

Project 1

Section 1

a. INSERT INTO

```
Project (project_id,project_title,project_manager,project_budget)
VALUES(1,"Pension System","M Phillips",25500);
```

INSERT INTO

```
Project (project_id,project_title,project_manager,project_budget)
VALUES(2,"Salary System","H Martin",15500);
```

INSERT INTO

```
Project (project_id,project_title,project_manager,project_budget)
VALUES(3,"HR System","K Lewis",10500);
```

b. INSERT INTO

```
Department(dept_id,dept_name)
VALUES(100,"IT");
```

INSERT INTO

```
Department(dept_id,dept_name)
VALUES(101,"HR");
```

INSERT INTO

```
Department(dept_id,dept_name)
VALUES(102,"DB");
```

c. INSERT INTO

```
employee(employee_id,employee_name,dept_id)
VALUES(200,"A Smith",100);
```

INSERT INTO

```
employee(employee_id,employee_name,dept_id)
VALUES(201,"B Lewis",100);
```

INSERT INTO

```
employee(employee_id,employee_name,dept_id)
VALUES(202,"D Rich",101);
```

INSERT INTO

```
employee(employee_id,employee_name,dept_id)
```

```
VALUES(203,"E Ford",101);  
INSERT INTO  
employee(employee_id,employee_name,dept_id)  
VALUES(204,"F James",102);
```

```
d. INSERT INTO  
Proj_Emp(project_id,employee_id,hourly_rate)  
VALUES(1,200,25);  
INSERT INTO  
Proj_Emp(project_id,employee_id,hourly_rate)  
VALUES(1,201,18.5);  
INSERT INTO  
Proj_Emp(project_id,employee_id,hourly_rate)  
VALUES(1,202,21);  
INSERT INTO  
Proj_Emp(project_id,employee_id,hourly_rate)  
VALUES(2,203,20);  
INSERT INTO  
Proj_Emp(project_id,employee_id,hourly_rate)  
VALUES(2,204,17);  
INSERT INTO  
Proj_Emp(project_id,employee_id,hourly_rate)  
VALUES(3,201,17.5);  
INSERT INTO  
Proj_Emp(project_id,employee_id,hourly_rate)  
VALUES(3,202,16.25);
```

Section 2

```
a. SELECT project_title, project_manager, project_budget,  
Employee.employee_name,  
Department.dept_name,  
Proj_Emp.hourly_rate  
from Project
```

```

INNER JOIN Proj_Emp
ON Project.project_id=Proj_Emp.project_id
INNER JOIN Employee
ON Proj_Emp.employee_id=Employee.employee_id
INNER JOIN Department
ON Employee.dept_id=Department.dept_id
ORDER BY 1,2,3,4;

```

project_title	project_manager	project_budget	employee_name	dept_name	hourly_rate
HR System	K Lewis	10500	B Lewis	IT	17.50
HR System	K Lewis	10500	D Rich	HR	16.25
Pension System	M Phillips	25500	A Smith	IT	25.00
Pension System	M Phillips	25500	B Lewis	IT	18.50
Pension System	M Phillips	25500	D Rich	HR	21.00
Salary System	H Martin	15500	E Ford	HR	20.00
Salary System	H Martin	15500	F James	DB	17.00

- b. SELECT employee_name,
MAX(Proj_Emp.Hourly_rate) as 'max_hourly_rate'
from Employee
INNER JOIN Proj_Emp
on Employee.employee_id=Proj_Emp.employee_id
GROUP BY Employee.employee_name;

employee_name	max_hourly_rate
A Smith	25.00
B Lewis	18.50
D Rich	21.00
E Ford	20.00
F James	17.00

- c. SELECT project_title,
Employee.employee_name,project_budget
from Project
INNER JOIN Proj_Emp
ON Project.project_id=Proj_Emp.project_id

```

INNER JOIN Employee
ON Proj_Emp.employee_id=Employee.employee_id
where Project.project_budget=
(SELECT MIN(Project.project_budget)
From Project);

```

	project_title	employee_name	project_budget	
►	HR System	B Lewis	10500	
	HR System	D Rich	10500	

```

d. SELECT employee_name,
      d.dept_name,
      pe.Hourly_rate
From Employee e
      INNER JOIN Proj_Emp pe
      ON e.employee_id=pe.employee_id
      INNER JOIN Department d
      ON e.dept_id=d.dept_id
WHERE pe.Hourly_rate=
      (SELECT MAX(pe2.Hourly_rate)
      FROM Proj_Emp pe2
      INNER JOIN Employee e2
      ON pe2.employee_id=e2.employee_id
      INNER JOIN Department d2
      ON e2.dept_id=d2.dept_id
      WHERE d.dept_id=d2.dept_id);

```

employee_name	dept_name	Hourly_rate	
A Smith	IT	25.00	
D Rich	HR	21.00	
F James	DB	17.00	

- e. SELECT employee_name,
Department.dept_name,
Proj_Emp.Hourly_rate,
RANK() OVER(PARTITION BY Department.dept_name
ORDER BY Proj_Emp.Hourly_rate DESC)
as 'Rank'
FROM Employee
INNER JOIN Proj_Emp
ON Employee.employee_id=Proj_Emp.employee_id
INNER JOIN Department
ON Employee.dept_id=Department.dept_id;

employee_name	dept_name	Hourly_rate	Rank	
F James	DB	17.00	1	
D Rich	HR	21.00	1	
E Ford	HR	20.00	2	
D Rich	HR	16.25	3	
A Smith	IT	25.00	1	
B Lewis	IT	18.50	2	
B Lewis	IT	17.50	3	