**Jaypee Institute of Information Technology**

**Database Systems & Web (15B11CI312)**

**Tutorial 6 (SQL-Joins)**

Q1.

Consider the following schema:

Suppliers(*sid:* integer, *sname:* string, *address:* string)

Parts(*pid:* integer, *pname:* string, *color:* string)

Catalog(*sid:* integer, *pid:* integer, *cost:* real)

Write the following queries in SQL:

1. Find the *pname*s of parts for which there is some supplier.
2. Find the name of supplier who supply some red parts.
3. Find the sids of suppliers who supply some red part and some green part
4. Find the sids of suppliers who supply some red part or are at 221 packers street.
5. Find the color and cost of parts supplied by supplier “john”
6. Find the name of most costly part.

Q2.

Consider the following schema:

Worker(Worker\_ID, First\_Name, Salary, Joining\_Date, Department)

Bonus (WORKER\_REF\_ID, BONUS\_DATE BONUS\_AMOUNT)

Title (WORKER\_REF\_ID, Worker\_Title, Affected\_form)

Write the following queries in SQL:

1. Print details of the Workers whose SALARY lies between 100000 and 500000 and bonus amount in between 5000 to 10000.
2. Print details of the Workers who are also Managers.
3. Print the list of employees with the same salary.
4. Print the salary and bonus amount details of all managers
5. Update the 10% extra bonus amount to all employees of CSE department.

**(SQL-Nested Queries)**

1. Consider the following relational schemas:

*students*(id, name, class\_id, gpa)

*teachers*(id, name, subject, class\_id, monthly\_salary)

*classes*(id, grade, teacher\_id, num\_of\_students)

a. Find all students that have above-average GPAs.

b. Calculate the average number of students in classes where the teacher teaches DSW or DSA.

c. Display all information about the students in the class with the highest number of students.

d. Display the subject area that corresponds to the highest average teacher salary.

1. Consider the following relational schemas:

*Film*(title, genere, year, director\_id, minutes, budget, gross)

*Director* (director\_id, name, birth, city)

a. A film is considered to be a super-hit if the gross income is more than 1.5 times the budget. Display the name and city of all those directors whose films are super-hit.

b. Display the film with highest budget.

c. List all the names of directors whose films are produced with a budget below 20 crores.