Some Practice Database SQL Questions

WorksOn Database:

```
emp (eno, ename, bdate, title, salary, dno)
proj (pno, pname, budget, dno)
dept (dno, dname, mgreno)
workson (eno, pno, resp, hours)
```

Questions:

1) Write an SQL query that returns the project number and name for projects with a budget greater than $100,000.

2) Write an SQL query that returns all works on records where hours worked is less than 10 and the responsibility is 'Manager'.

3) Write an SQL query that returns the employees (number and name only) who have a title of 'EE' or 'SA' and make more than $35,000.

4) Write an SQL query that returns the employees (name only) in department 'D1' ordered by decreasing salary.

5) Write an SQL query that returns the departments (all fields) ordered by ascending department name.

6) Write an SQL query that returns the employee name, department name, and employee title.

7) Write an SQL query that returns the project name, hours worked, and project number for all works on records where hours > 10.

8) Write an SQL query that returns the project name, department name, and budget for all projects with a budget < $50,000.

9) Write an SQL query that returns the employee numbers and salaries of all employees in the 'Consulting' department ordered by descending salary.

10) Write an SQL query that returns the employee name, project name, employee title, and hours for all works on records.

Answers:

1) Write an SQL query that returns the project number and name for projects with a budget greater than $100,000.

```
SELECT pno, pname
FROM proj
WHERE budget > 100000
```

Note: Do not include comma or dollar sign in query.

2) Write an SQL query that returns all works on records where hours worked is less than 10 and the responsibility is 'Manager'.

```
SELECT *
FROM workson
WHERE hours < 10 AND resp = 'Manager'
```

3) Write an SQL query that returns the employees (number and name only) who have a title of 'EE' or 'SA' and make more than $35,000.

```
SELECT eno, ename
FROM emp
WHERE (title = 'EE' OR title = 'SA') AND salary > 35000
```

Note: Parentheses are required.

4) Write an SQL query that returns the employees (name only) in department 'D1' ordered by decreasing salary.

```
SELECT ename
FROM emp
WHERE dno = 'D1'
ORDER BY salary DESC
```

Note: Can sort on field not in output - did not need to put salary in SELECT.

5) Write an SQL query that returns the departments (all fields) ordered by ascending department name.

```
SELECT *
FROM dept
ORDER BY dname ASC
```

6) Write an SQL query that returns the employee name, department name, and employee title.

```
SELECT ename, dname, title
FROM emp, dept
WHERE emp.dno = dept.dno
```

7) Write an SQL query that returns the project name, hours worked, and project number for all works on records where hours > 10.

```
SELECT pname, hours, proj.pno
FROM workson, proj
WHERE hours > 10 AND proj.pno = workson.pno
```

8) Write an SQL query that returns the project name, department name, and budget for all projects with a budget < $50,000.

```
SELECT pname, dname, budget
FROM proj, dept
WHERE budget < 50000 AND proj.dno = dept.dno
```

9) Write an SQL query that returns the employee numbers and salaries of all employees in the 'Consulting' department ordered by descending salary.

```
SELECT eno, salary
FROM emp, dept
WHERE dname = 'Consulting'
ORDER BY salary DESC
```

10) Write an SQL query that returns the employee name, project name, employee title, and hours for all works on records.

```
SELECT ename, pname, title, hours
 FROM emp, proj, workson
 WHERE emp.eno = workson.eno and proj.pno = workson.pno
```