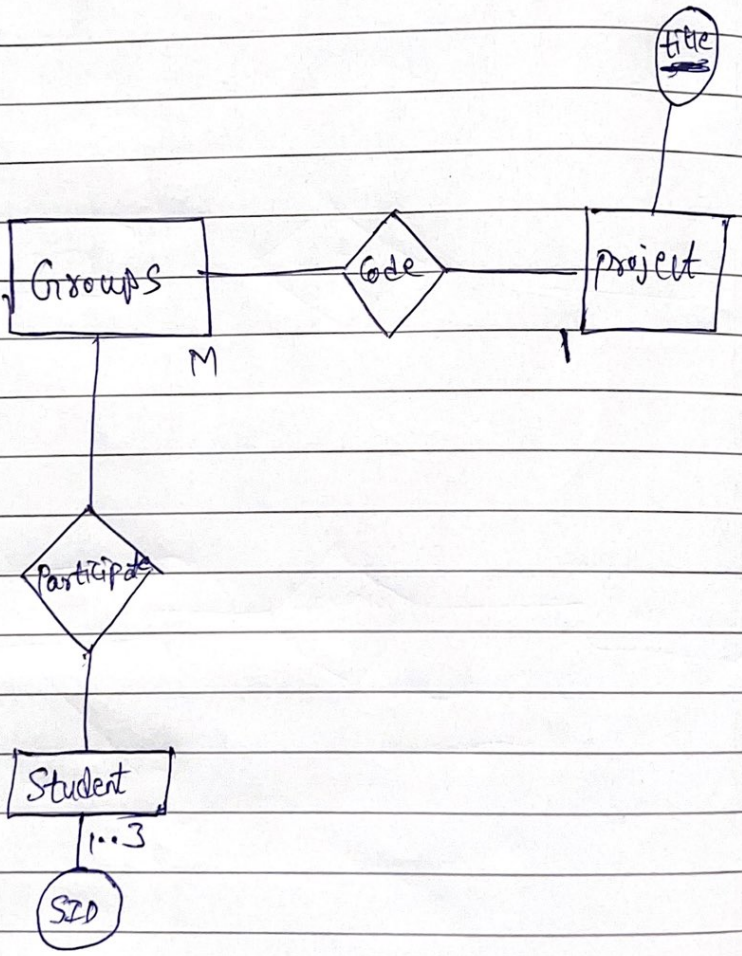
7.1 $t_1 \times t_2$

P	Q	$t_1.R$	A	B	$t_2.R$
10	a	5	10	b	6
10	a	5	25	c	3
10	a	5	10	b	5
15	b	8	10	b	6
15	b	8	25	c	3
15	b	8	10	b	5
25	a	6	10	b	6
25	a	6	25	c	3
25	a	6	10	b	5

7.2 $t_1 \bowtie t_2$

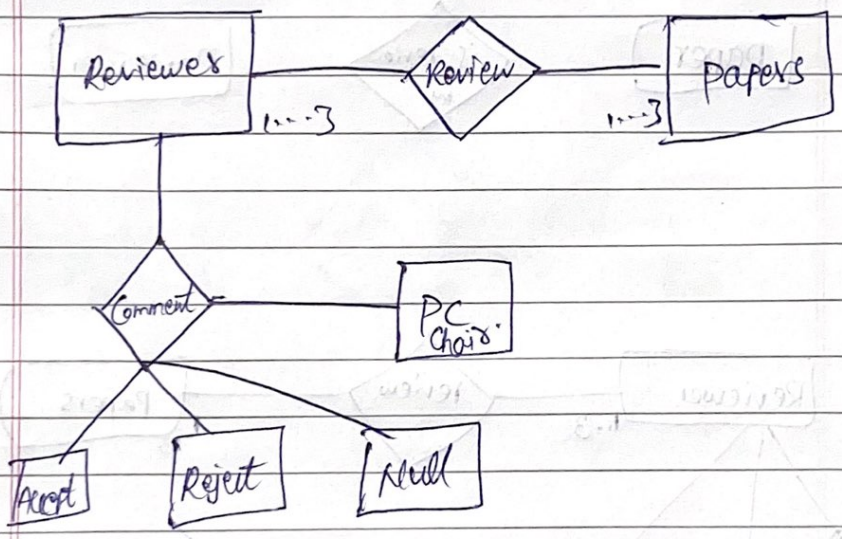
P	Q	R	A	B
10	a	5	10	b
25	a	6	10	b

Q.1



classmate
Date
Page

9.2



10.1

```
Create Table Employee (
        Emp-ID      INT ,
        E-name      Varchar,
        gender      varchar,
        disability  varchar,
        health-status  Varchar,
        PRIMARY KEY (Emp-ID))

Create Table Company (

        Company-name    Varchar
        tax-ID          Varchar
        Company-Status  Varchar
        PRIMARY KEY (Company-Name))

Create Table Lives (
        Emp-ID  INT,
        Street  Varchar,
        City    Varchar,
        PRIMARY KEY (EMP-ID))
    Foreign Key emp-id references employee

create Table Works (
        Emp-ID  INT,
        Company-name  Varchar
        Salary  INT,
    PRIMERY KEY (Emp-ID, Company-name))
foreign key Emp-ID references Employee)
foreign key Company_name referenced Company.
```

Create Table located_in (

Company_name varchar,
City varchar,
PRIMARY KEY (company_name))
foreign key Company_name refers Company).

10.2

a) $\Pi_{e\_name}\left(\sigma_{gender = 'female' \wedge Company\_name = 'Ruston\ Bank'}(Employee \times Works)\right)$

b) $\Pi_{Company\_name}\left(\sigma_{City = (\Pi City(\sigma_{company\_name = 'Ruston\ bank'}(Located\ In)))}(Employee \times works)\right)$

c) $\Pi_{e\_name} = \left(\sigma_{works.Company name = "Ruston\ Bank" \wedge Work.EmpID = Employee.Emp\_ID}(Employee \times works \times Lives)\right)$

d) $\Pi_{e\_name, street, city}\left(\sigma_{works.Company\_Name = "Ruston\ Bank" \wedge works\_Salary = \$10,500 \wedge works.Emp\_ID = Employee.E\_ID \wedge works.Emp\_ID = Lives.Emp\_ID}\right)$