

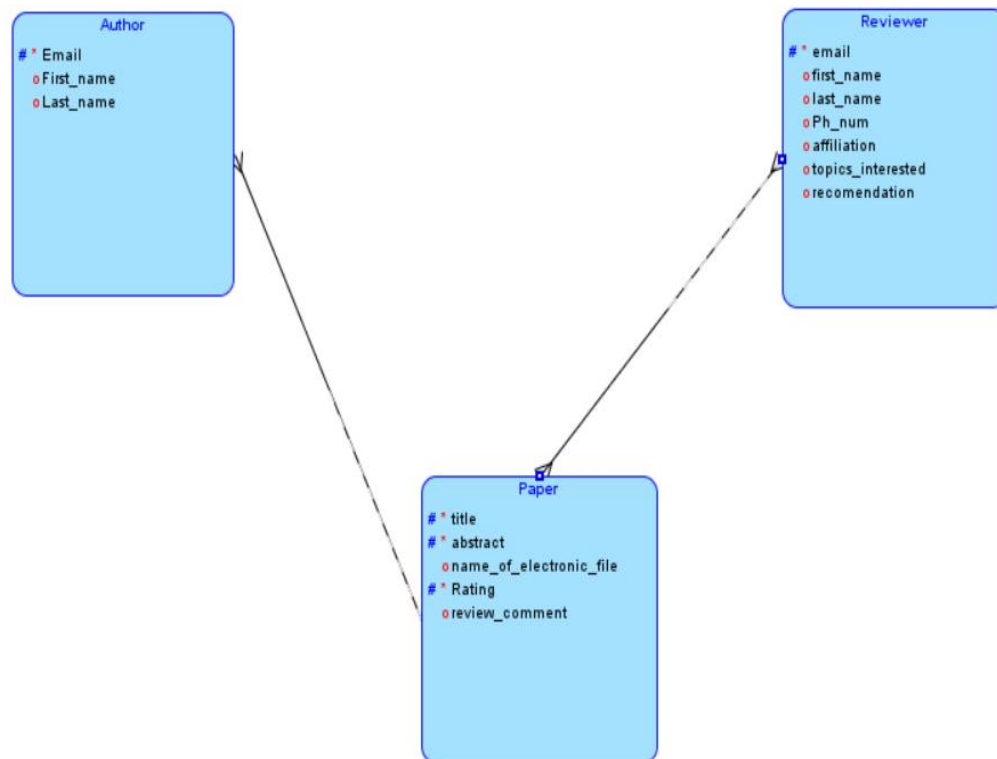
**Name:** **Ibadullah Shaikh**

**Roll No:** **19K-0259**

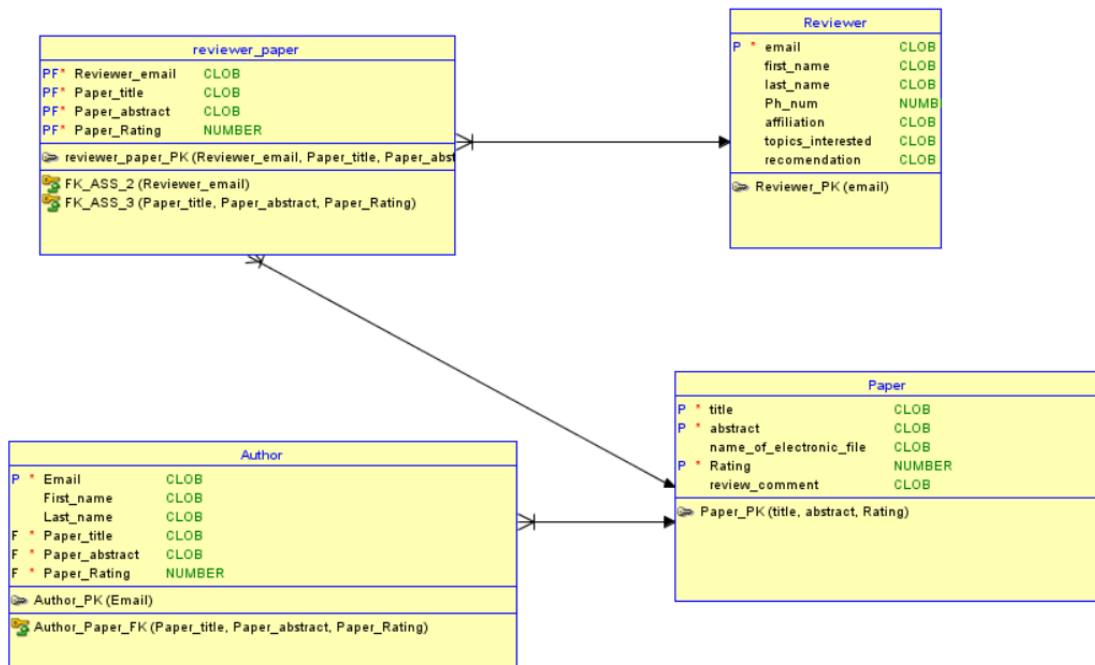
**Lab-07 Tasks.**

**Q1.**

⇒ **Logical:**



## ⇒ Relational:



## ⇒ DDL:

```

-- Generated by Oracle SQL Developer Data Modeler 4.1.1.888
-- at:    2021-11-12 19:10:22 PKT
-- site:  Oracle Database 11g
-- type:  Oracle Database 11g
  
```

```

CREATE TABLE Author
(
    Email CLOB NOT NULL ,
    First_name CLOB ,
    Last_name CLOB ,
    Paper_title CLOB NOT NULL ,
    Paper_abstract CLOB NOT NULL ,
    Paper_Rating NUMBER NOT NULL
);
ALTER TABLE Author ADD CONSTRAINT Author_PK PRIMARY KEY ( Email ) ;
  
```

```

CREATE TABLE Paper
  
```

```
(
    title CLOB NOT NULL ,
    abstract CLOB NOT NULL ,
    name_of_electronic_file CLOB ,
    Rating NUMBER NOT NULL ,
    review_comment CLOB
);
ALTER TABLE Paper ADD CONSTRAINT Paper_PK PRIMARY KEY ( title, abstract, Rating ) ;
```

```
CREATE TABLE Reviewer
(
    email CLOB NOT NULL ,
    first_name CLOB ,
    last_name CLOB ,
    Ph_num NUMBER ,
    affiliation CLOB ,
    topics_interested CLOB ,
    recomendation CLOB
);
ALTER TABLE Reviewer ADD CONSTRAINT Reviewer_PK PRIMARY KEY ( email ) ;
```

```
CREATE TABLE reviewer_paper
(
    Reviewer_email CLOB NOT NULL ,
    Paper_title CLOB NOT NULL ,
    Paper_abstract CLOB NOT NULL ,
    Paper_Rating NUMBER NOT NULL
);
ALTER TABLE reviewer_paper ADD CONSTRAINT reviewer_paper_PK PRIMARY KEY (
Reviewer_email, Paper_title, Paper_abstract, Paper_Rating ) ;
```

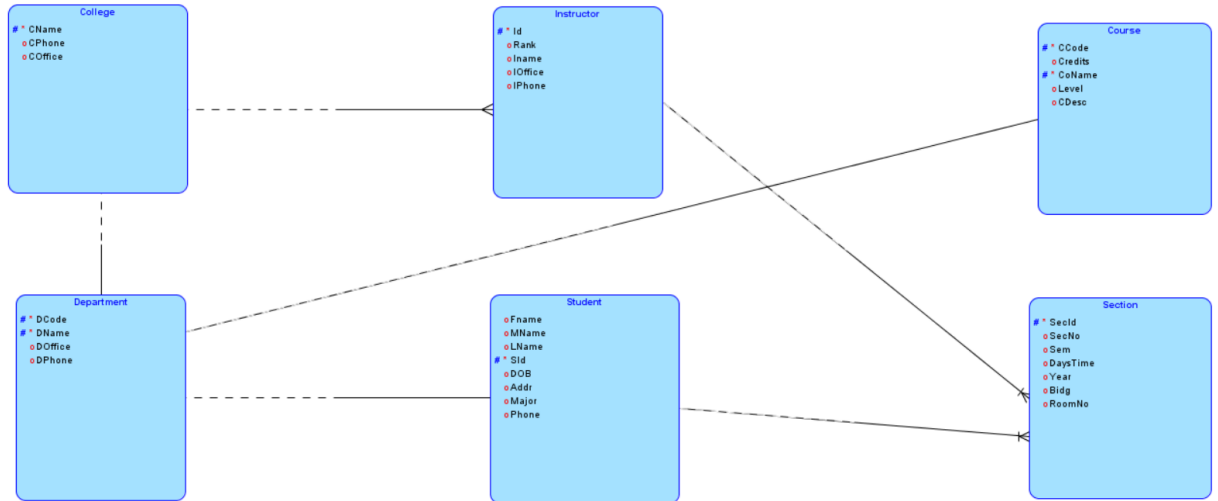
```
ALTER TABLE Author ADD CONSTRAINT Author_Paper_FK FOREIGN KEY ( Paper_title,
Paper_abstract, Paper_Rating ) REFERENCES Paper ( title, abstract, Rating ) ;
```

```
ALTER TABLE reviewer_paper ADD CONSTRAINT FK_ASS_2 FOREIGN KEY ( Reviewer_email )
REFERENCES Reviewer ( email ) ;
```

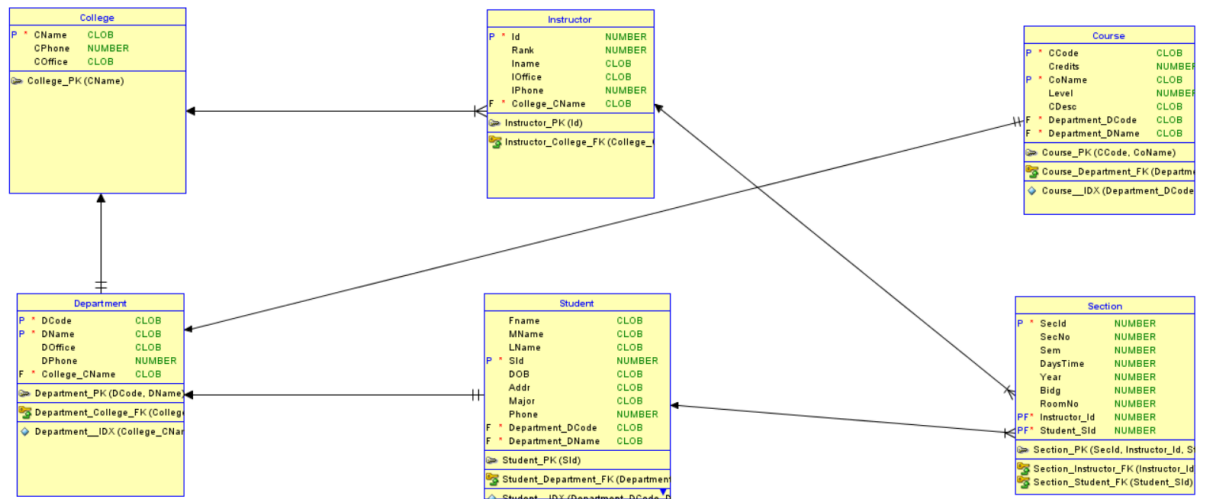
```
ALTER TABLE reviewer_paper ADD CONSTRAINT FK_ASS_3 FOREIGN KEY ( Paper_title,
Paper_abstract, Paper_Rating ) REFERENCES Paper ( title, abstract, Rating ) ;
```

## Q2:

⇒ **Logical:**



⇒ **Relational:**



⇒ **DDL:**

```
CREATE TABLE College
```

```
( CName CLOB NOT NULL , CPhone NUMBER , COffice CLOB
```

```
);
```

```
ALTER TABLE College ADD CONSTRAINT College_PK PRIMARY KEY ( CName );
```

```
CREATE TABLE Course
```

```
(
```

```
CCode CLOB NOT NULL ,
```

```
Credits NUMBER ,
```

```
CoName CLOB NOT NULL ,
```

```
"Level" NUMBER ,
```

```
CDesc CLOB ,
```

```
Department_DCode CLOB NOT NULL ,
```

```
Department_DName CLOB NOT NULL
```

```
);
```

```
CREATE UNIQUE INDEX Course__IDX ON Course
```

```
(
```

```
Department_DCode ASC , Department_DName ASC
```

```
)
```

```
;
```

```
ALTER TABLE Course ADD CONSTRAINT Course_PK PRIMARY KEY ( CCode, CoName );
```

```
CREATE TABLE Department
```

```
(
```

```
DCode CLOB NOT NULL ,
DName CLOB NOT NULL ,
DOffice CLOB ,
DPhone NUMBER ,
College_CName CLOB NOT NULL
);
CREATE UNIQUE INDEX Department__IDX ON Department
(
College_CName ASC
)
;
ALTER TABLE Department ADD CONSTRAINT Department_PK PRIMARY KEY ( DCode, DName );
```

```
CREATE TABLE Instructor
(
Id NUMBER NOT NULL ,
Rank NUMBER ,
Iname CLOB ,
IOffice CLOB ,
IPhone NUMBER ,
College_CName CLOB NOT NULL
);
ALTER TABLE Instructor ADD CONSTRAINT Instructor_PK PRIMARY KEY ( Id );
```

```
CREATE TABLE Section
```

```
(  
    SecId    NUMBER NOT NULL ,  
    SecNo    NUMBER ,  
    Sem      NUMBER ,  
    DaysTime NUMBER ,  
    YEAR     NUMBER ,  
    Bidg     NUMBER ,  
    RoomNo   NUMBER ,  
    Instructor_Id NUMBER NOT NULL ,  
    Student_SId NUMBER NOT NULL  
);
```

```
ALTER TABLE Section ADD CONSTRAINT Section_PK PRIMARY KEY ( SecId, Instructor_Id,  
Student_SId );
```

```
CREATE TABLE Student
```

```
(  
    FName CLOB ,  
    MName CLOB ,  
    LName CLOB ,  
    SId NUMBER NOT NULL ,  
    DOB CLOB ,  
    Addr CLOB ,  
    Major CLOB ,  
    Phone NUMBER ,  
    Department_DCode CLOB NOT NULL ,  
    Department_DName CLOB NOT NULL
```

```
);  
CREATE UNIQUE INDEX Student__IDX ON Student  
(  
    Department_DCode ASC , Department_DName ASC  
)  
;  
ALTER TABLE Student ADD CONSTRAINT Student_PK PRIMARY KEY ( SId );
```

```
ALTER TABLE Course ADD CONSTRAINT Course_Department_FK FOREIGN KEY (  
    Department_DCode, Department_DName ) REFERENCES Department ( DCode, DName );
```

```
ALTER TABLE Department ADD CONSTRAINT Department_College_FK FOREIGN KEY (  
    College_CName ) REFERENCES College ( CName );
```

```
ALTER TABLE Instructor ADD CONSTRAINT Instructor_College_FK FOREIGN KEY (  
    College_CName ) REFERENCES College ( CName );
```

```
ALTER TABLE Section ADD CONSTRAINT Section_Instructor_FK FOREIGN KEY ( Instructor_Id )  
REFERENCES Instructor ( Id );
```

```
ALTER TABLE Section ADD CONSTRAINT Section_Student_FK FOREIGN KEY ( Student_SId )  
REFERENCES Student ( SId );
```

```
ALTER TABLE Student ADD CONSTRAINT Student_Department_FK FOREIGN KEY (  
    Department_DCode, Department_DName ) REFERENCES Department ( DCode, DName );
```