Task 1

Data Types in SQL:

In SQL data types specify the types of data which can be stored in a column. Each data type has its own properties and rules for storing and manipulating data. Few of the most commonly used are:

1. **CHAR:** A fixed length of string of characters which can store upto 255 characters. For example CHAR(20) will store characters no more than 20 characters.
2. **VARCHAR:** A variable length of string of characters which can store upto 65535 characters. For example VARCHAR(300) will store characters no more than 300 characters.
3. **INT:** Whole numbers with range from -2147483648 to 2147483647. For example it can store numbers like -5,0,31 etc.
4. **BIGINT:** Whole numbers with range much greater than that of INT.
5. **FLOAT:** Floating point numbers can be stored. For example FLOAT(5) will store any floating number with 5 numbers after decimal point, like 54.23413.
6. **DECIMAL:** A fixed-point number with a specified precision and scale. The precision is the total number of digits that can be stored, while the scale is the number of digits that can be stored after the decimal point. For example, DECIMAL(10,2) would specify a column that can store up to 10 digits, with 2 digits after the decimal point.
7. **BOOLEAN:** Can store True or False values.

8. **DATE:** A date value in the format of 'YYYY-MM-DD'. For example, DATE can be used to store dates like '2022-03-23'.
9. **TIME:** A time value in the format of 'HH:MM:SS'. For example, TIME can be used to store times like '13:45:00'.
10. **TIMESTAMP:** A combination of date and time values in the format of 'YYYY-MM-DD HH:MM:SS'. For example, TIMESTAMP can be used to store date and time values like '2022-03-23 13:45:00'.