Term Project – University Database

Implementation Account: cs332d9

Implementation Password: azi2ceeC

Members:

Nathan Eduvala, Last 4 CWID: 5944

Stefan Parrish, Last 4 CWID: 6392

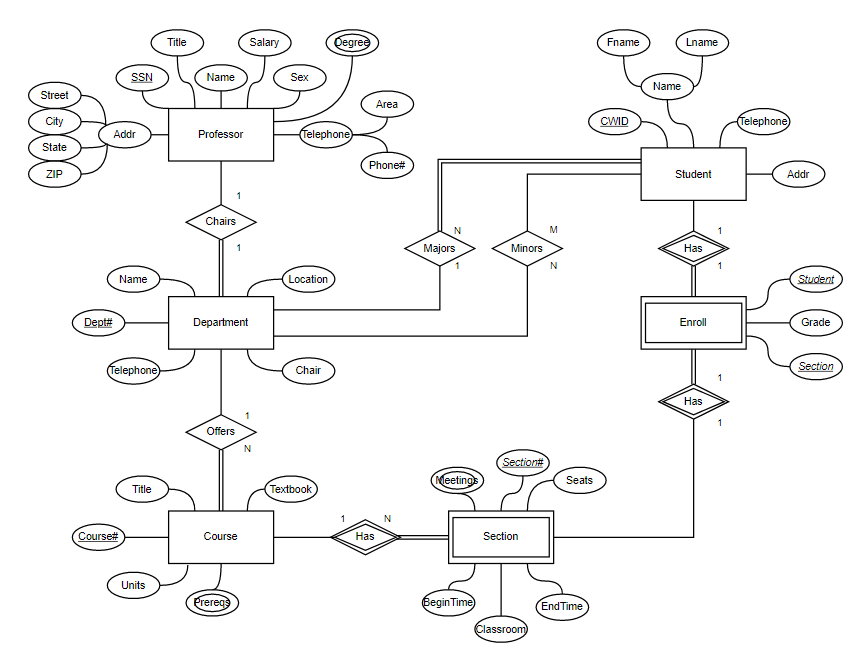
Ryan Mauricio, Last 4 CWID: 3777

CPSC332

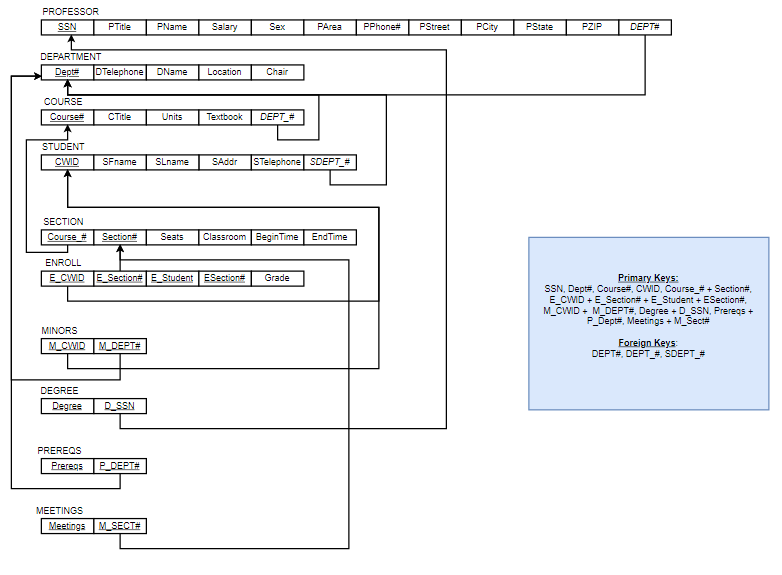
Dr. Wang

16 May 2021

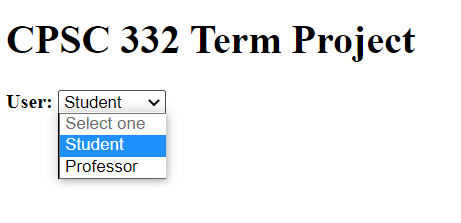
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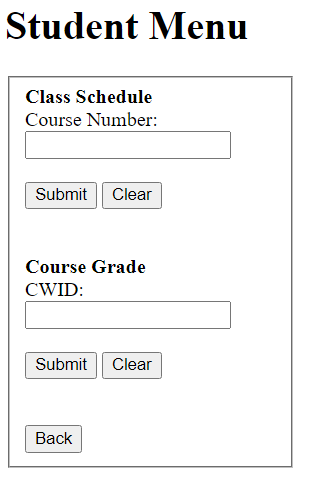
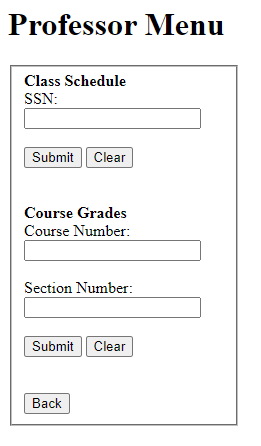


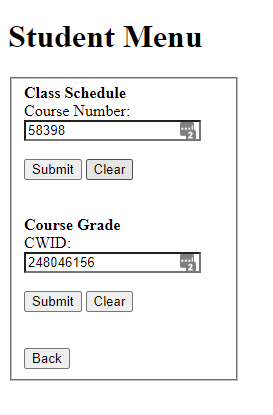
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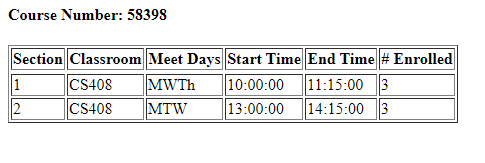
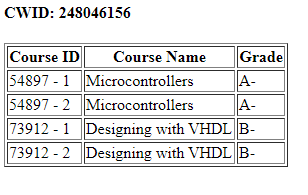
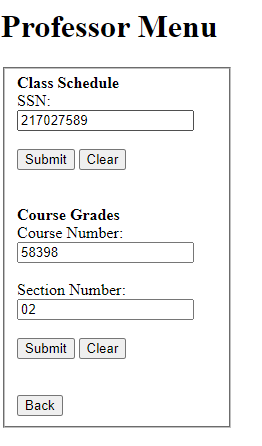
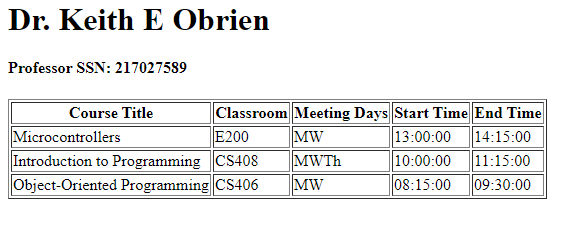
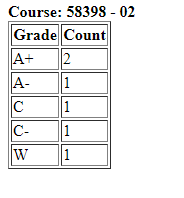


**INTERFACES**





**TESTINGS**



**SOURCE CODE**

countStud.php

<?php

$servername = "mariadb";

$username = "cs332d9";

$password = "azi2ceeC";

$dbname = "cs332d9";

$db = **new** mysqli($servername, $username, $password, $dbname);

$course\_number = $\_POST["CourseNum2"];

$section\_number = $\_POST["SectionNum"];

**if**($db->connect\_error) {

**die**("Connection failed: " . $db->connect\_error);

}

$sql = "SELECT E.GRADE, COUNT(\*) AS NUM\_OF\_STUDENT ";

$sql .= "FROM COURSE C, COURSE\_SECTION CS, ENROLLMENT E ";

$sql .= "WHERE C.COURSE\_NUM = **$course\_number** AND C.COURSE\_NUM = CS.SECTION\_NUM ";

$sql .= " AND CS.COURSE\_NO = **$section\_number** AND C.COURSE\_NUM = E.SEC\_NUM ";

$sql .= "GROUP BY E.GRADE";

$result = $db->query($sql);

**echo** "<h4>Course: " . $course\_number . " - " . $section\_number . "<br>";

**echo** "<table border='1'>

<tr>

<th>Grade</th>

<th>Count</th>

</tr>";

**if**($result->num\_rows > 0) {

**while**($row = $result->fetch\_assoc()) {

**echo** "<tr>";

**echo** "<td>" . $row["GRADE"] . "</td>";

**echo** "<td>" . $row["NUM\_OF\_STUDENT"] . "</td>";

**echo** "</tr>";

}

}

**echo** "</table>";

?>

**SOURCE CODE**

courses.php

<?php

$servername="mariadb";

$username="cs332d9";

$password="azi2ceeC";

$dbname="cs332d9";

$db = **new** mysqli($servername, $username, $password, $dbname);

**if** ($db->connection\_error) {

**die**("Connection failed: " . $db->connect\_error);

}

$course\_num = $\_POST['CourseNum'] ?? '';

$query = "SELECT C.COURSE\_NUM, CS.COURSE\_NO, CS.CLASSROOM, CS.MEETING\_DAYS, CS.START\_TIME, CS.END\_TIME, COUNT(\*) AS NUM\_OF\_STUDENT ";

$query .= "FROM COURSE C, COURSE\_SECTION CS, ENROLLMENT E ";

$query .= "WHERE C.COURSE\_NUM = **$course\_num** AND C.COURSE\_NUM = CS.SECTION\_NUM AND C.COURSE\_NUM = E.SEC\_NUM AND CS.COURSE\_NO = E.C\_NUM ";

$query .= "GROUP BY E.C\_NUM, E.SEC\_NUM";

$data = $db->query($query);

**echo** "<h4>Course Number: " . $course\_num . "</h4>";

**echo** "<table border='1'>

<tr>

<th>Section</th>

<th>Classroom</th>

<th>Meet Days</th>

<th>Start Time</th>

<th>End Time</th>

<th># Enrolled</th>

</tr>";

**echo** "<tr>";

**if ($data->num\_rows > 0) {**

**while($row = $data->fetch\_assoc()) {**

**echo "<tr>";**

**echo "<td>" . $row["COURSE\_NO"] . "</td>";**

**echo "<td>" . $row["CLASSROOM"] . "</td>";**

**echo "<td>" . $row["MEETING\_DAYS"] . "</td>";**

**echo "<td>" .$row["START\_TIME"] . "</td>";**

**echo "<td>" .$row["END\_TIME"] . "</td>";**

**echo "<td>" . $row["NUM\_OF\_STUDENT"] . "</td>";**

**echo "</tr>";**

**}**

**}**

**echo "</table>";**

**$db->close();**

**?>**

**SOURCE CODE**

gradeCount.php

<?php

$servername = "mariadb";

$username = "cs332d9";

$password = "azi2ceeC";

$dbname = "cs332d9";

$db = **new** mysqli($servername, $username, $password, $dbname);

**if** ($db->connect\_error) {

**die**("Connection failed: " . $db->connect\_error);

}

$teacher\_ssn = $\_POST["SocialNum"];

$teacher = "SELECT TITLE, FNAME, LNAME FROM PROFESSOR";

$teacher\_result = $db->query($teacher);

$name = $teacher\_result->fetch\_assoc();

$sql = "SELECT C.TITLE, CS.CLASSROOM, CS.MEETING\_DAYS, START\_TIME, END\_TIME ";

$sql .= "FROM PROFESSOR P, COURSE C, COURSE\_SECTION CS ";

$sql .= "WHERE P.SSN = **$teacher\_ssn** AND PROF\_SN = SSN AND SECTION\_NUM = COURSE\_NUM";

$result = $db->query($sql);

**echo** "<h1>" . $name["TITLE"] . " " . $name["FNAME"] . " " . $name["LNAME"] . "</h1>";

**echo** "<h4>Professor SSN: " . $teacher\_ssn . "</h4>";

**echo** "<table border='1'>

<tr>

<th>Course Title</th>

<th>Classroom</th>

<th>Meeting Days</th>

<th>Start Time</th>

**<th>End Time</th>**

**</tr>";**

**if ($result->num\_rows > 0) {**

**while($row = $result->fetch\_assoc()) {**

**echo "<tr>";**

**echo "<td>" . $row["TITLE"] . "</td>";**

**echo "<td>" . $row["CLASSROOM"] . "</td>";**

**echo "<td>" . $row["MEETING\_DAYS"] . "</td>";**

**echo "<td>" . $row["START\_TIME"] . "</td>";**

**echo "<td>" . $row["END\_TIME"] . "</td>";**

**echo "</tr>";**

**}**

**}**

**echo "</table>";**

**$db->close();**

**?>**

**SOURCE CODE**

index.php

**SOURCE CODE**

<!doctype html>

<html>

<head>

<title>**Database Project**</title>

</head>

<body>

<h1>**CPSC 332 Term Project**<h1>

<p><b>**User:**</b>

<select onchange=**"a(this.value)"**>

<option disabled selected> **Select one** </option>

<option value=**"stud.php"**> **Student** </option>

<option value=**"prof.php"**> **Professor** </option>

</select>

<script>

**function** a**(**src**)**

**{**

window.location**=**src**;**

**}**

</script>

</p>

</body>

</html>

prof.php

**SOURCE CODE**

<!doctype html>

<html>

<head>

<title>**Professor**</title>

</head>

<body>

<h1>**Professor Menu**</h1>

<fieldset style=**"width: 200px; text-align: left"**>

<form action=**"gradeCount.php"** method=**"post"**>

<b>**Class Schedule**</b><br>

**SSN:** <br>

<input type=**"text"** name=**"SocialNum"** required=**""** /><br><br>

<input type=**"submit"** value=**"Submit"** />

<input type=**"reset"** value=**"Clear"** />

</form><br><br>

<form method=**"post"** action=**"countStud.php"**>

<b>**Course Grades**</b><br>

**Course Number:**<br>

<input type=**"text"** name=**"CourseNum2"** required=**""** /><br><br>

**Section Number:**<br>

<input type=**"text"** name=**"SectionNum"** required=**""** /><br><br>

<input type=**"submit"** value=**"Submit"** />

<input type=**"reset"** value=**"Clear"** />

</form><br><br>

<form action=**"http://ecs.fullerton.edu/~cs332d9/"**>

<input type=**"submit"** value=**"Back"**>

</form>

</fieldset>

</body>

</html>

sections.php

<?php

$servername="mariadb";

$username="cs332d9";

$password="azi2ceeC";

$dbname="cs332d9";

$db = **new** mysqli($servername, $username, $password, $dbname);

$ID = $\_POST['ID'] ?? '';

**if** ($db->connect\_error) {

**die**("Connection failed: " . $db->connect\_error);

}

$sql = "SELECT C.COURSE\_NUM, CS.COURSE\_NO, C.TITLE, E.GRADE ";

$sql .= "FROM STUDENT S, COURSE C, COURSE\_SECTION CS, ENROLLMENT E ";

$sql .= "WHERE S.ID = **$ID** AND E.STUDENT\_CWID = S.ID ";

$sql .= " AND C.COURSE\_NUM = E.SEC\_NUM AND C.COURSE\_NUM = CS.SECTION\_NUM";

$result = $db->query($sql);

**echo** "<h4>CWID: " . $ID . "</h4>";

**echo** "<table border='1'>

<tr>

<th>Course ID</th>

<th>Course Name</th>

<th>Grade</th>

</tr>";

**if** ($result->num\_rows > 0) {

**while**($row = $result->fetch\_assoc()) {

**echo** "<tr>";

**echo** "<td>" . $row["COURSE\_NUM"] . " - " . $row["COURSE\_NO"] . "</td>";

**echo "<td>" . $row["TITLE"] . "</td>";**

**echo "<td>" . $row["GRADE"] . "</td>";**

**echo "</tr>";**

**}**

**}**

**echo "</table>";**

**$db->close();**

**?>**

**SOURCE CODE**

stud.php

**DDL – CREATE TABLES**

<!doctype html>

<html>

<head>

<title>**Student**</title>

</head>

<body>

<h1>**Student Menu**</h1>

<fieldset style=**"width: 200px; text-align: left"**>

<form action=**"courses.php"** method=**"post"**>

<b>**Class Schedule**</b><br>

**Course Number:** <br>

<input type=**"text"** name=**"CourseNum"** required=**""**/>

<br>

<br>

<input type=**"submit"** value=**"Submit"**/>

<input type=**"reset"** value=**"Clear"**/>

</form><br><br>

<form action=**"sections.php"** method=**"post"**>

<b>**Course Grade**</b><br>

**CWID:** <br>

<input type=**"text"** name=**"ID"** required=**""** />

<br>

<br>

<input type=**"submit"** value=**"Submit"** />

<input type=**"reset"** value=**"Clear"** />

</form><br><br>

**<form action="http://ecs.fullerton.edu/~cs332d9/">**

**<input type="submit" value="Back">**

**</form>**

**</fieldset>**

**</body>**

**</html>**

**CREATE** **TABLE** PROFESSOR**(**

SSN **NUMERIC(**9**)** **NOT** **NULL,**

FNAME **VARCHAR(**20**),**

LNAME **VARCHAR(**20**),**

STREET\_ADDRESS **VARCHAR(**30**),**

CITY **VARCHAR(**20**),**

ST **CHAR(**2**),**

ZIP\_CODE **NUMERIC(**5**),**

AREA\_CODE **NUMERIC(**3**),**

P\_NUM **NUMERIC(**7**),**

SEX **CHAR(**1**),**

TITLE **VARCHAR(**20**),**

SALARY **VARCHAR(**10**),**

**PRIMARY** **KEY(**SSN**)**

**);**

**CREATE** **TABLE** DEPARTMENT**(**

DEPT\_NUM **CHAR(**4**)** **NOT** **NULL,**

DEPT\_NAME **VARCHAR(**30**),**

DEPT\_PHONE **NUMERIC(**10**),**

DEPT\_LOCATION **VARCHAR(**20**),**

CHAIR\_SSN **NUMERIC(**9**)** **NOT** **NULL,**

**PRIMARY** **KEY(**DEPT\_NUM**),**

**FOREIGN** **KEY(**CHAIR\_SSN**)** **REFERENCES** PROFESSOR**(**SSN**)**

**);**

**CREATE** **TABLE** COURSE**(**

COURSE\_NUM **VARCHAR(**10**)** **NOT** **NULL,**

TITLE **CHAR(**50**),**

TEXTBOOK **VARCHAR(**100**),**

UNITS **NUMERIC(**1**),**

D\_NUM **CHAR(**4**)** **NOT** **NULL,**

**PRIMARY** **KEY(**COURSE\_NUM**),**

**FOREIGN** **KEY(**D\_NUM**)** **REFERENCES** DEPARTMENT**(**DEPT\_NUM**)**

--COURSE\_NUM = course number

**);**

**CREATE** **TABLE** STUDENT**(**

ID **NUMERIC(**9**)** **NOT** **NULL,**

ADDR **VARCHAR(**100**),**

F\_NAME **VARCHAR(**20**),**

L\_NAME **VARCHAR(**20**),**

S\_PHONE **NUMERIC(**10**),**

SD\_NUM **CHAR(**4**)** **NOT** **NULL,**

**PRIMARY** **KEY(**ID**),**

**FOREIGN** **KEY(**SD\_NUM**)** **REFERENCES** DEPARTMENT**(**DEPT\_NUM**)**

**);**

**DDL – CREATE TABLES continuedSQL - IMPLEMENT QUERIES**

**CREATE** **TABLE** COURSE\_SECTION**(**

SECTION\_NUM **NUMERIC(**10**)** **NOT** **NULL,**

COURSE\_NO **VARCHAR(**10**)** **NOT** **NULL,**

CLASSROOM **VARCHAR(**5**),**

MEETING\_DAYS **VARCHAR(**10**),**

START\_TIME **TIME,**

END\_TIME **TIME,**

SEAT\_NUM **NUMERIC(**2**),**

PROF\_SN **NUMERIC(**9**)** **NOT** **NULL,**

**PRIMARY** **KEY(**SECTION\_NUM**,** COURSE\_NO**),**

**FOREIGN** **KEY(**COURSE\_NO**)** **REFERENCES** COURSE**(**COURSE\_NUM**),**

**FOREIGN** **KEY(**PROF\_SN**)** **REFERENCES** PROFESSOR**(**SSN**)**

--SECTION\_NUM = course number

--COURSE\_NO = section number

**);**

**CREATE** **TABLE** MINOR**(**

DEP\_NUM **CHAR(**4**)** **NOT** **NULL,**

STUD\_ID **NUMERIC(**9**)** **NOT** **NULL,**

**PRIMARY** **KEY(**DEP\_NUM**,** STUD\_ID**),**

**FOREIGN** **KEY(**DEP\_NUM**)** **REFERENCES** DEPARTMENT**(**DEPT\_NUM**),**

**FOREIGN** **KEY(**STUD\_ID**)** **REFERENCES** STUDENT**(**ID**)**

**);**

**CREATE** **TABLE** ENROLLMENT**(**

STUDENT\_CWID **NUMERIC(**9**)** **NOT** **NULL,**

SEC\_NUM **NUMERIC(**10**)** **NOT** **NULL,**

C\_NUM **VARCHAR(**10**)** **NOT** **NULL,**

GRADE **CHAR(**2**),**

**PRIMARY** **KEY(**STUDENT\_CWID**,** SEC\_NUM**,** C\_NUM**),**

**FOREIGN** **KEY(**STUDENT\_CWID**)** **REFERENCES** STUDENT**(**ID**),**

**FOREIGN** **KEY(**SEC\_NUM**)** **REFERENCES** COURSE\_SECTION**(**SECTION\_NUM**),**

**FOREIGN** **KEY(**C\_NUM**)** **REFERENCES** COURSE\_SECTION**(**COURSE\_NO**)**

--COURSE\_NUM = course number

--C\_NUM = section number

**);**

**CREATE** **TABLE** PREREQUISITE**(**

PREREQ **VARCHAR(**20**)** **NOT** **NULL,**

CO\_NUM **VARCHAR(**10**)** **NOT** **NULL,**

**PRIMARY** **KEY(**CO\_NUM**,** PREREQ**),**

**FOREIGN** **KEY(**CO\_NUM**)** **REFERENCES** COURSE**(**COURSE\_NUM**)**

**);**

**CREATE** **TABLE** PROF\_DEGREE**(**

PROFESSOR\_SSN **NUMERIC(**9**)** **NOT** **NULL,**

DEGREE **CHAR(**15**)** **NOT** **NULL,**

**PRIMARY** **KEY** **(**PROFESSOR\_SSN**),**

**FOREIGN** **KEY** **(**PROFESSOR\_SSN**)** **REFERENCES** PROFESSOR**(**SSN**)**

**);**

**INSERT** **INTO** STUDENT **VALUES**

**(**488975986**,**'3044 Denver Avenue, Fullerton, CA 93632'**,**'John M'**,**'Nevers'**,**9512940033**,**'CPSC'**),**

**(**065862395**,**'3344 Williams Lane, Fullerton, CA 93632'**,**'John B'**,**'Orzechowski'**,**9492930735**,**'CPSC'**),**

**(**698202167**,**'3344 Williams Lane, Fullerton, CA 93632'**,**'Gail T'**,**'Powers'**,**9259277812**,**'CPSC'**),**

**(**248046156**,**'1563 Brown Street, Anaheim, CA 92805'**,**'David J'**,**'Davis'**,**9099602134**,**'EGEE'**),**

**(**607579281**,**'2418 Clarence Court, Placentia, CA 92870'**,**'Ernesto M'**,**'Lee'**,**3108224223**,**'EGEE'**),**

**(**396138320**,**'2035 Meadowbrook Road, Playa Del Ray, CA 90291'**,**'Amos T'**,**'Claybrooks'**,**8508038331**,**'CPSC'**),**

**(**139380363**,**'2682 Joy Lane, Glendale, CA 91204'**,**'Toni T'**,**'Yang'**,**8185449094**,**'EGEE'**),**

**(**185435036**,**'4671 Heritage Road, Visalia, CA 93291'**,**'Lucy R'**,**'Dehner'**,**5597335345**,**'EGEE'**);**

**INSERT** **INTO** DEPARTMENT **VALUES**

**(**'CPSC'**,**'Computer Science'**,**6572783700**,**'CS-552'**,**217027589**),**

**(**'EGEE'**,**'Electrical Engineering'**,**6572785987**,**'E-100G'**,**550522511**);**

**INSERT** **INTO** PROFESSOR **VALUES**

**(**217027589**,**'Keith'**,**'E Obrien'**,**'4948 Doe Meadow Drive'**,** 'Moss Landing'**,** 'CA'**,**95039**,**301**,**5571069**,**'M'**,**'Dr.'**,**'$70,000'**),**

**(**571118522**,**'Jacqueline'**,**'L Anderson'**,**'1874 Frederick Street'**,**'Sacramento'**,**'CA'**,**95814**,**916**,**2415458**,**'F'**,**'Ms.'**,**'$65,000'**),**

**(**550522511**,**'Sarah'**,**'G Reed'**,**'3710 Jim Rosa Lane'**,**'San Francisco'**,**'CA'**,**94143**,**415**,**7770846**,**'F'**,**'Dr.'**,** '$100,000'**);**

**INSERT** **INTO** COURSE **VALUES**

**(**58398**,**'Introduction to Programming'**,**'C++ Programming 5th Edition'**,**3**,**'CPSC'**),**

**(**78123**,**'Object-Oriented Programming'**,**'Data Structure 2nd Edition'**,**3**,**'CPSC'**),**

**(**54897**,**'Microcontrollers'**,**'Introduction to Microcontrollers 2nd Edition'**,**3**,**'EGEE'**),**

**(**73912**,**'Designing with VHDL'**,**'VHDL 12th Edition'**,**3**,**'EGEE'**);**

**INSERT** **INTO** COURSE\_SECTION **VALUES**

**(**58398**,**01**,**'CS408'**,**'MWTh'**,**'10:00'**,**'11:15'**,**30**,**217027589**),**

**(**58398**,**02**,**'CS408'**,**'MTW'**,**'13:00'**,**'14:15'**,**30**,**550522511**),**

**(**78123**,**01**,**'CS406'**,**'MW'**,**'8:15'**,**'9:30'**,**30**,**217027589**),**

**(**78123**,**02**,**'CS406'**,**'TTh'**,**'14:30'**,**'15:45'**,**30**,**550522511**),**

**(**54897**,**01**,**'E200'**,**'MW'**,**'13:00'**,**'14:15'**,**30**,**217027589**),**

**(**54897**,**02**,**'E200'**,**'WTh'**,**'10:00'**,**'11:00'**,**30**,**550522511**),**

**(**73912**,**01**,**'E302'**,**'MF'**,**'14:30'**,**'15:45'**,**30**,**571118522**),**

**(**73912**,**02**,**'E302'**,**'WF'**,**'8:15'**,**'9:30'**,**30**,**571118522**);**

**INSERT** **INTO** ENROLLMENT **VALUES**

**(**488975986**,**58398**,**02**,**'A+'**),**

**(**488975986**,**78123**,**01**,**'B+'**),**

**(**065862395**,**73912**,**01**,**'C'**),**

**(**065862395**,**58398**,**01**,**'C'**),**

**(**065862395**,**78123**,**01**,**'F'**),**

**(**698202167**,**78123**,**02**,**'D'**),**

**(**698202167**,**58398**,**01**,**'W'**),**

**(**698202167**,**54897**,**01**,**'D+'**),**

**(**248046156**,**54897**,**01**,**'A-'**),**

**(**248046156**,**73912**,**02**,**'B-'**),**

**(**607579281**,**58398**,**02**,**'A-'**),**

**(**607579281**,**54897**,**01**,**'B'**),**

**(**396138320**,**78123**,**01**,**'C+'**),**

**(**396138320**,**58398**,**02**,**'A+'**),**

**(**396138320**,**73912**,**02**,**'B'**),**

**(**139380363**,**73912**,**01**,**'A'**),**

**(**139380363**,**54897**,**01**,**'A'**),**

**(**139380363**,**78123**,**01**,**'A'**),**

**(**185435036**,**78123**,**02**,**'B'**),**

**(**185435036**,**73912**,**02**,**'A-'**),**

**(**531300685**,**54897**,**01**,**'A-'**),**

**(**531300685**,**58398**,**01**,**'C-'**),**

**(**531300685**,**78123**,**02**,**'D'**),**

**(**539892591**,**78123**,**01**,**'F'**),**

**(**539892591**,**54897**,**02**,**'D'**);**