**EXPERIMENT 7**

**Aim**: Study and use of inbuilt SQL functions - aggregate functions, Built-in functions like Numeric, date, string functions.

**Introduction:**

Aggregate functions

These functions operate on the multiset of values of a column of a relation, and return a value

avg: average value

min: minimum value

max: maximum value

sum: sum of values

count: number of values

Examples from the content taught:

1. Find the average salary of instructors in the Computer Science department:

select avg (salary)

from instructor

where dept\_name= ’Comp. Sci.’;

1. Find the total number of instructors who teach a course in the Spring 2010 semester

select count (distinct ID)

from teaches

where semester = ’Spring’ and year = 2010;

1. Find the number of tuples in the course relation

select count (\*)

from course;

**Examples:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Function** | **Ishan** | **Khush** | **Alister** |
| **AVERAGE** | Find the average time of stay in a particular area.    **SELECT** **SEC\_TO\_TIME**(**AVG**(**TIME\_TO\_SEC**(RFID Time))) **from** RFID Raw Data |  |  |
| **MAX** | Find the item that has max quantity on shelves.  **SELECT** Item\_Category, **MAX(**visible quantity**) from** Readers |  |  |
| **MIN** | Find all the sensors which are working to near perfection.  **SELECT** Sensor\_ID,**MIN**(false\_positives) **FROM** Analysis\_Mdata **GROUP BY** Sensor\_ID; |  |  |
| **SUM** | **SELECT** Item\_Category, **SUM(**visible\_ quantity**) from** Readers  **WHERE** visible\_quantity >= **MIN**(visible\_quantity) |  |  |
| **COUNT** | Find all the sensors which are currently occupied by items above the sensors.  **SELECT COUNT**(Sensor\_Status)  **FROM** Sensors  **WHERE** Sensor\_status = ‘1’; |  |  |