ST. XAVIER’S COLLEGE

**(Affiliated to Tribhuvan University)**

**Maitighar, Kathmandu**

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**Database Management System**

**Theory Lab Assignment #7**

**SUBMITTED BY:**

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1. Data definition language

A **data definition language** or **data description language** (**DDL**) is a syntax similar to a computer [programming language](https://en.wikipedia.org/wiki/Programming_language) for defining [data structures](https://en.wikipedia.org/wiki/Data_structure), especially [database schemas](https://en.wikipedia.org/wiki/Database_schema).DDL statements create, modify, and remove database objects such as tables, indexes, and users. Common DDL statements are CREATE, ALTER, and DROP.

1.2 domain type in SQL

* **char**(n) (or **character**(n)): fixed-length character string, with user-specified length.
* **varchar**(n) (or **character varying**): variable-length character string, with user-specified maximum length.
* **int** or **integer**: an integer (length is machine-dependent).
* **smallint**: a small integer (length is machine-dependent).
* **numeric**(*p, d*): a fixed-point number with user-specified precision, consists of *p* digits (plus a sign) and *d* of *p* digits are to the right of the decimal point. E.g., **numeric**(*3, 1*) allows 44.5 to be stored exactly but not 444.5.
* **real** or **double precision**: floating-point or double-precision floating-point numbers, with machine-dependent precision.
* **float**(n): floating-point, with user-specified precision of at least *n* digits.
* **date**: a calendar date, containing four digit year, month, and day of the month.
* **time**: the time of the day in hours, minutes, and seconds.
* It allows arithmetic and comparison operations on various numeric domains, including, **interval** and *cast* (*type coercion*) such as transforming between *smallint* and *int*. It considers strings with different length are compatible types as well.
* It allows **create domain** statement, e.g.,

**create domain** *person-name* **char**(20)

1.3 schema definition in SQL

The structure of a database system described in a formal language supported by the database management system (DBMS). In a relational database, the schema defines the tables, the fields in each table, and the relationships between fields and tables.

Schemas are generally stored in a data dictionary. Although a schema is defined in text database language, the term is often used to refer to a graphical depiction of the database structure.

2. Data manipulation language

2.1 the select clause

2.2 the where clause

2.3 the form clause

2.4 the rename clause

2.5 tupule variable

2.6 string operation

2.7 ordering the display of tupules

2.8 duplicate tupules