UNIVERSITY OF NORTH TEXAS

COMPUTER SCIENCE DEPARTMENT

CSCE5350 SECTION 002/FUNDAMENTALS OF DATABASE SYSTEMS

HIGH SCHOOL/UNIVERSITY SELECTION MANAGMENT SYSTEM

PROJECT REPORT

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1.INTRODUCTION

1.1Project Description:

The High School/University Selection Management portal helps the secondary and post-secondary school students to choose their High School and their University. The aim of this project is to enlighten students with the information regarding various endorsements, career clusters, Majors, Alternative schools, financial aid available at high school and university level. The students are also mentored by Student Mentors, whose job is to help the students choose their high school and university based on their likes and interest.

There are three logins, one is for middle school students where they can choose their high school that provides their desired endorsement based on their career cluster, likes and interest in their locality with help of their mentors who will assist the students throughout this process. The other one is for High School students who can choose their desired universities that provide the majors of their choice. Since, these universities have admission criteria, the mentors will assist the students to select the university that will provide them their desired major and also offer them an admit based on their test scores. Also, the students can check the various financial aids offered by these universities which will further influence their selection. The third login is for Student mentors to access the portal. Additionally, students can also choose alternate schools or provide feedback about the mentors.

1.2 Project Scope:

The Scope of the project is as follows:

1.Middle school students can enter their bio information

2.Check various endorsements and scholarships available for middle school students.

3.Check the various Major available for High School Student.

4.Locate the nearest high school or alternate schools based on student's city

5.High school students can enter their bio information.

6.Mentors will help high school students choose the university based on the likes and preferences entered by high school and middle school students and email them.

7.Once Mentored, the mentors can delete the record of the student mentored.

The primary goal of this project is to boost the percentage of number of American students attending an university and having a formal degree. Also, to help drop outs and students who can't afford formal degree with alternate options like alternate schools and scholarships.

1.3. **References**

"IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications"- IEEE Computer Society, 1998.

IEEE Standards Board

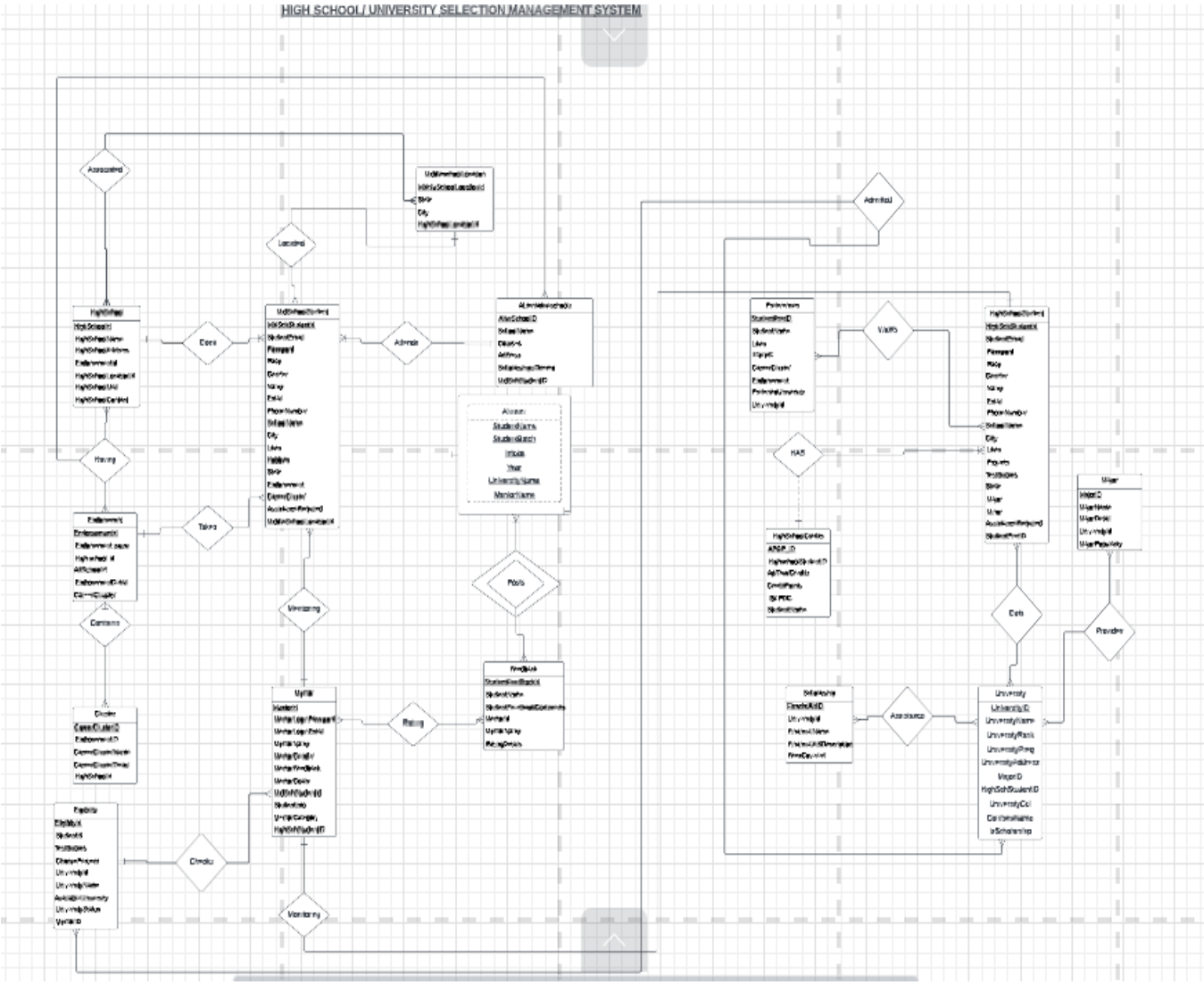
2. Project Overview:

2.1. Project Assumptions:

1. The students are divided into middle school and high school students.
2. A mentor can have one or more school students for mentoring.
3. Middle school student's location determines their high school and students can choose any one endorsement from the available high schools in their location.
4. The high school students don't have any restrictions; however, the mentor will choose from the list of student's shortlisted universities based on their test scores and other requirements.
5. The students who have successfully used and benefited from this portal can give feedback about the mentors.
6. Each endorsement is linked with one or more career cluster which will give the middle school students on what careers their subjects will be linked.
7. Apart from these students can also refer to various financial aids each university is offering.
8. Students who are drop outs or doesn't want to pursue formal education can check the alternate schools.

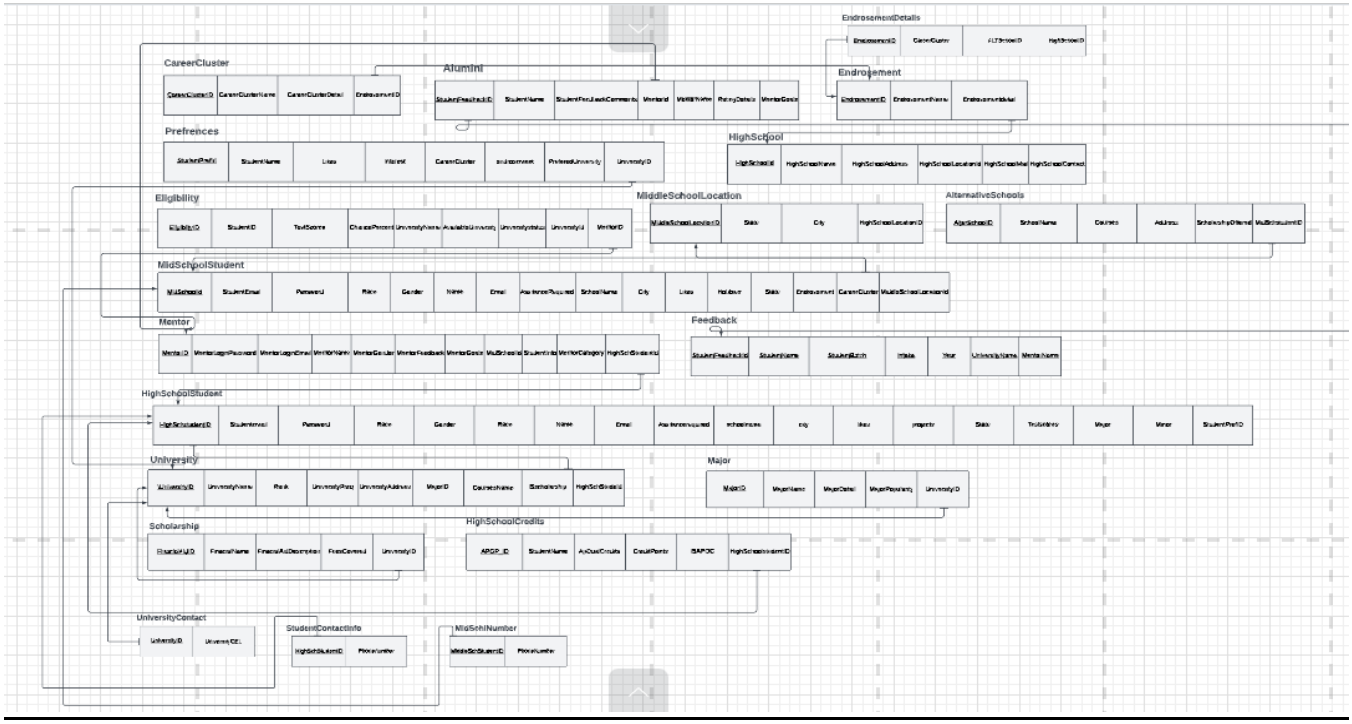
2.2.Project ER Model:

1. *Lucid Chart Link :* ER Diagram Lucid Chart *(Ctrl +Click)*
2. Lucid Chart :

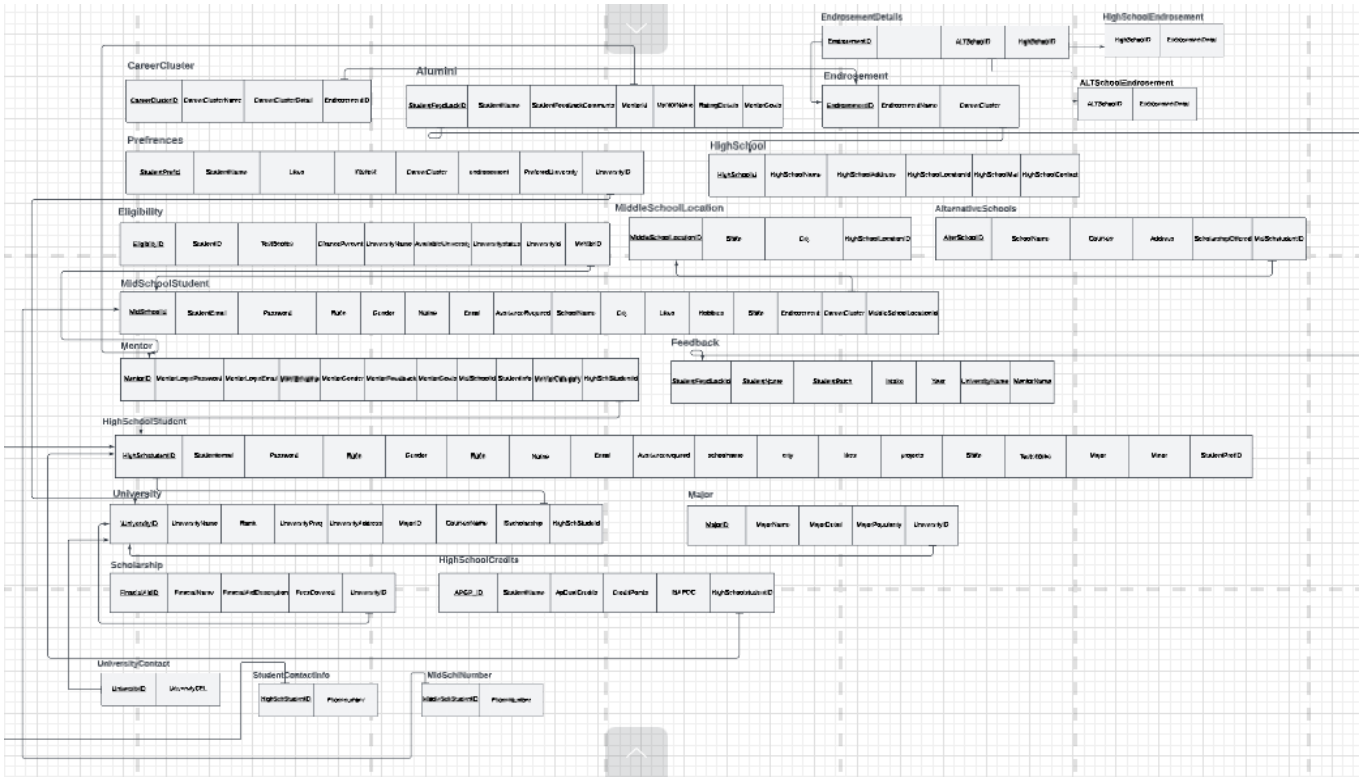


3.Normalization:

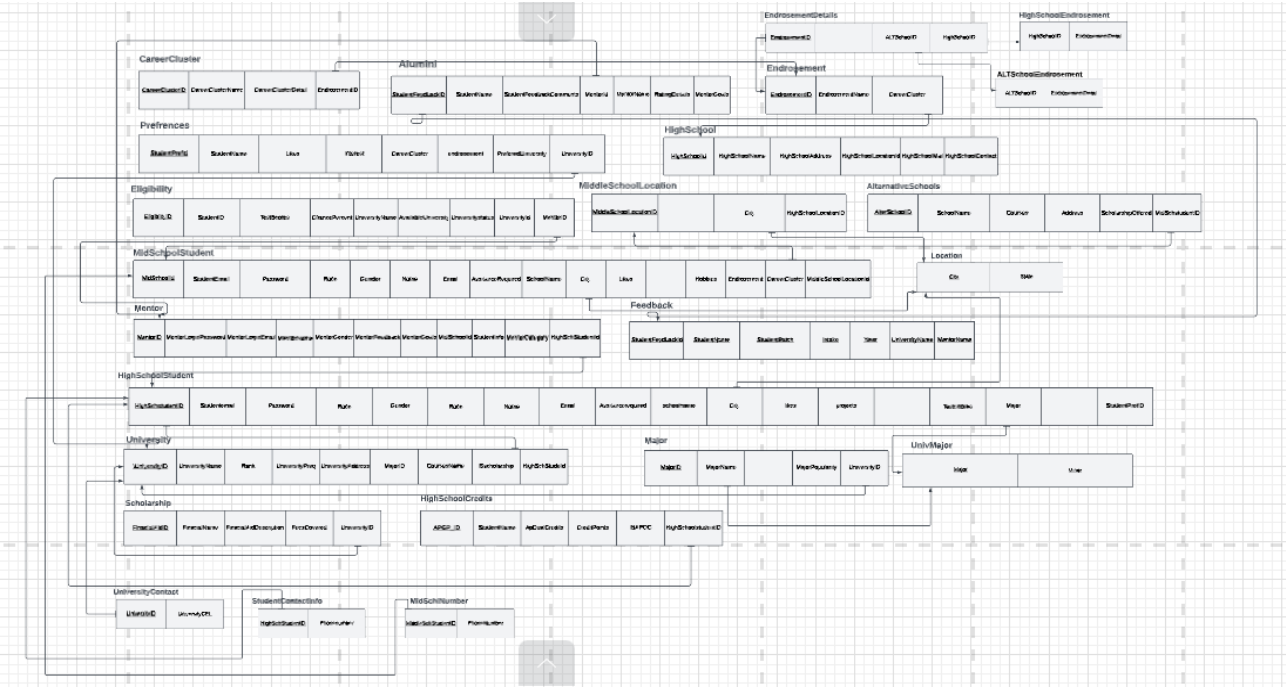
3.1. 1st Normal Form:



3.2. 2nd Normal Form:



3.3. 3rd Normal Form:



3.4. Relational Schema:

3.5. ENTITIES:

1. CareerCluster
2. Preferences
3. MiddleSchoolLocation
4. AlternativeSchools
5. HighSchool
6. MidSchoolStudent
7. Endorsement
8. EndrosementDetails
9. ALTSchoolEndrosement
10. HighSchoolEndrosement
11. Location
12. Mentor
13. University
14. Scholarship
15. Major
16. UnivMajor
17. HighSchoolStudent
18. Feedback
19. UniversityContact
20. StudentContactInfo
21. MidSchNumber

4.Project Implementation:

4.1 Create Table Statements:

1.**Alternative Schools :**

```
CREATE TABLE `alternativeschools` (
  `AltschoolID` int NOT NULL,
  `SchoolName` varchar(70) DEFAULT NULL,
  `Courses` varchar(100) DEFAULT NULL,
  `Address` varchar(500) DEFAULT NULL,
  `Scholarship` char(6) DEFAULT NULL,
  `MiddleSchoolId` int DEFAULT NULL,
  PRIMARY KEY (`AltschoolID`),
```

```
  KEY `MiddleSchoolId` (`MiddleSchoolId`),
  CONSTRAINT `alternativeschools_ibfk_1` FOREIGN KEY (`MiddleSchoolId`) REFERENCES `middleschoollocation` (`MiddleSchoolLocationId`)
)
```

2. **Altschendrosement**

```
CREATE TABLE `altschendrosement` (
  `Altschool` int NOT NULL,
  `EndrosementDetails` varchar(1000) DEFAULT NULL,
  PRIMARY KEY (`Altschool`)
)
```

3.**Career Cluster**

```
CREATE TABLE `careercluster` (
  `CareerClusterID` int NOT NULL,
  `CareerClusterName` varchar(70) DEFAULT NULL,
  `CareerClusterDetail` varchar(1000) DEFAULT NULL,
  `EndrosementID` int NOT NULL
PRIMARY KEY (`CareerClusterID`)
CONSTRAINT `careercluster _ibfk_1` FOREIGN KEY (`EndrosementID`) REFERENCES `endrosement ` (`EndrosementID`)
)
```

4. **Endrosement**

```
CREATE TABLE `endrosement` (
  `EndrosementID` int NOT NULL,
  `EndrosementName` varchar(50) DEFAULT NULL,
  `CareerClusterID` int DEFAULT NULL,
  `CCDetails` varchar(100) DEFAULT NULL,
  PRIMARY KEY (`EndrosementID`),
  CONSTRAINT `endrosement_ibfk_1` FOREIGN KEY (`EndrosementID`) REFERENCES `endrosementdetails` (`EndrosementID`)
)
```

5. **Endrosementdetails**

```
CREATE TABLE `endrosementdetails` (
  `EndrosementID` int NOT NULL,
  `AltSchoolID` int DEFAULT NULL,
  `HighSchoolID` int DEFAULT NULL,
  `EndrosementDetail` varchar(1000) DEFAULT NULL,
  PRIMARY KEY (`EndrosementID`)
)
```

6. **Feedback**

```
   CREATE TABLE `feedback` (
  `StudentName` varchar(100) DEFAULT NULL,
  `StudentBatch` datetime DEFAULT NULL,
  `intake` varchar(90) DEFAULT NULL,
  `syear` int DEFAULT NULL,
  `UnivName` varchar(100) DEFAULT NULL,
  `MentorName` varchar(50) DEFAULT NULL,
  `MentorId` int DEFAULT NULL,
  `Comments` varchar(1000) DEFAULT NULL,
  `StudentID` int unsigned NOT NULL AUTO_INCREMENT,
  PRIMARY KEY (`StudentID`)
)
```

7. **HighSchool**

```
CREATE TABLE `highschool` (
  `HighschoolID` int NOT NULL,
  `HighSchoolName` varchar(500) DEFAULT NULL,
  `HighSchoolAddress` varchar(1000) DEFAULT NULL,
  `HighSchoolLocationId` int DEFAULT NULL,
  `HighSchoolMail` varchar(200) DEFAULT NULL,
  `HighSchool` int DEFAULT NULL,
```

```
`endrosementId` int DEFAULT NULL,
PRIMARY KEY (`HighschoolID`),
KEY `endrosementId` (`endrosementId`),
CONSTRAINT `highschool_ibfk_1` FOREIGN KEY (`endrosementId`) REFERENCES
`endrosement` (`EndrosementID`)
)
```

8.**HighSchoolEndrosement**

```
CREATE TABLE `highschoolendrosement` (
`HighSchoolId` int NOT NULL,
`EndrosementDetails` varchar(1000) DEFAULT NULL,
PRIMARY KEY (`HighSchoolId`)
)
```

9.**Highschoolstudent**

```
CREATE TABLE `highschoolstudent` (
`StudentEmail` varchar(100) DEFAULT NULL,
`pwd` varchar(70) DEFAULT NULL,
`race` varchar(10) DEFAULT NULL,
`gender` char(10) DEFAULT NULL,
`Sname` varchar(100) DEFAULT NULL,
`Email` varchar(70) DEFAULT NULL,
`Astrequired` varchar(10) DEFAULT NULL,
`SchoolName` varchar(100) DEFAULT NULL,
`city` varchar(100) DEFAULT NULL,
`likes` varchar(100) DEFAULT NULL,
`projects` varchar(300) DEFAULT NULL,
`testscores` int DEFAULT NULL,
`major` varchar(100) DEFAULT NULL,
`studentprefid` varchar(30) DEFAULT NULL,
`highSchoolStudentsID` int NOT NULL AUTO_INCREMENT,
PRIMARY KEY (`highSchoolStudentsID`)
```

```
)
```

10. **Location**

```
CREATE TABLE `location` (
  `City` varchar(70) DEFAULT NULL,
  `State` varchar(100) DEFAULT NULL
)
```

11.**Major**

```
CREATE TABLE `major` (
  `majorID` int NOT NULL,
  `majorname` varchar(100) DEFAULT NULL,
  `Majorpopularity` varchar(30) DEFAULT NULL,
  `Univid` int DEFAULT NULL,
  PRIMARY KEY (`majorID`)
)
```

12.**Mentor**

```
CREATE TABLE `mentor` (
  `MentorID` int NOT NULL,
  `Mpwd` varchar(100) DEFAULT NULL,
  `MentorEmail` varchar(100) DEFAULT NULL,
  `MentorName` varchar(100) DEFAULT NULL,
  `MidSchoolId` int DEFAULT NULL,
  `Highschoolid` int DEFAULT NULL,
  PRIMARY KEY (`MentorID`)
)
```

13.**Middleschoollocation**

```
CREATE TABLE `middleschoollocation` (
  `MiddleSchoolLocationId` int NOT NULL,
  `City` varchar(70) DEFAULT NULL,
  `highSchoolId` int DEFAULT NULL,
```

```
  PRIMARY KEY (`MiddleSchoolLocationId`),
  KEY `highSchoolId` (`highSchoolId`),
  CONSTRAINT `middleschoollocation_ibfk_1` FOREIGN KEY (`highSchoolId`) REFERENCES `highschool` (`HighschoolID`)
)
```

14.**MiddleSchoolStudent**

```
CREATE TABLE `middleschoolstudent` (
  `MidSchoolID` int NOT NULL AUTO_INCREMENT,
  `StudentEmail` varchar(100) DEFAULT NULL,
  `Passwd` varchar(100) DEFAULT NULL,
  `Race` varchar(30) DEFAULT NULL,
  `Gender` char(7) DEFAULT NULL,
  `FName` varchar(100) DEFAULT NULL,
  `Email` varchar(100) DEFAULT NULL,
  `Assitancerequired` char(5) DEFAULT NULL,
  `SchoolName` varchar(100) DEFAULT NULL,
  `city` varchar(60) DEFAULT NULL,
  `Likes` varchar(100) DEFAULT NULL,
  `ENdrosement` varchar(80) DEFAULT NULL,
  `Eid` int DEFAULT NULL,
  `CareerCluster` varchar(1000) DEFAULT NULL,
  `cid` int DEFAULT NULL,
  `Middleschoolid` int DEFAULT NULL,
  PRIMARY KEY (`MidSchoolID`)
)
```

15. **MidSchNumber**

```
CREATE TABLE `midschnumber` (
  `Midschid` int NOT NULL,
  `Phnumber` int DEFAULT NULL,
  PRIMARY KEY (`Midschid`)
```

```
)
```

16. **Prefrences**

```
CREATE TABLE `prefrences` (
  `StudentPrefID` int NOT NULL AUTO_INCREMENT,
  `StudentName` varchar(70) DEFAULT NULL,
  `Major` varchar(50) DEFAULT NULL,
  `Universityname` varchar(100) DEFAULT NULL,
  `Mentoring` varchar(50) DEFAULT NULL,
  PRIMARY KEY (`StudentPrefID`)
)
```

17.**Scholarship**

```
CREATE TABLE `scholarship` (
  `finaidid` int NOT NULL,
  `fname` varchar(100) DEFAULT NULL,
  `fdescription` varchar(80) DEFAULT NULL,
  `feescovered` varchar(25) DEFAULT NULL,
  `univid` int DEFAULT NULL,
  PRIMARY KEY (`finaidid`)
)
```

18.**University**

```
CREATE TABLE `university` (
  `univID` int NOT NULL,
  `UnivName` varchar(100) DEFAULT NULL,
  `Urank` int DEFAULT NULL,
  `univpreq` varchar(100) DEFAULT NULL,
  `Univaddr` int DEFAULT NULL,
  `MajorID` int DEFAULT NULL,
  `CourseName` varchar(70) DEFAULT NULL,
  `Ischolarship` varchar(60) DEFAULT NULL,
```

```
  PRIMARY KEY (`univID`),
  KEY `MajorID` (`MajorID`),
  KEY `Univaddr` (`Univaddr`),
  CONSTRAINT `university_ibfk_1` FOREIGN KEY (`MajorID`) REFERENCES `major` (`majorID`),
  CONSTRAINT `university_ibfk_2` FOREIGN KEY (`Univaddr`) REFERENCES `univcontact`
(`univID`)
)
```

19.**Studentcontactinfo**

```
CREATE TABLE `studentcontactinfo` (
  `HighSchoolStudentId` int NOT NULL,
  `phnum` int DEFAULT NULL,
  PRIMARY KEY (`HighSchoolStudentId`)
)
```

20.**UnivContact**

```
CREATE TABLE `univcontact` (
  `univID` int NOT NULL,
  `UnivCel` int DEFAULT NULL,
  PRIMARY KEY (`univID`)
)
```

21.**UnivMajor**

```
CREATE TABLE `univmajor` (
  `major` varchar(30) DEFAULT NULL,
  `minor` varchar(30) DEFAULT NULL,
  `majorID` int NOT NULL
)
```

4.2 Insert Statements:

1. **Alternativeschools:**

INSERT INTO `alternativeschools` VALUES (8,'World languages Insititute','Music,art,dance,spanish and french','Oaks of denton,

223,denton','50',8),(9,'Rangers Sparkle','STEM & Public Service','West university drive,exit 40 ,denton','20',9);

2. **Altschendrosement:**

INSERT INTO `altschendrosement` VALUES (1,'Public service'),(2,'Languages'),(3,'Welding'),(4,'Arts and humanities');

3. **Careercluster:**

INSERT INTO `careercluster` VALUES (12,'Health Science','Study of human anatomy',1),(12,'Teacher','Dealing with students',2),(12,'Health Science','Study of human anatomy',1),(12,'Teacher','Dealing with students',2),(31,'Computer Science','Software and hardware course',3),(31,'Maths','Mathematician',4),(21,'dance','dancer classes',5);

4.**Endrosement:**

INSERT INTO `endrosement` VALUES (1,'Public Service',12,'public service career cluster'),(2,'Arts and Humanities',21,'Art career cluster'),(3,'STEM',31,'engineering'),(4,'Business and Industry',41,'Money and marketing');

5.**EndrosementDetails:**

INSERT INTO `endrosementdetails` VALUES (1,NULL,NULL,'This endrosement deals with public service which includes medicine, law enforcement and teaching profession'),(2,NULL,NULL,'This endrosement deals with Arts,Dance,Music and Band'),(3,NULL,NULL,'This endrosement deals with Maths,Comp science and engineering'),(4,NULL,NULL,'This endrosement deals Money,finace and marketing');

6.**Feedback:**

INSERT INTO `feedback` VALUES ('Nataraj',NULL,NULL,2018,NULL,'Sam',NULL,'Good Mentoring',2),('Nataraj',NULL,NULL,2018,NULL,'Sam',NULL,'Good Mentoring',3),('Soma',NULL,NULL,2019,NULL,'Sam',NULL,'Not bad',4),('Soma',NULL,NULL,2019,NULL,'Sam',NULL,'Not bad',5);

7.**HighSchool:**

INSERT INTO `highschool` VALUES (1,'DentonISD','Avenue 223 G,denton',123,'DentonISD@denton.ws',NULL,1),(2,'Ponder High School','Ponder street 1 G,denton',123,'ponder@denton.ws',NULL,1),(3,'Sanger HighSchool','Sanger exit 32, frisco',124,'Sanger@frisco.ws',NULL,2),(4,'Little Elm','Little elm, 2nd cross street',126,'Littleelm@le.ws',NULL,3),(5,'Sanger HighSchool','Sanger exit 32, frisco',124,'Sanger@frisco.ws',NULL,3),(6,'Little Elm','Little elm, 2nd cross street',126,'Littleelm@le.ws',NULL,2),(7,'Little Elm','Little elm, 2nd cross street',126,'Littleelm@le.ws',NULL,4);

8. **HighSchoolEndrosement:**

INSERT INTO `highschoolendrosement` VALUES (1,'STEM'),(2,'Public service'),(3,'Multi discplinary'),(4,'Business and Industry'),(5,'Arts and Humanities');

9.**HighSchoolStudent:**

INSERT INTO `highschoolstudent` VALUES
('Nah@dent.isd',NULL,'Asian','Male','Nataraja','nat@gmail.com','yes','Dentonisd','Denton','Engineering','SQL',1100,'STEM','STEM',1);

10.**Location :**

INSERT INTO `location` VALUES
('denton','Texas'),('Frisco','Texas'),('Plano','Texas'),('Irwin','Texas');

11. **Major:**

INSERT INTO `major` VALUES
(1,'CS','95%',1),(2,'MBBS','95%',2),(3,'Science','35%',3),(4,'Arts','45%',4),(5,'Finance','75%',5);

12.**Mentor:**

INSERT INTO `mentor` VALUES
(1,'1234','natarajan@unt.edu','Natarajan',NULL,NULL),(2,'2345','sathwika@unt.edu','Sathwika',NULL,NULL),(3,'hello','preetam@unt.edu','Preetham',NULL,NULL),(4,'pwd123','naresh@unt.edu','Naresh',NULL,NULL),(5,'sql123','nikitha@unt.edu','Nikitha',NULL,NULL),(6,'unt007','ramesh@unt.edu','Ramesh',NULL,NULL);

13. **Middleschoollocation:**

INSERT INTO `middleschoollocation` VALUES
(1,'Denton',1),(2,'denton',2),(3,'frisco',3),(4,'frisco',4),(5,'frisco',5),(6,'plano',6),(7,'plano',7),(8,'Denton',NULL),(9,'denton',NULL);

14. **Middleschoolstudent:**

INSERT INTO `middleschoolstudent` VALUES
(1,'gmail','0','asian','m','abc','yahoo','0','psbb','denton','teaching','PS',NULL,'TEacher',NULL,NULL),(2,'np@sanger.ws',NULL,'asian','m','Nikhil','nkhere@gmail.com','yes','walker middle school','denton','law enforcement','PS',NULL,'police',NULL,NULL),(3,'jade@wms.ws',NULL,'american','m','Jade','jadeiscool@gmail.com','yes','walker middle school','denton','STEM','STEM',NULL,'Engineer',NULL,NULL),(4,'srimathi@denton.ws',NULL,'asian','m','Sri Mathi','Sri1907@gmail.com','yes','Denton middle school','denton','Finance','B&I',NULL,'Finance',NULL,NULL),(5,'srimathi@denton.ws',NULL,'asian','f','Sri Mathi','Sri1907@gmail.com','yes','Denton middle school','denton','Finance','B&I',NULL,'Finance',NULL,NULL);

15.**Midschnumber**:

INSERT INTO `midschnumber` VALUES
(1,23489765),(2,45678930),(3,13456789),(4,30786543),(5,89769043);

16. **Prefrences**

INSERT INTO `prefrences` VALUES
(1,'Sri','Finance','UNT','Natarajan'),(2,'Natraja','CS','Arizona State','Ashley'),(3,Sai
,'CS','Arizona State','Ashley');

17.**Scholarship:**

INSERT INTO `scholarship` VALUES (1,'Einsten scholarship','Given to those who pursue science and has GPA of 4','50%',1),(2,'Eagle scholarship','Random manner , mostly for first generation','60%',1),(3,'Michael scholarship','First gen arts student','30%',1),(4,'Marie Curie Scholarship','First gen Women','20%',2),(5,'Multi discplinary','Students who excel in SAT and ACT','80%',1),(6,'EagleWing scholarship','Random manner , mostly for first generation','30%',2),(7,'Latino scholarship','Latino and hispanic students','20%',2),(8,'Robotics Scholar','International students in AI domain','35%',3);

18. **Studentcontactinfo:**

INSERT INTO `studentcontactinfo` VALUES
(1,98576843),(2,23457891),(3,10287654),(4,23475688),(5,89394288),(6,45672312);

19. **Univcontact:**

INSERT INTO `univcontact` VALUES
(1,23496584),(2,99566773),(3,23414389),(4,43567821),(5,26178956),(6,98756345),(8,99520
287),(9,94084361);

20.**University:**

INSERT INTO `university` VALUES (1,'UNT',243,'SAT score above 1000',1,1,'CSC','1'),(2,'UNT',243,'SAT score above 900',1,2,'physcology','1'),(3,'UNT',243,'SAT score above 1000',1,5,'MBA','1'),(4,'UT dallas',200,'SAT score above 1100',2,1,'CSC','1'),(5,'UT dallas',200,'SAT score above 1000',2,2,'health science','1'),(6,'Sunny Buffalo',290,'SAT score above 900',3,4,'bachelors ARts','1'),(7,'Arizona state',108,'SAT score above 1100',4,1,'CS','1'),(8,'Arizona state',108,'SAT score above 1000',4,5,'MBA','1'),(9,'Arizona State',108,'SAT score above 950',4,2,'MBBS','1'),(10,'Arizona State',108,'SAT score above 900',4,1,'Electrical engineering','1');

21. **Univmajor**

INSERT INTO `univmajor` VALUES
('CS','CSIS',1),('CS','Cybersecurity',1),('CS','AI',1),('MBBS','Health Science',2),('MBBS','Dentist',2),('Science','Chemistry',3),('Science','physics',3),('Science','Biology',3),('Finance','Marketing',5),('Finance','HR',5),('Arts','Modern Art',4),('Arts','Classical writing',4);

4.3. Select Statements:

1. **EndrosementDetails.**

```
1 •   SELECT * FROM testdb.endrosementdetails;
2
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

EndrosementID	EndrosementDetail
1	This endrosement deals with public service which includes medicine, law enforcement and teaching profession
2	This endrosement deals with Arts,Dance,Music and Band
3	This endrosement deals with Maths,Comp science and engineering
4	This endrosement deals Money,finace and marketing

2.**Endrosement**

```
1 •   SELECT * FROM testdb.endrosement;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

EndrosementID	EndrosementName	CareerClusterID	CCDetails
1	Public Service	12	public service career cluster
2	Arts and Humanities	21	Art career cluster
3	STEM	31	engineering
4	Business and Industry	41	Money and marketing
NULL	NULL	NULL	NULL

3.**Feedback**

```
1 •   SELECT * FROM testdb.feedback;
2
3
```

esult Grid | Filter Rows: | Edit:

StudentName	syear	MentorName	Comments	StudentID
Nataraj	2018	Sam	Good Mentoring	2
Nataraj	2018	Sam	Good Mentoring	3
Soma	2019	Sam	Not bad	4
Soma	2019	Sam	Not bad	5

4.**HighSchool**

```
1 •   SELECT * FROM testdb.highschool;
2
3
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

HighschoolID	HighSchoolName	HighSchoolAddress	HighSchoolLocationId	HighSchoolMail	endrosementId
1	DentonISD	Avenue 223 G,denton	123	DentonISD@denton.ws	1
2	Ponder High School	Ponder street 1 G,denton	123	ponder@denton.ws	1
3	Sanger HighSchool	Sanger exit 32, frisco	124	Sanger@frisco.ws	2
4	Little Elm	Little elm, 2nd cross street	126	Littleelm@le.ws	3
5	Sanger HighSchool	Sanger exit 32, frisco	124	Sanger@frisco.ws	3
6	Little Elm	Little elm, 2nd cross street	126	Littleelm@le.ws	2
7	Little Elm	Little elm, 2nd cross street	126	Littleelm@le.ws	4

5.**CareerCluster**

```
1 •   SELECT * FROM testdb.careercluster;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

CareerClusterID	CareerClusterName	CareerClusterDetail	EndrosementID
12	Health Science	Study of human anatomy	1
12	Teacher	Dealing with students	2
12	Health Science	Study of human anatomy	1
12	Teacher	Dealing with students	2
31	Computer Science	Software and hardware course	3
31	Maths	Mathematician	4
21	dance	dancer classes	5

6.**altschoolendrosement**

```
1 •   SELECT * FROM testdb.altschendrosement;
```

Result Grid | Filter Rows: | Edit:

Altschool	EndrosementDetails
1	Public service
2	Languages
3	Welding
4	Arts and humanities

7.**Highschoolendrosement**

```
1 •   SELECT * FROM testdb.highschoolendrosement;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

HighSchoolId	EndrosementDetails
1	STEM
2	Public service
3	Multi discplinary
4	Business and Industry
5	Arts and Humanities

8.**HighSchoolStudent**

```
1 •   SELECT * FROM testdb.highschoolstudent;
```

esult Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

StudentEmail	pwd	race	gender	Sname	Email	Astrequired	SchoolName	city	likes	projects	testscores	major	studentprefid	highSchoolStudentsID
Nah@dent.isd	NULL	Asian	Male	Nataraja	nat@gmail.com	yes	Dentonisd	Denton	Engineering	SQL	1100	STEM	STEM	1

9.**Location**

```
1 •   SELECT * FROM testdb.location;
```

Result Grid | Filter Rows: | E

City	State
denton	Texas
Frisco	Texas
Plano	Texas
Irwin	Texas

10.**Major**

```
1 •   SELECT * FROM testdb.major;
```

Result Grid | Filter Rows: | Edit:

majorID	majorname	Majorpopularity	Univid
1	CS	95%	1
2	MBBS	95%	2
3	Science	35%	3
4	Arts	45%	4
5	Finance	75%	5

11.**Mentor**

```
1 •   SELECT * FROM testdb.mentor;
2
3
```

Result Grid | Filter Rows: | Edit:

MentorID	Mpwd	MentorEmail	MentorName
1	1234	natarajan@unt.edu	Natarajan
2	2345	sathwika@unt.edu	Sathwika
3	hello	preetam@unt.edu	Preetham
4	pwd123	naresh@unt.edu	Naresh
5	sql123	nikitha@unt.edu	Nikitha
6	unt007	ramesh@unt.edu	Ramesh

12.**Middleschoollocation**

```
1 •   SELECT * FROM testdb.middleschoollocation;
```

Result Grid | Filter Rows: | Edit:

MiddleSchoolLocationId	City	highSchoolId
1	Denton	1
2	denton	2
3	frisco	3
4	frisco	4
5	frisco	5
6	plano	6
7	plano	7
8	Denton	NULL
9	denton	NULL

13.**middleschoollocation**

```
1 •  SELECT * FROM testdb.middleschoolstudent;
2
```

sult Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

StudentEmail	Passwd	Race	Gender	FName	Email	Assitancerequired	SchoolName	city	Likes	ENdrosement	Eid	CareerCluster
gmail	0	asian	m	abc	yahoo	0	psbb	denton	teaching	PS	NULL	TEacher
np@sanger.ws	NULL	asian	m	Nikhil	nkhere@gmail.com	yes	walker middle school	denton	law enforcement	PS	NULL	police
jade@wms.ws	NULL	american	m	Jade	jadeiscool@gmail.com	yes	walker middle school	denton	STEM	STEM	NULL	Engineer
srimathi@denton.ws	NULL	asian	m	Sri Mathi	Sri1907@gmail.com	yes	Denton middle school	denton	Finance	B&I	NULL	Finance
srimathi@denton.ws	NULL	asian	f	Sri Mathi	Sri1907@gmail.com	yes	Denton middle school	denton	Finance	B&I	NULL	Finance

14.**middleschoolstudentlocation**

```
1 •  SELECT * FROM testdb.middleschoolstudent;
2
```

sult Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

StudentEmail	Passwd	Race	Gender	FName	Email	Assitancerequired	SchoolName	city	Likes	ENdrosement	Eid	CareerCluster
gmail	0	asian	m	abc	yahoo	0	psbb	denton	teaching	PS	NULL	TEacher
np@sanger.ws	NULL	asian	m	Nikhil	nkhere@gmail.com	yes	walker middle school	denton	law enforcement	PS	NULL	police
jade@wms.ws	NULL	american	m	Jade	jadeiscool@gmail.com	yes	walker middle school	denton	STEM	STEM	NULL	Engineer
srimathi@denton.ws	NULL	asian	m	Sri Mathi	Sri1907@gmail.com	yes	Denton middle school	denton	Finance	B&I	NULL	Finance
srimathi@denton.ws	NULL	asian	f	Sri Mathi	Sri1907@gmail.com	yes	Denton middle school	denton	Finance	B&I	NULL	Finance

15.**Prefrences**

```
1 •  SELECT * FROM testdb.prefrences;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

StudentPrefID	StudentName	Major	Universityname	Mentoring
1	Sri	Finance	UNT	Natarajan
2	Natraja	CS	Arizona State	Ashley

16.**Scholarship**

```
1 •   SELECT * FROM testdb.scholarship;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap C

finaidid	fname	fdescription	feescovered	univid
1	Einsten scholarship	Given to those who pursue science and has GP...	50%	1
2	Eagle scholarship	Random manner , mostly for first generation	60%	1
3	Michael scholarship	First gen arts student	30%	1
4	Marie Curie Scholarship	First gen Women	20%	2
5	Multi discplinary	Students who excel in SAT and ACT	80%	1
6	EagleWing scholarship	Random manner , mostly for first generation	30%	2
7	Latino scholarship	Latino and hispanic students	20%	2
8	Robotics Scholar	International students in AI domain	35%	3

17.**studentcontactinfo**

```
L •   SELECT * FROM testdb.studentcontactinfo;
```

ult Grid | Filter Rows: | Edit: | Export/Import:

HighSchoolStudentId	phnum
1	98576843
2	23457891
3	10287654
4	23475688
5	89394288
6	45672312

18.**UnivContact**

```
1 •   SELECT * FROM testdb.univcontact;
```

ult Grid | Filter Rows: | Edit:

univID	UnivCel
1	23496584
2	99566773
3	23414389
4	43567821
5	26178956
6	98756345
8	99520287
9	94084361

19.**University:**

```
1 •   SELECT * FROM testdb.university;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

univID	UnivName	Urank	univpreq	Univaddr	MajorID	CourseName	Ischolarship
1	UNT	243	SAT score above 1000	1	1	CSC	1
2	UNT	243	SAT score above 900	1	2	physcology	1
3	UNT	243	SAT score above 1000	1	5	MBA	1
4	UT dallas	200	SAT score above 1100	2	1	CSC	1
5	UT dallas	200	SAT score above 1000	2	2	health science	1
6	Sunny Buffalo	290	SAT score above 900	3	4	bachelors ARts	1
7	Arizona state	108	SAT score above 1100	4	1	CS	1
8	Arizona state	108	SAT score above 1000	4	5	MBA	1
9	Arizona State	108	SAT score above 950	4	2	MBBS	1
10	Arizona State	108	SAT score above 900	4	1	Electrical engineering	1

20.**UnivMajor**

```
1 •   SELECT * FROM testdb.univmajor;
```

Result Grid | Filter Rows: | Export: | Wrap C

major	minor	majorID
CS	CSIS	1
CS	Cyber...	1
CS	AI	1
MBBS	Health...	2
MBBS	Dentist	2
Science	Chemi...	3
Science	physics	3
Science	Biology	3
Finance	Marke...	5
Finance	HR	5
Arts	Moder...	4
Arts	Classic...	4

4.4 Project Implementations:

This is a high school endorsement and university finder portal. Students can enter their information which will be used by mentors for mentoring them via email. They can also find the various endorsements, major, scholarship and high school details.

The Mentors can view the records of the students who have filled out the form and update their colleges based on the student's profile.

Project Setup:

Technologies used to design the above system:

MySQL Workbench, Java JFrame and Swing, Netbeans IDE.

Prerequisites:

1) Install Netbeans

2) Install JDK 8 driver

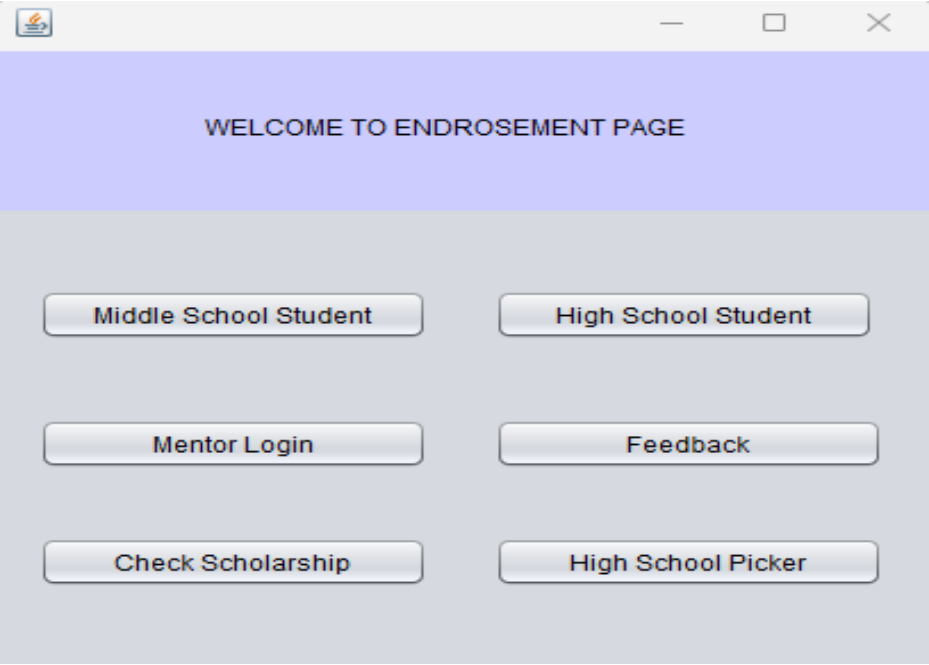
3) Install MySQL Workbench

Setup to run the Project:

- Install Netbeans IDE
- Load the project into Netbeans
- Load the JDK into our project path and update the JDK in the project as well
- Connect to database under services tab Using the password, username and URL
- Passkey : UNTTechBots96
- Username : root
- URL : jdbc:mysql://localhost:3306/testdb
- Load the database into MySQL Workbench.

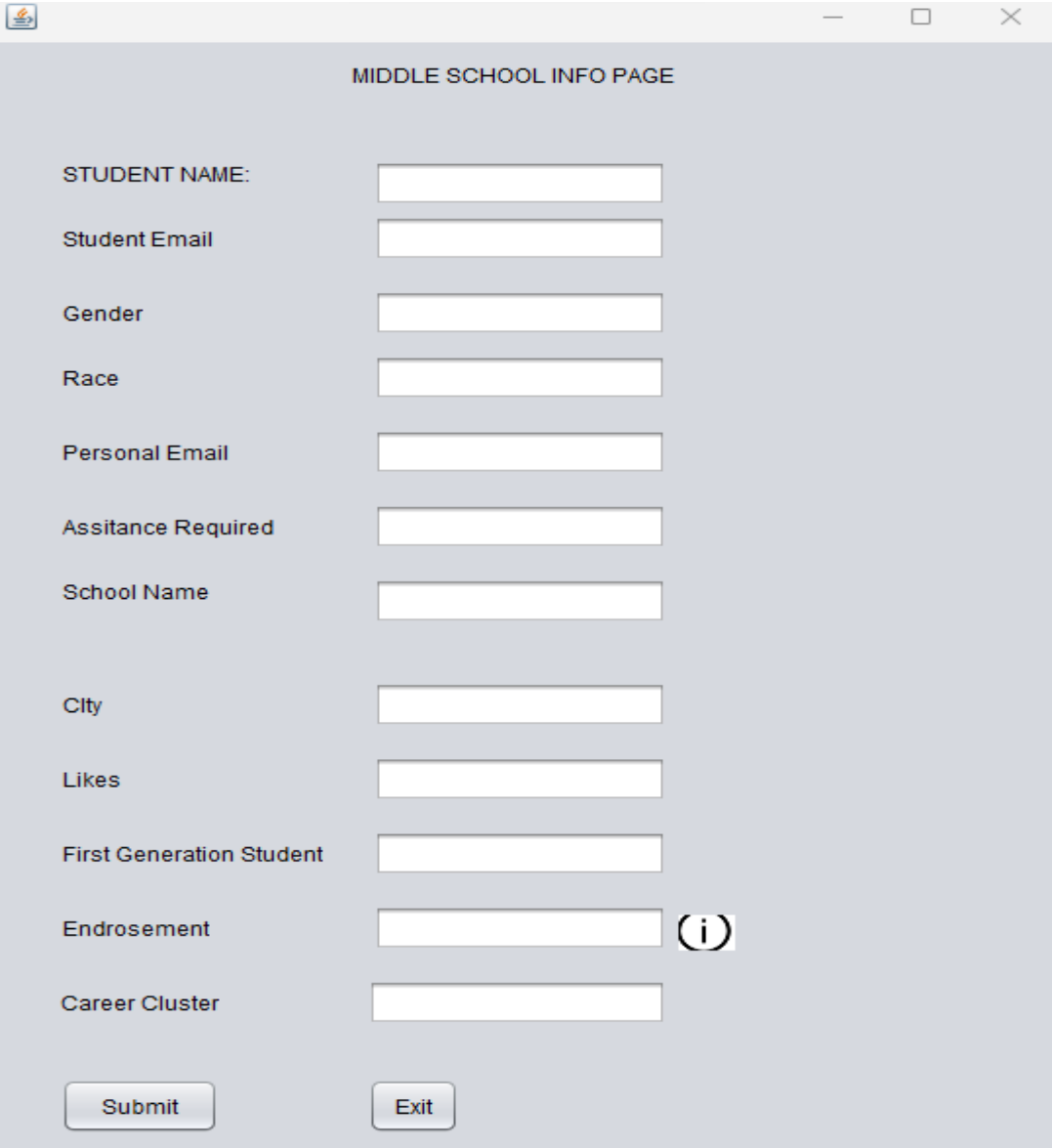
4.5 Project UI Components:

1.**HomePage:**



- This is the homepage and welcome page of our project.

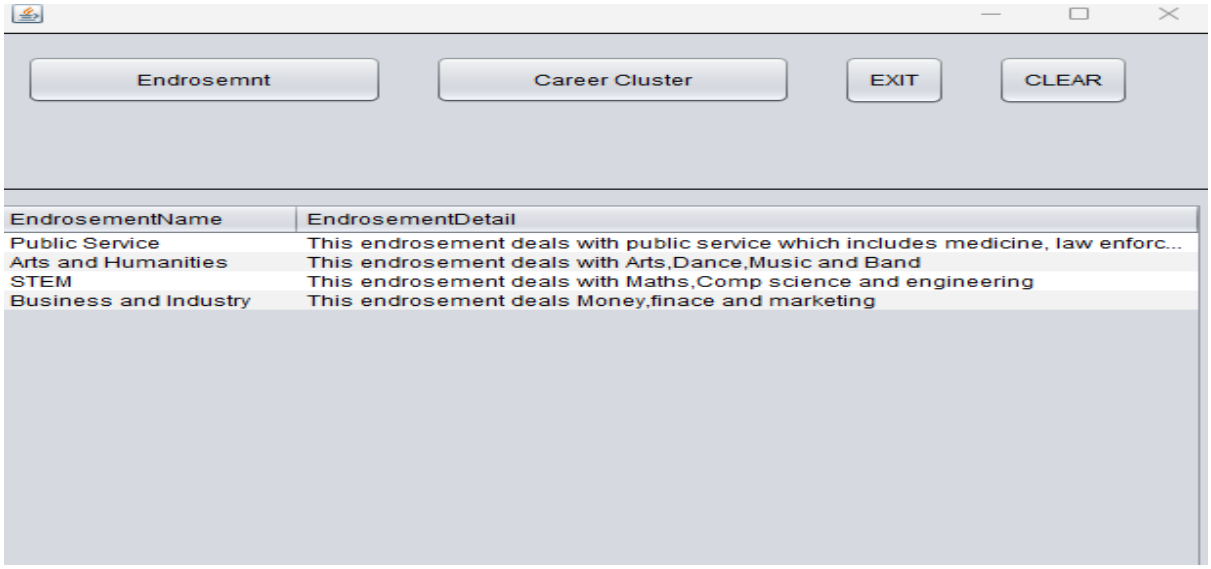
2.**Middle School Student Bio Page:**



- On clicking Middle School student button from the homepage, the above form open up where middle school students can fill in their details which will be inserted into '**middleschoolstudent'** table on clicking save.
- On clicking the 'i' Icon the user will be redirected to Endorsement page.

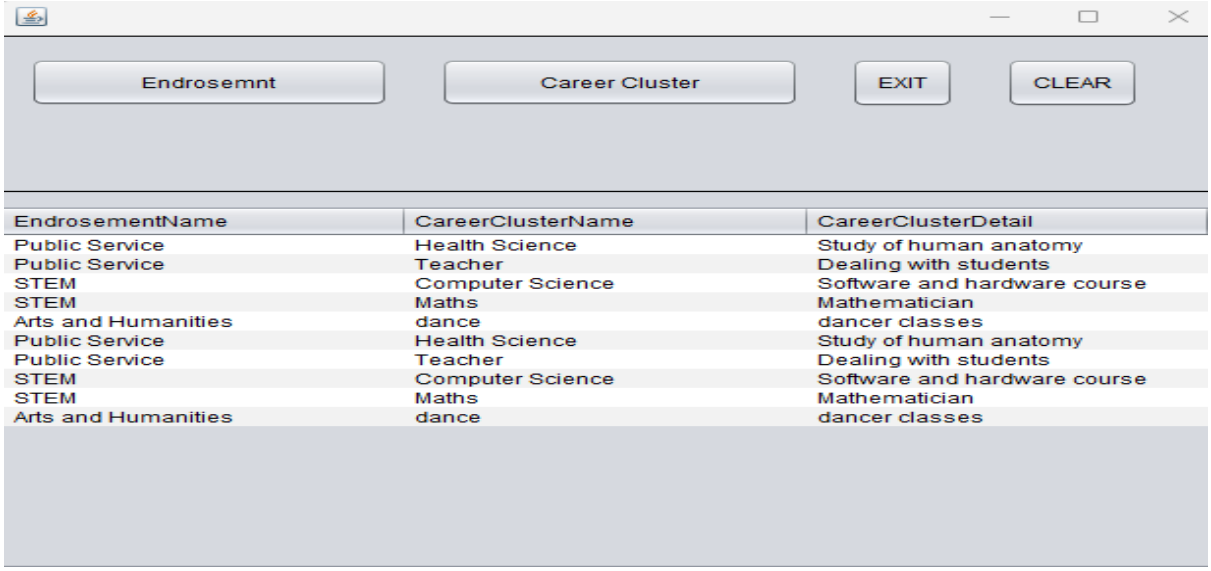
3.**Endorsement Page:**

- Here the User can view various Endorsement and career cluster US schools are offering by clicking Endorsement or career cluster button.
- On clicking the Clear button the table below will be cleared.
- The endorsement details are present in two tables '**Endrosement'** and '**EndrosementDetails'** and selected by inner join based on endorsement ID.



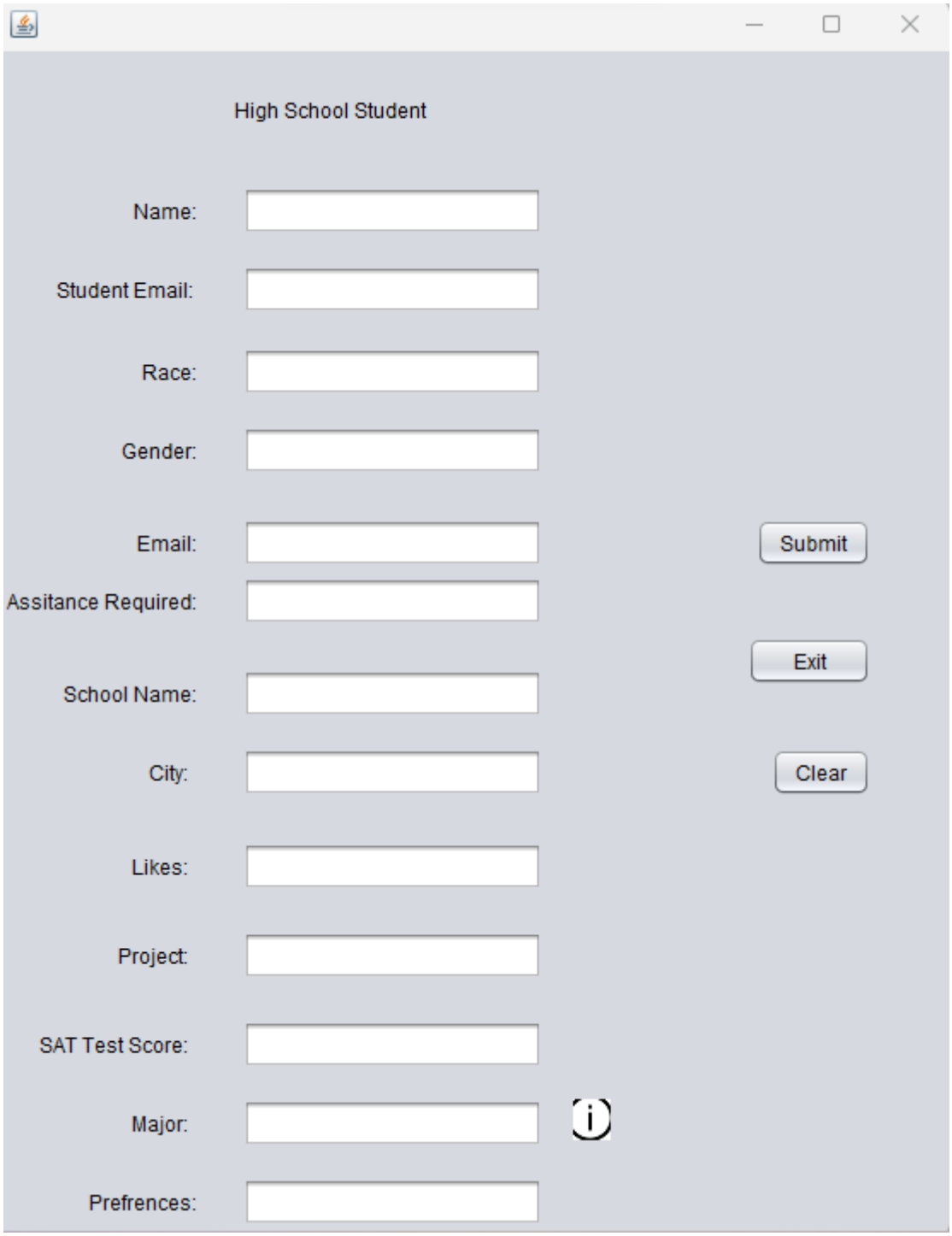
4.**Career Cluster:**

- As explained above the Career Cluster options can be viewed on clicking career cluster button.
- The '**Careercluster'** and '**endorsement'** table are selected using inner join operation for this operation.



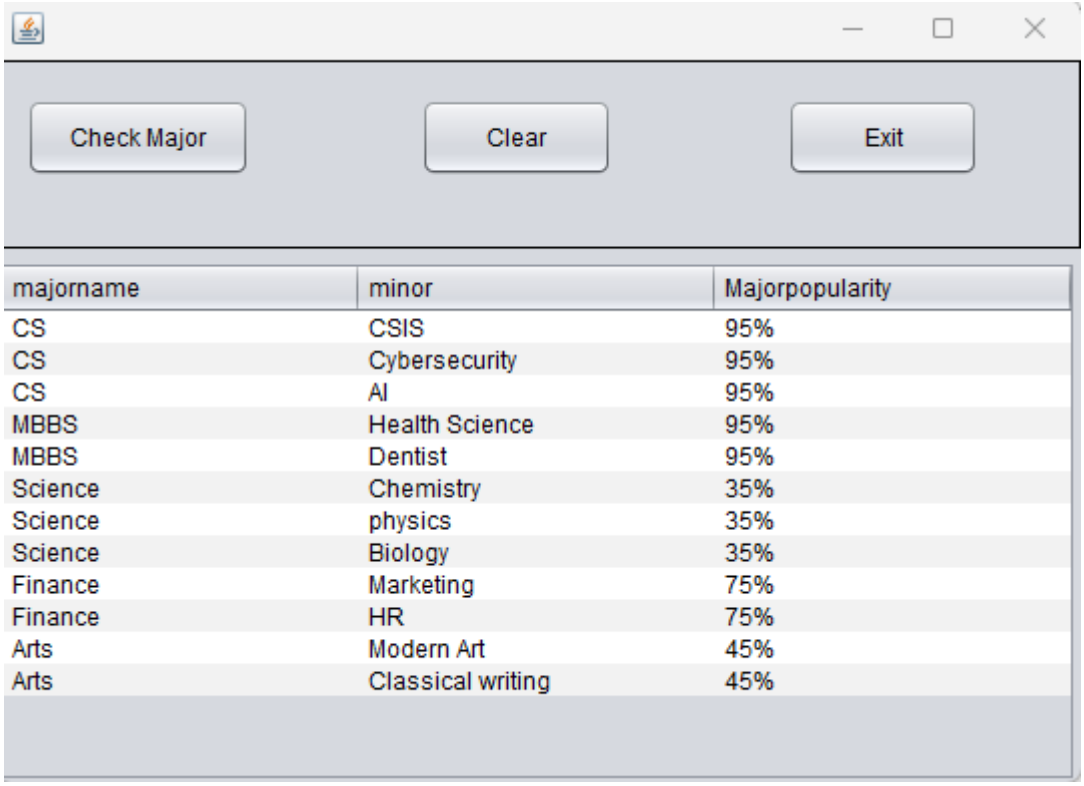
5.**High School Student Info Page**

On clicking the High School student button on homage the below form opens up where user enters their details and records are inserted into **'HighSchoolStudent'** table.



6.**Major:**

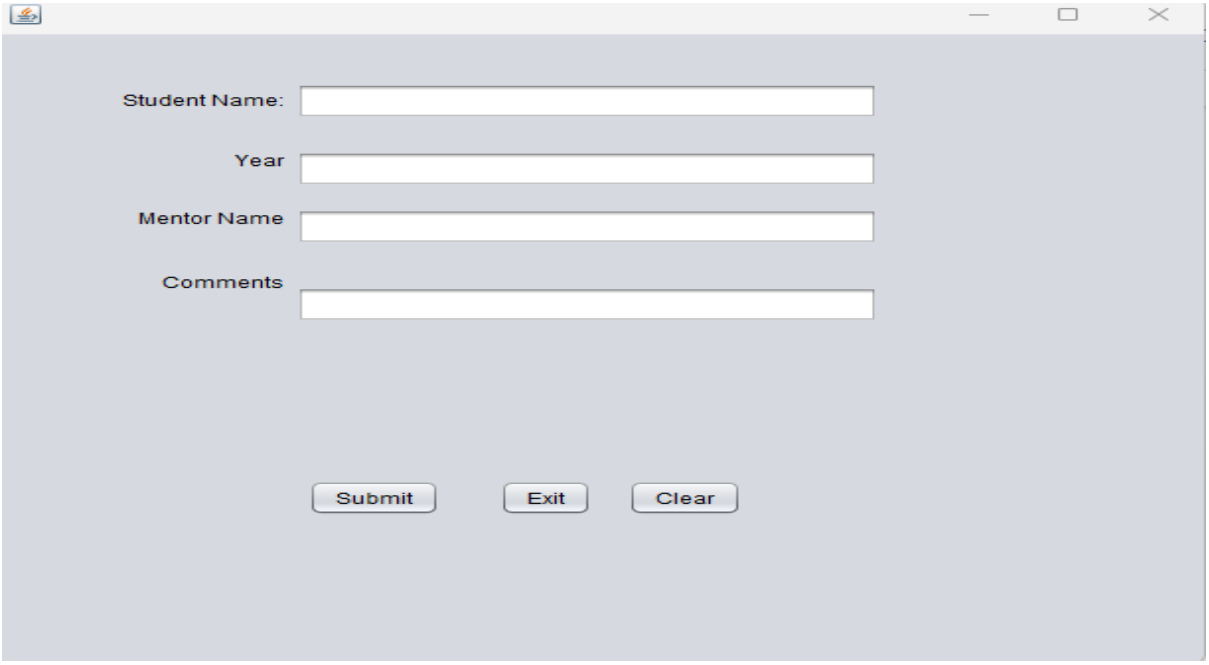
On clicking the 'i' Icon in the high school form the Major page opens up where users can view different Majors, Minors and its popularity from the table **Major** and **UnivMajor**.



majorname	minor	Majorpopularity
CS	CSIS	95%
CS	Cybersecurity	95%
CS	AI	95%
MBBS	Health Science	95%
MBBS	Dentist	95%
Science	Chemistry	35%
Science	physics	35%
Science	Biology	35%
Finance	Marketing	75%
Finance	HR	75%
Arts	Modern Art	45%
Arts	Classical writing	45%

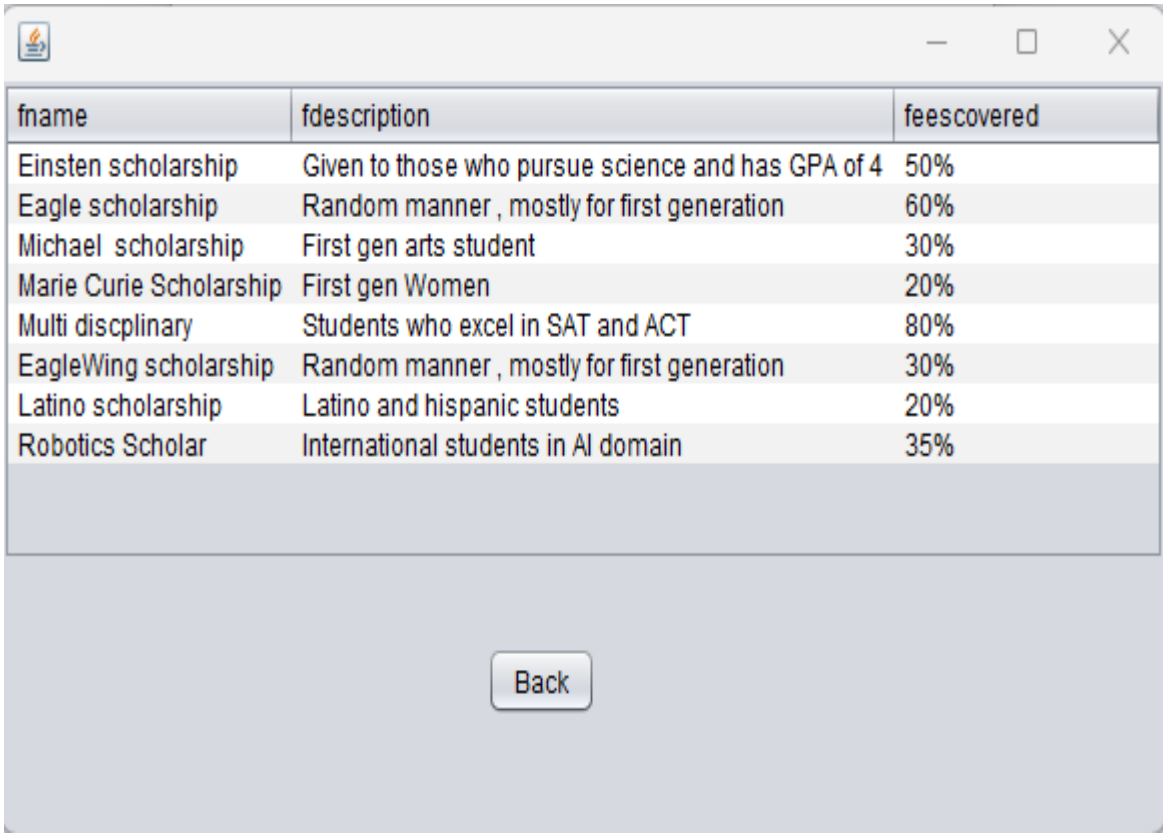
7. **Feedback :**

The students after a Mentoring session are done can enter their feedback which is then inserted into '**Feedback'** table.



8.**Scholarship:**

If an user wants to view the various scholarships offered then they can click Scholarship button in homepage and the details are selected from '**Scholarship**', table.

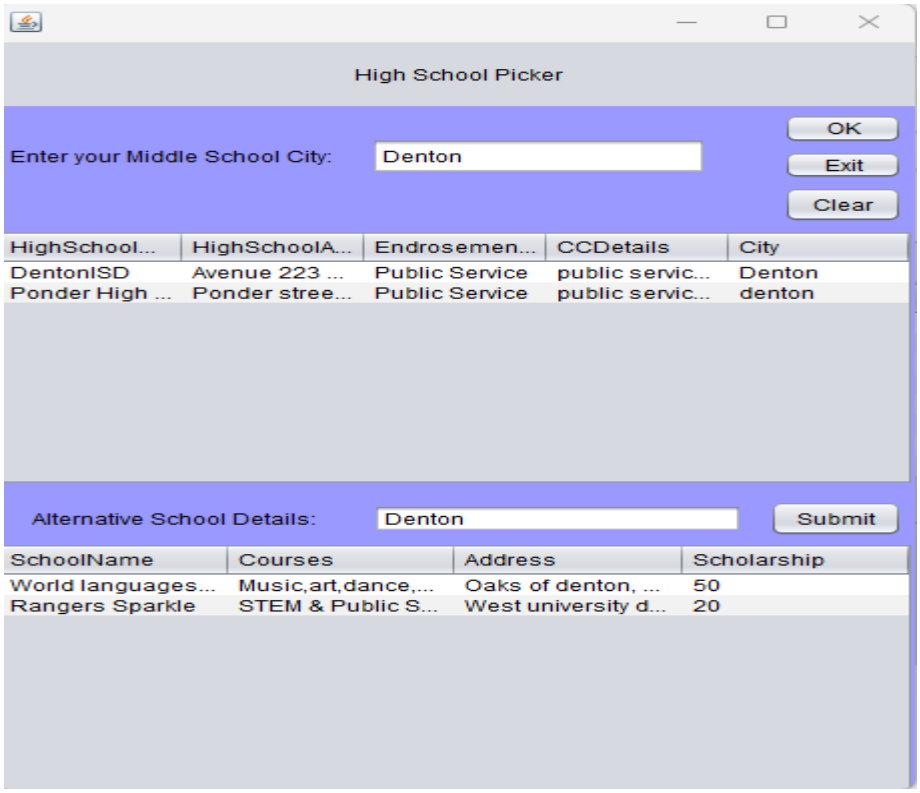


fname	fdescription	feescovered
Einsten scholarship	Given to those who pursue science and has GPA of 4	50%
Eagle scholarship	Random manner , mostly for first generation	60%
Michael scholarship	First gen arts student	30%
Marie Curie Scholarship	First gen Women	20%
Multi discplinary	Students who excel in SAT and ACT	80%
EagleWing scholarship	Random manner , mostly for first generation	30%
Latino scholarship	Latino and hispanic students	20%
Robotics Scholar	International students in AI domain	35%

Back

9.**High school and Alternative School Picker:**

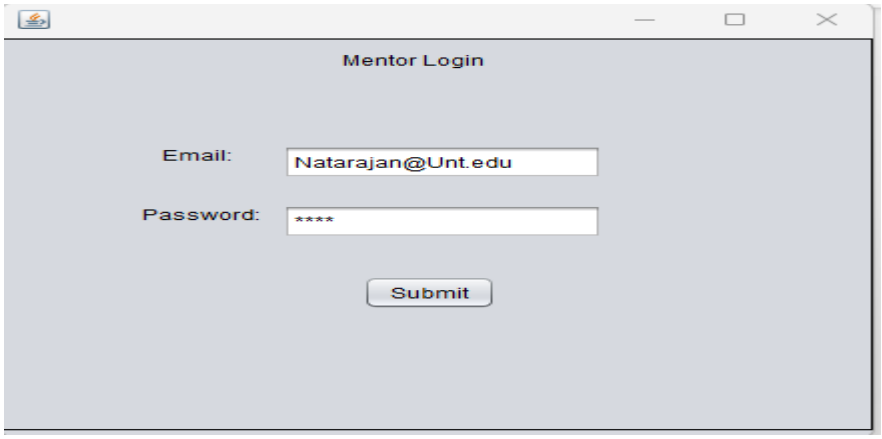
- The user can also select the Highschool that's in their city by entering their city. The high schools in their city are displayed based on the inner join of '**Middleschoollocation, highschool and endorsement**' table with City in the where Predicate.



- Likewise, if an user doesn't need high school and looking for alternative school they can enter the city and alternative schools in that particular city is displayed based on inner join of '**middleschoollocation'** and '**alternativeschool**' with city as where predicate.

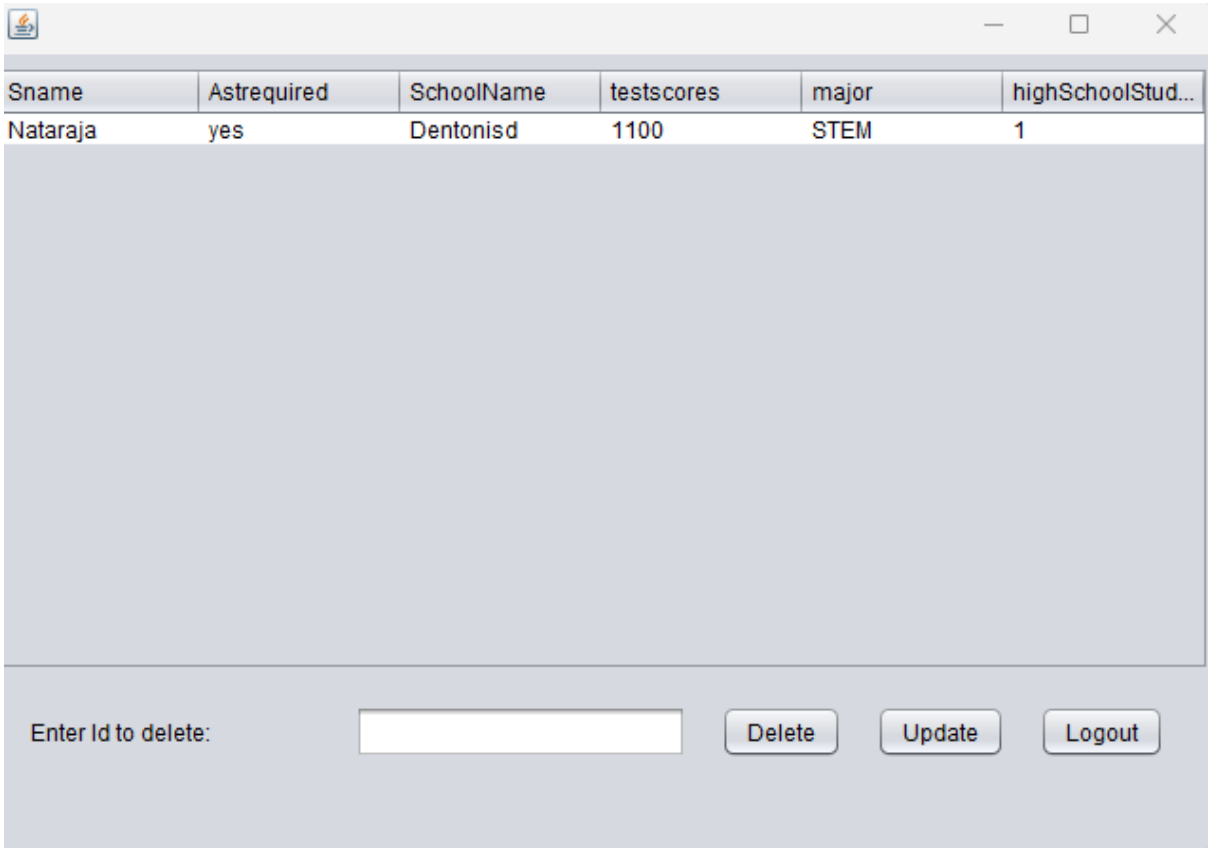
10.**Mentor Login :**

Finally, this is mentor login page. The mentors enter their credential which is validated and they enter their page on successful validation.



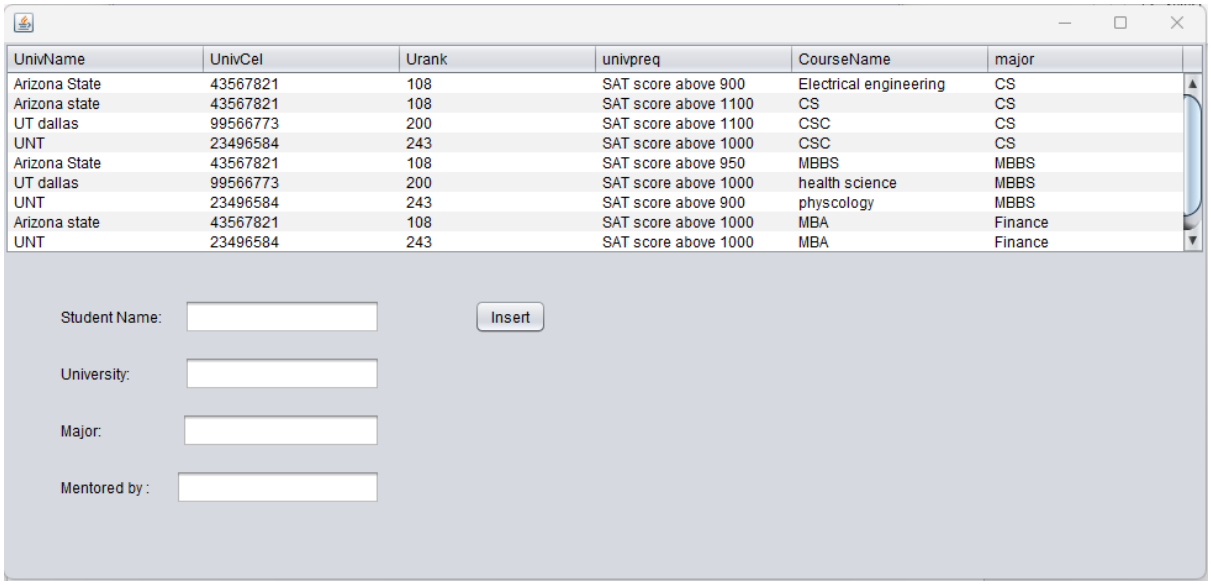
11.**Mentor Page**

- In this page, students' details are presented. The mentor can view it and click update button to update the students with a desired university based on their scores, major and field of interest.
- The mentors then mentor the students in zoom or teams based on their student email provided for which the students give their feedback.
- Once updated they can delete the record by entering the student ID visible to erase the record from '**highschoolstudent**' table.



12. **University Update Page for Mentor:**

- On clicking update the above page pops up which contains the university criteria based on which mentors update the student details and click insert.
- The details are then inserted and the process is completed when mentor is done mentoring and updating the record.


UnivName
UnivCel
Urank
univpreq
CourseName
major
Arizona State 43567821 108 SAT score above 900 Electrical engineering CS
Arizona state 43567821 108 SAT score above 1100 CS CS
UT dallas 99566773 200 SAT score above 1100 CSC CS
UNT 23496584 243 SAT score above 1000 CSC CS
Arizona State 43567821 108 SAT score above 950 MBBS MBBS
UT dallas 99566773 200 SAT score above 1000 health science MBBS
UNT 23496584 243 SAT score above 900 physcology MBBS
Arizona state 43567821 108 SAT score above 1000 MBA Finance
UNT 23496584 243 SAT score above 1000 MBA Finance
Student Name:
Insert
University:
Major:
Mentored by :