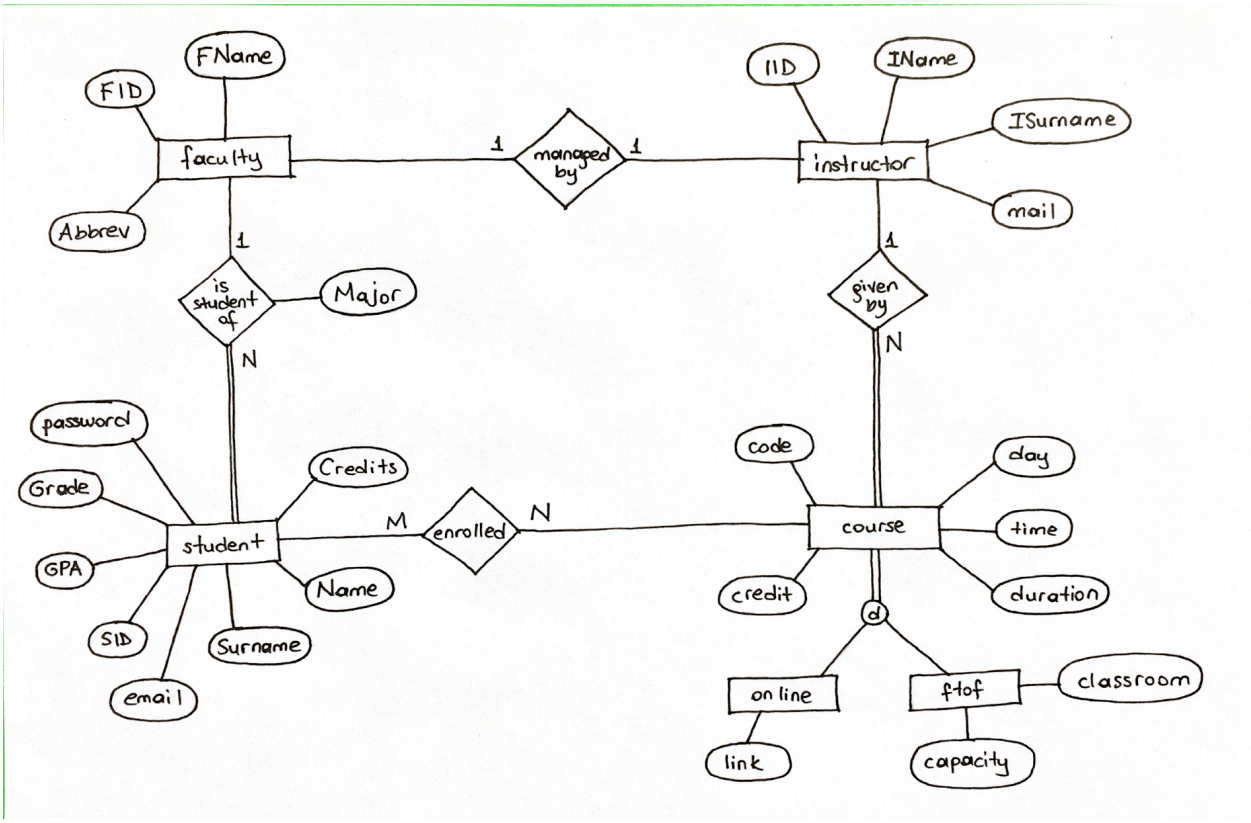
COMP 306- PROJECT REPORT

(Mehmet Çuhadar - Meryem Karakaş - Sinan Cem Erdoğan)

1)Project Description

We created student information management system for DU. In this system students can access all of the information about their academic lives, such as their current GPA, credits, course history, contact informations of their faculties, graduation status, instructor informations and schedule of their current courses. Beyond accessing their information they can add or drop courses. Students cannot add more than 5 courses and take less than 2 courses in a semester. Lastly, students can search available courses at the university.

2) ER DIAGRAM



3)

```
CREATE TABLE instructor(
        IID: int,
        IName: varchar(20),
        ISurname: varchar(20),
        mail: varchar(100),
        primary key(IID));

CREATE TABLE faculty(
        FID: int,
        Abbrev: varchar(4),
        FIID: int,
        FName: varchar(100),
        primary key(FID),
        foreign key(FIID) REFERENCES instructor(IID)
                on update cascade on delete restrict);


CREATE TABLE student(
        Name: varchar(20),
        SUrname: varchar(20),
        SID: int,
        GPA: REAL,
        Grade: int,
        Credits: int,
        email: varchar(100),
        password: varchar(40),
        SFID: int,
        Major: varchar(50),
        primary key(SID),
        foreign key(SFID) REFERENCES faculty(FID)
                on update cascade on delete restrict);


CREATE TABLE course(
        Code: varchar(10),
        Day: varchar(20),
        Time: varchar(10),
        Duration: int,
```

```
        Credit: int,
        CIID: int,
        primary key(Code),
        foreign key(CIID) REFERENCES instructor(IID)
                on update cascade on delete restrict);


CREATE TABLE ftof(
        FCODE: varchar(10),
        Capacity: int,
        Classroom: int,
        primary key(FCODE),
        foreign key(FCODE) REFERENCES course(Code)
                on update cascade on delete restrict);


CREATE TABLE online(
        OCODE: varchar(10),
        Link: varchar(100),
        primary key(OCODE),
        foreign key(OCODE) REFERENCES course(Code)
                on update cascade on delete restrict);


CREATE TABLE enrolled(
        SSID: int,
        CCODE: varchar(10),
        Letter: varchar(3),
        primary key(CCODE,SSID),
        foreign key(SSID) REFERENCES student(SID)
                on update cascade on delete restrict,
        foreign key(CCODE) REFERENCES course(Code)
                on update cascade on delete restrict);
```

4)Data Sources

We have seven tables, which are student,instructor,course,faculty,enrolled,ftof,online.

To populate the student table we generate names and surnames with online tools. For the rest of the attributes of the student table we used available formulas in excel and python to generate random majors.

To populate the instructor table,again, we generate names and surnames with online tools. For id and mail, we used excel properties and formulas.

To populate the course table, we identified the course names. Then, we used excel formulas to populate attributes of the table.

To populate the enrolled table, we used python for algorithms,which takes student grades and assigns courses and letters according to their grades.

To populate the ftof and online table, we used excel functions.

Finally, after creating the tables, we import these tables into database using data import wizard property of sql workbench.

5)Complex SQL Queries

```
String query = "select sum(credit) "
               +"from student,enrolled,course "
               + "where sid = ssid and ccode = code and letter is not null and email = " + "'"+mail+"'";
```

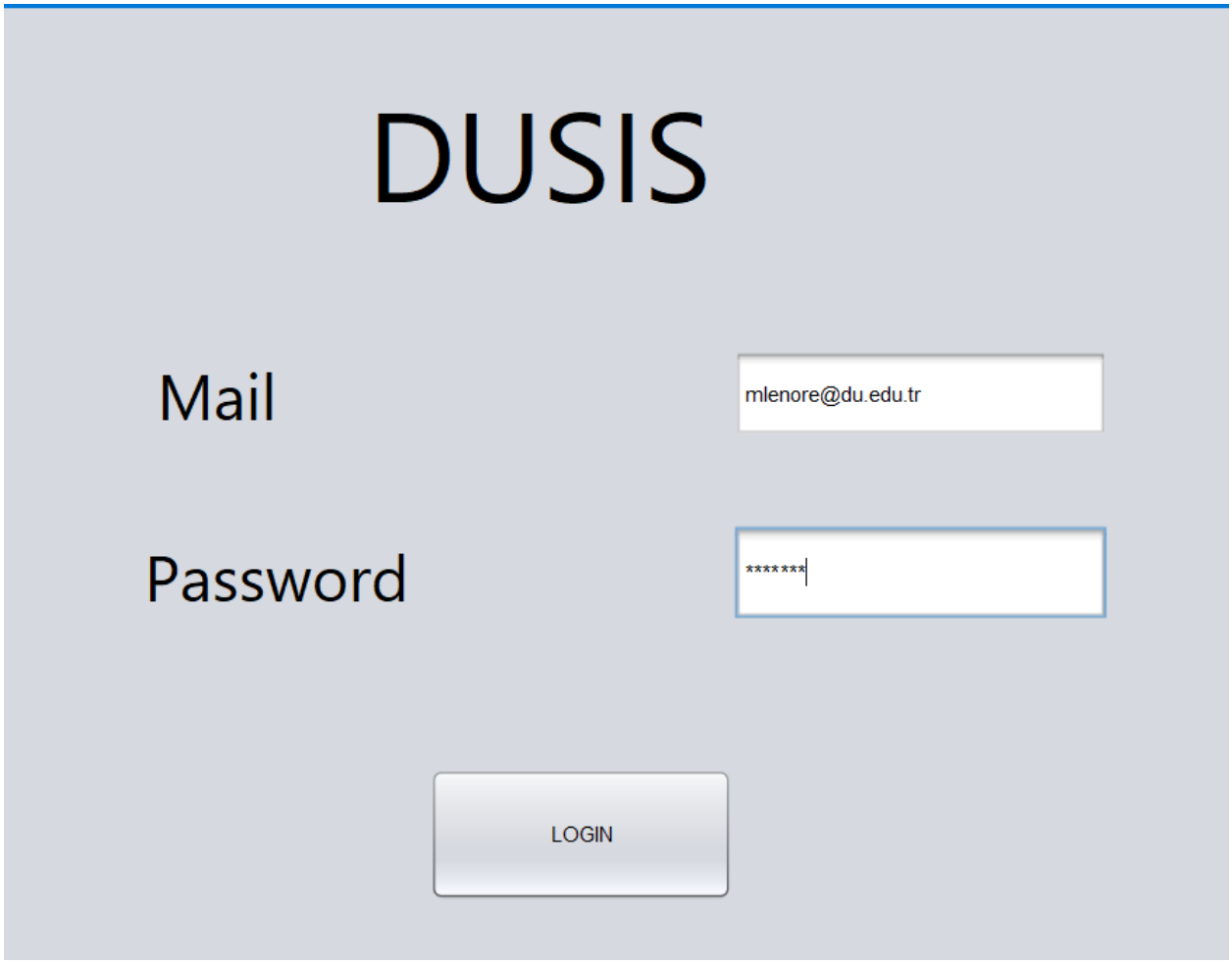
```
String query = "select code,day,duration,time,credit,iname,isurname "
              +"from course inner join instructor on ciid = iid "
              + "where code in (select ocode from online) and code like " + "'"+class_input.getText()+"%'";
```

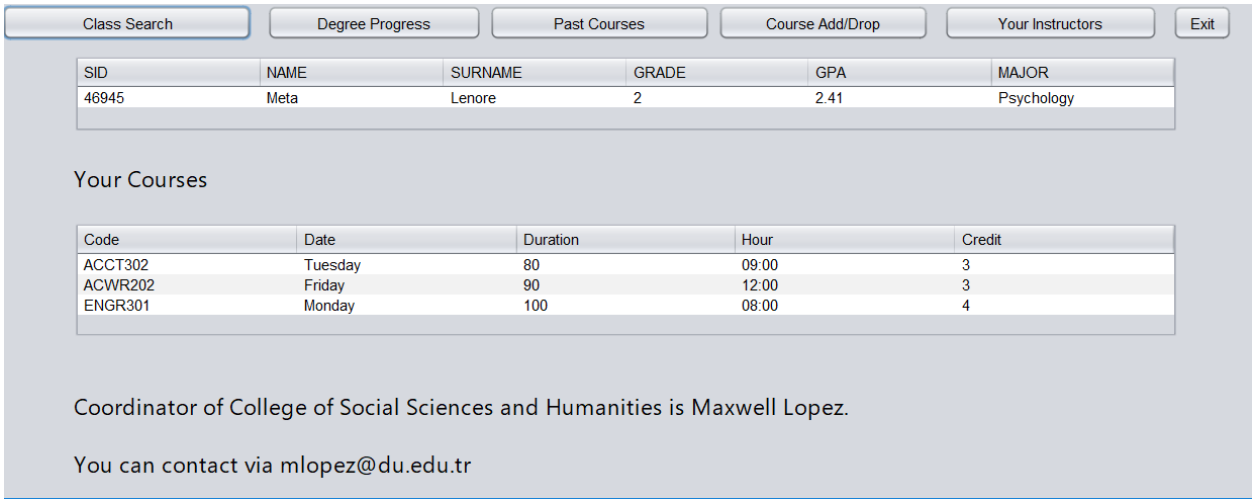
```
String query = "select code,mail,iname,isurname "
        + "from course inner join instructor on ciid = iid "
        + "where code in (select ccode "
                    + "from student inner join enrolled on sid = ssid "
                     + "where letter is null and email = '"+mail+"')";
```

```
String query = "select Count(code) "
              +"from student,enrolled,course "
              + "where sid=ssid and code=ccode and letter is null and email = " + "'"+mail+"'";
```

```
String query = "select code "
               +"from student,enrolled,course "
               + "where sid=ssid and code=ccode and letter is null and email = " + "'"+mail+"'";
String query2 = "select code "
               + "from course "
               + "where code not in (" +query +") "
               + "order by code";
```

6)Screenshots



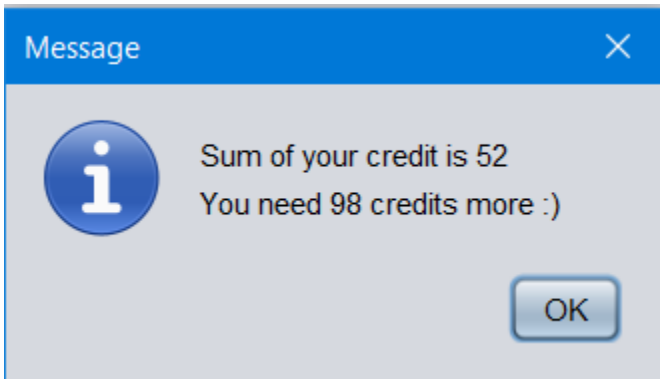


CLASS SEARCH

Math

Code	Day	Duration	Time	Credit	Type	Instructor
MATH102	Tuesday	100	09:00	3	Online	Kathy Cooper
MATH202	Thursday	110	11:00	3	Online	Austin Peters
MATH302	Monday	110	13:00	3	Online	Melissa Harris
MATH402	Wednesday	100	15:00	3	Online	Olivia Collins
MATH101	Monday	100	08:00	4	Face To Face	Robert Williams
MATH201	Wednesday	100	10:00	3	Face To Face	Patrick White
MATH301	Friday	110	12:00	4	Face To Face	Lance Jones
MATH401	Tuesday	100	14:00	3	Face To Face	Edward Caldwell

BACK



PAST COURSES

Code	Credit	Letter	Credit	Instructor
ACWR201	3	C	3	Sara West
ARHA102	3	C	3	Kevin Adams
CHEM102	3	B+	3	Jose Dixon
COMP101	4	C-	4	Daniel Ferrell
ECON101	3	C+	3	Gina Williams
ENGR101	4	F	4	Troy Burke
ETHC201	4	C	4	Timothy Blake
HUMS102	3	B-	3	James Cruz
INDR201	4	F	4	Cassandra Sutton
MAVA201	4	F	4	Jessica Newman
MBGE101	3	C	3	Emily Contreras
MECH201	4	C	4	Jose Carson
PHIL102	3	C-	3	Ryan Diaz
SOCI102	4	B	4	Heather Smith
SOSC101	3	C-	3	Mark Nguyen

BACK

Course Add/Drop

Add a Course

ACCT101

ADD

Drop A Course

ACCT302

DROP

Successfully Done

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Your Instructors

Code	Instructor	Mail
ENGR301	Olivia Whitehead	owhitehead@du.edu.tr
ACCT302	Frank Flores	fflores@du.edu.tr
ACWR202	William King	wking@du.edu.tr

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