Lab 8

1) $A1 \leftarrow (\sigma_{PNAME='ProductX'}(PROJECT)) \bowtie_{Pnumber=Pno} (WORKS\_ON)$

$A2 \leftarrow (EMPLOYEE) \bowtie_{Ssn=Essn} (\sigma_{HOURS>10}(R1))$

$A3 \leftarrow \pi_{Fname}(\sigma_{Dno=5}(R2))$

Fname
John
Joyce

2) $R1(Pno, Ssn) \leftarrow \pi_{Pno, Essn}(WORKS\_ON)$

$R2(Pno) \leftarrow \pi_{Pnumber}(PROJECT)$

$R3 \leftarrow R1 \div R2$

$Result \leftarrow \pi_{Fname}(EMPLOYEE * R2)$

Result: Empty

3) $R1(Dnumber, Avg\_salary) \leftarrow_{Dno} \Im_{AVG\ Salary}(Employee)$

$Result \leftarrow \pi_{Dname, Avg\_salary}(R1 * Department)$

Result:

Dname	Avg_salary
Research	33250
Administration	31000
Headquarters	55000

4) $R1 \leftarrow \pi_{Ssn}(EMPLOYEE)$

$R2(Ssn) \leftarrow \pi_{Essn}(WORKS\_ON)$

$R3 \leftarrow R1 - R2$

$Result \leftarrow \pi_{Fname}(EMPLOYEE * R3)$

Result: Empty

5) $Result(Avg\_female\_salary) \leftarrow \Im_{Avg\ Salary}(\sigma_{SEX='F'}(EMPLOYEE))$

Result:

Avg_female_salary
31000