Join Query Exercise Solutions

For the following tables, answer the questions below them.

```
CREATE TABLE Project (
  PID INTEGER(7) PRIMARY KEY,
  Pname VARCHAR(30) NOT NULL
);

CREATE TABLE Employee (
  EID INTEGER(7) PRIMARY KEY,
  Ename VARCHAR(30) NOT NULL,
  PID INTEGER(7) NOT NULL,
  CONSTRAINT Proj_EID_FK
    FOREIGN KEY(PID)
    REFERENCES Project(PID)
    ON DELETE CASCADE
);
```

```
CREATE TABLE Vehicle (
  VID INTEGER(7) PRIMARY KEY,
  Vmodel VARCHAR(30) NOT
NULL,
  EID INTEGER(7) NOT NULL,
  CONSTRAINT Veh_EID_FK
    FOREIGN KEY (EID)
    REFERENCES Employee (EID)
    ON DELETE CASCADE
);

CREATE TABLE Manager (
  MID INTEGER(7) PRIMARY KEY,
  Mname VARCHAR(30) NOT NULL,
  PID INTEGER(7) NOT NULL,
  CONSTRAINT Proj_EID_FK
    FOREIGN KEY (PID)
    REFERENCES Project (PID)
    ON DELETE CASCADE
);
```

1. List all projects, displaying the project names and employee names associated with the projects. **(5 results)**

```
SELECT p.Pname, e.Ename
FROM Project p, Employee e
WHERE p.PID = e.PID;
```

**OR**

```
SELECT p.Pname, e.Ename
FROM Project p JOIN Employee e
ON p.PID = e.PID;
```

**OR**

```
SELECT p.Pname, e.Ename
FROM Project p JOIN Employee e
USING (PID);
```

2. Display the project name and employee names associated with project named “Alpha”. **(2 results)**

```
SELECT p.Pname, e.Ename
FROM Project p, Employee e
WHERE p.PID = e.PID
AND p.Pname = "Alpha";
```

**OR**

```
SELECT p.Pname, e.Ename
```

```
FROM Project p JOIN Employee e
USING (PID)
WHERE p.Pname = "Alpha";
```

3. List all projects and employees, displaying project names and employee names. Also, include employees that are not associated with a project. **(5 results)**

```
SELECT p.Pname, e.Ename
FROM Project p
RIGHT JOIN Employee e
ON (e.PID = p.PID);
```

4. List all employee names and vehicle models. Include employees that are not assigned to a vehicle. **(7 results)**

```
SELECT e.Ename, v.Vmodel
FROM Employee e
LEFT JOIN Vehicle v
ON (v.EID = e.EID);
```

5. List all projects and include all employee names and manager names associated with the project. **(5 results)**

```
SELECT p.Pname, e.Ename, m.Mname
FROM Project p, Employee e, Manager m
WHERE p.PID = e.PID
AND p.PID = m.PID;
```

**OR**

```
SELECT p.Pname, e.Ename, m.Mname
FROM Project p JOIN Employee e JOIN Manager m
ON p.PID = e.PID AND p.PID = m.PID;
```

```
***NOTE: You cannot use the USING keyword  with more than 2
joined tables as it will result in the following error
"Column 'PID' in from clause is ambiguous"***
```