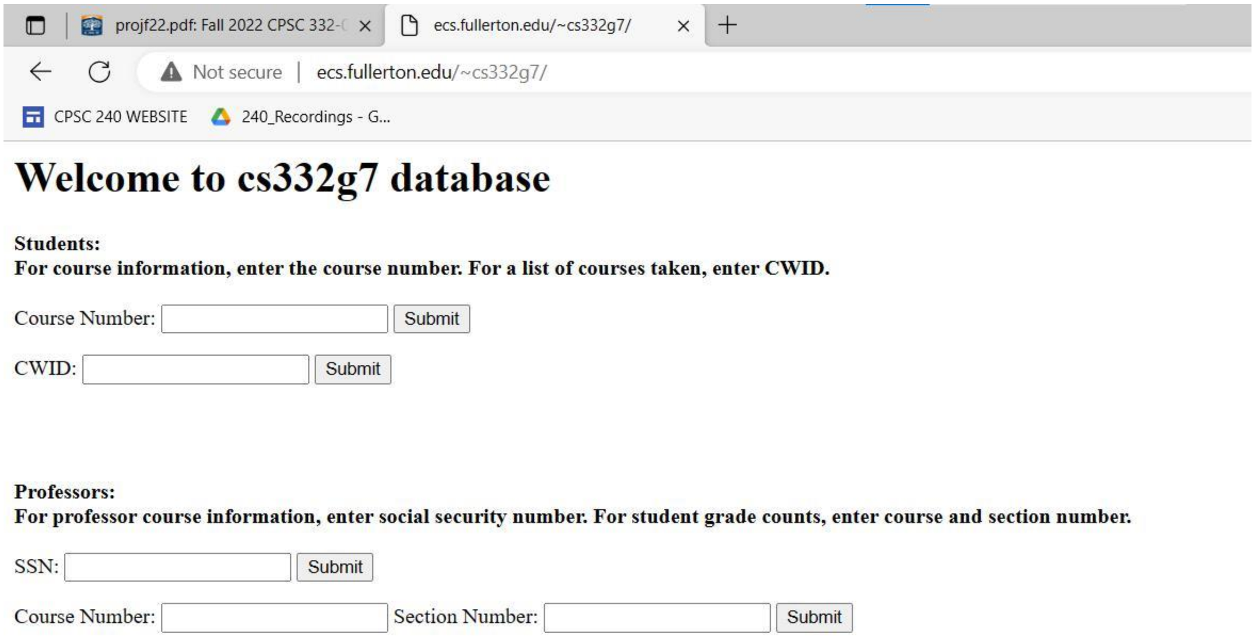
```
for($i=0; $i<$nor; $i++)
{
$row=$result->fetch_assoc();
printf("Course Name: %s<br>\n", $row["CourseTitle"]);
printf("Grade: %s<br>\n", $row["Grade"]);
echo "<br>";
}
$result->free_result();
$link->close();

?>

</body>
</html>
```

Index.html:

```
<html>
<body>

<h1> Welcome to cs332g7 database </h1>

<b>
Students:
<br>
For course information, enter the course number. For a list of courses taken, enter CWID.
</b>

<form method="post" action="queriesCourseInfo.php">
<br>
  Course Number: <input type="text" name="Cno">
  <input type="submit">
<br>
</form>


<form method="post" action="queries.php">
  CWID: <input type="text" name="Cwid">
  <input type="submit">
  <br>
<br>
<br>
<br>
</form>
```

```
<b>
Professors:
<br>
For professor course information, enter social security number. For student grade counts, enter
course and section number.
</b>

<form method="post"
action="queriesSsn.php"> <br>
  SSN: <input type = "text" name ="Ssn">
  <input type="submit">
</form>

<form method="post" action="queriesGradeCount.php">
  Course Number: <input type="text" name="Cno">
  Section Number: <input type="text"
  name="SectionNo"> <input type="submit">
  <br>
</form>
```

UI Screenshot


projf22.pdf: Fall 2022 CPSC 332-(
ecs.fullerton.edu/~cs332g7/
Not secure
ecs.fullerton.edu/~cs332g7/
CPSC 240 WEBSITE
240_Recordings - G...

Welcome to cs332g7 database

Students:
For course information, enter the course number. For a list of courses taken, enter CWID.

Course Number: [ ] Submit

CWID: [ ] Submit

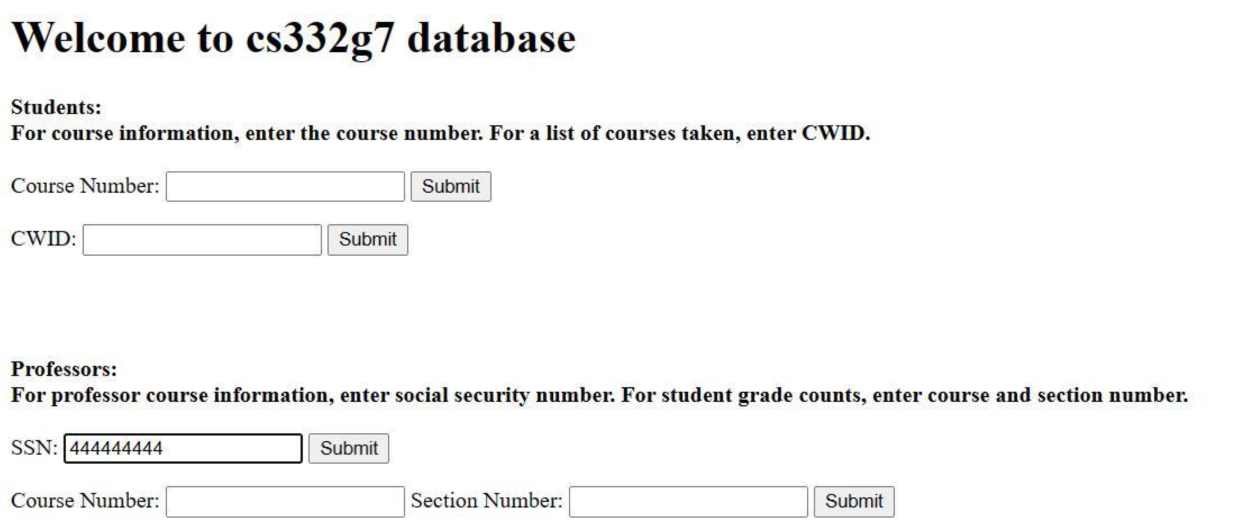
Professors:
For professor course information, enter social security number. For student grade counts, enter course and section number.

SSN: [ ] Submit

Course Number: [ ] Section Number: [ ] Submit

Professor query A screenshots

Input:



Welcome to cs332g7 database

Students:
For course information, enter the course number. For a list of courses taken, enter CWID.

Course Number: Submit

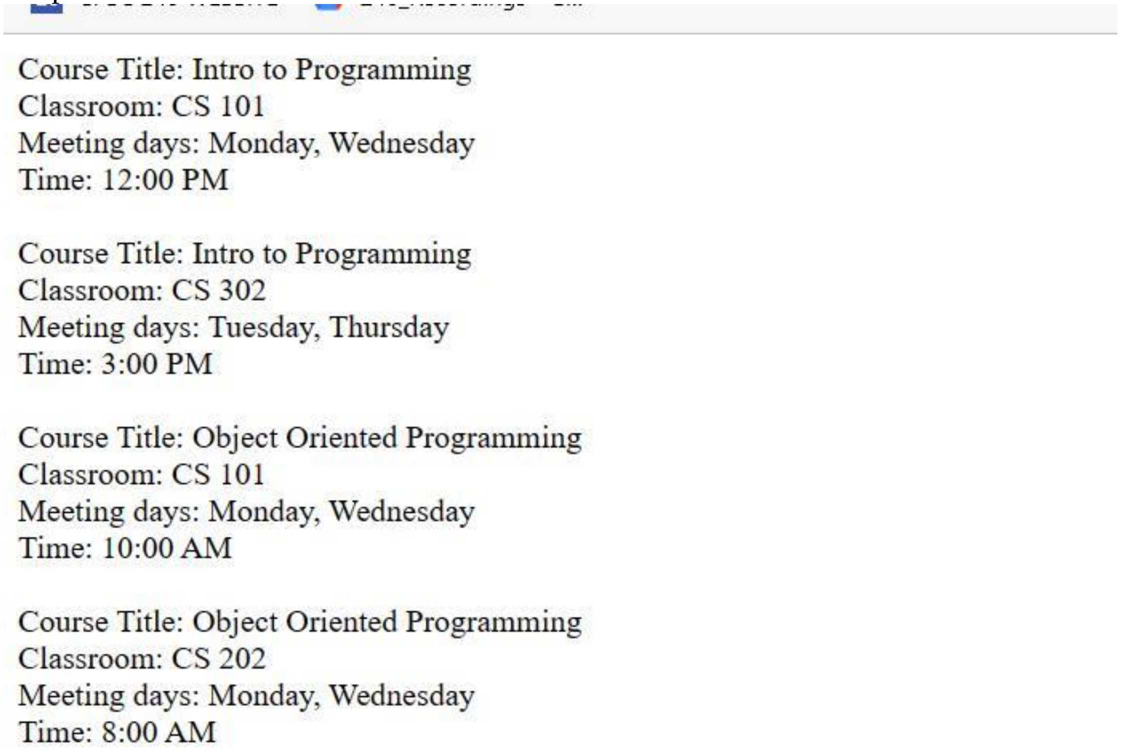
CWID: Submit

Professors:
For professor course information, enter social security number. For student grade counts, enter course and section number.

SSN: 444444444 Submit

Course Number: Section Number: Submit

Output:



Course Title: Intro to Programming
Classroom: CS 101
Meeting days: Monday, Wednesday
Time: 12:00 PM

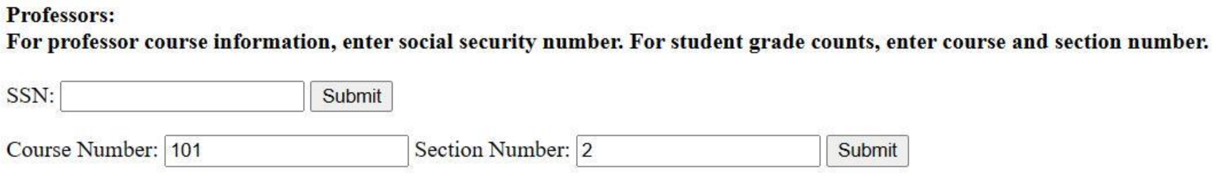
Course Title: Intro to Programming
Classroom: CS 302
Meeting days: Tuesday, Thursday
Time: 3:00 PM

Course Title: Object Oriented Programming
Classroom: CS 101
Meeting days: Monday, Wednesday
Time: 10:00 AM

Course Title: Object Oriented Programming
Classroom: CS 202
Meeting days: Monday, Wednesday
Time: 8:00 AM

Professor query B screenshots

Input:

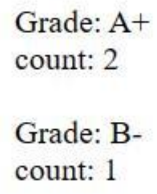


Professors:
For professor course information, enter social security number. For student grade counts, enter course and section number.

SSN:

Course Number: 101 Section Number: 2

Output:

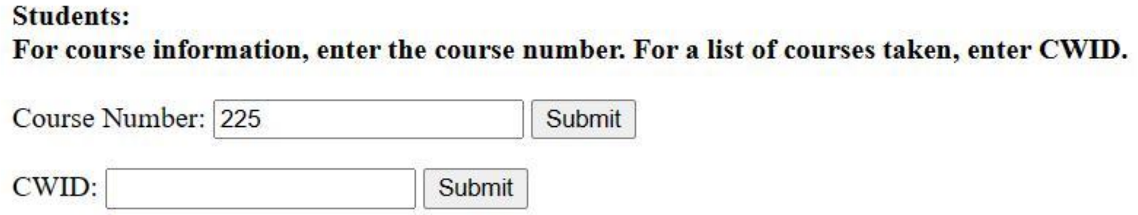


Grade: A+
count: 2

Grade: B-
count: 1

Student query A screenshots

Input:

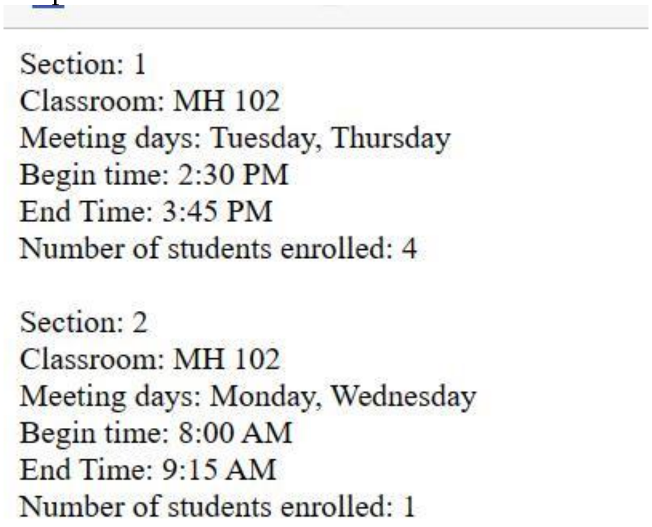


Students:
For course information, enter the course number. For a list of courses taken, enter CWID.

Course Number: 225

CWID:

Output:

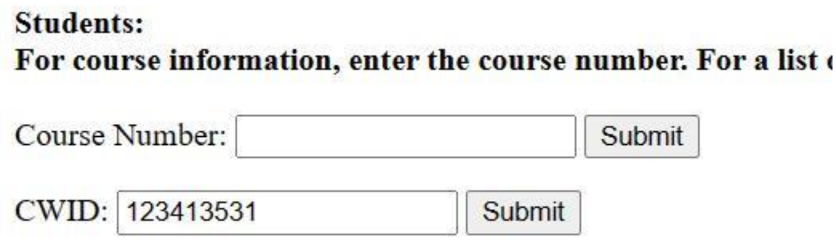


Section: 1
Classroom: MH 102
Meeting days: Tuesday, Thursday
Begin time: 2:30 PM
End Time: 3:45 PM
Number of students enrolled: 4

Section: 2
Classroom: MH 102
Meeting days: Monday, Wednesday
Begin time: 8:00 AM
End Time: 9:15 AM
Number of students enrolled: 1

Student query B screenshots

Input:

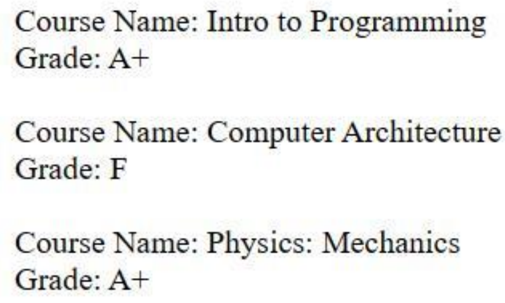


Students:
For course information, enter the course number. For a list

Course Number:

CWID: 123413531

Output:



Course Name: Intro to Programming
Grade: A+

Course Name: Computer Architecture
Grade: F

Course Name: Physics: Mechanics
Grade: A+

For website testing

Professor SSN's:
444444444
555555555
777777777

Student CWID's:
123413531
123456789
231242411
241232141
242321422
321453431
948283451
988234727

Course Numbers:
101
121
201
225

Section Numbers:
1
2