

1. Create following table using query according to the definition.

Student	
Column_Name	Data Type
Enrollment_No	VARCHAR(20)
Name	VARCHAR(25)
CPI	DECIMAL(5,2)
Birthdate	DATETIME

From the above given table perform the following queries using ALTER statement:

1. Add two more columns City VARCHAR (20) NULL and Backlog INT NOT NULL.
2. Change the size of NAME column of student from VARCHAR (25) to VARCHAR (35).
3. Change the data type DECIMAL to INT in CPI Column.
4. Rename Column Enrollment No to ENO.
5. Delete Column City from the STUDENT table.
6. Change name of table STUDENT to STUDENT\_MASTER.
7. Remove Column Backlog from the table.
8. Change Constraint of Name Column from NULL to NOT NULL.
9. Rename Column Birthdate to BDate.
10. Change the datatype of ENO Column from VARCHAR (20) to VARCHAR (12)

## 2. Create following table using query according to the definition.

Students	
Column_Name	Data Type
StuID	INT
FirstName	VARCHAR(25)
LastName	VARCHAR(25)
Website	VARCHAR(50)
City	VARCHAR(25)
Division	VARCHAR(20)

Insert the following records in the Students table.

StuID	FirstName	LastName	Website	City	Division
1011	Keyur	Patel	techonthenet.com	Rajkot	II-BCX
1022	Hardik	Shah	digminecraft.com	Ahmedabad	I-BCY
1033	Kajal	Trivedi	bigactivities.com	Baroda	IV-DCX
1044	Bhoomi	Gajera	checkyourmath.com	Ahmedabad	III-DCW
1055	Harmit	Mitel	NULL	Rajkot	II-BCY
1066	Ashok	Jani	NULL	Baroda	II-BCZ

From the above given tables perform the following queries using LIKE Operator:

- Display the name of students whose name starts with 'k'.
- Display the name of students whose name consists of five characters.
- Retrieve the first name & last name of students whose city name ends with a & contains six characters.
- Display all the students whose last name ends with 'tel'.
- Display all the students whose first name starts with 'ha' & ends with 't'.
- Display all the students whose first name starts with 'k' and third character is 'y'.
- Display the name of students having no website and name consists of five characters.
- Display all the students whose last name consist of 'jer'.
- Display all the students whose city name starts with either 'r' or 'b'.
- Display all the name students having websites.
- Display all the students whose name starts from alphabet A to H.
- Display all the students whose name's second character is vowel.
- Display student's name whose city name consist of 'rod'.
- Retrieve the First & Last Name of students whose website name starts with 'bi'.
- Display student's city whose last name consists of six characters.
- Display all the students whose city name consist of five characters & not starts with 'ba'.
- Show all the student's whose division starts with 'II'.
- Find out student's first name whose division contains 'bc' anywhere in division name.
- Show student id and city name in which division consist of six characters and having website name.
- Display all the students whose name's third character is consonant.

### 3. Math Functions

1. Display the result of 5 multiply by 30.
2. Find out the absolute value of -25, 25, -50 and 50.
3. Find smallest integer value that is greater than or equal to 25.2, 25.7 and -25.2.
4. Find largest integer value that is smaller than or equal to 25.2, 25.7 and -25.2.
5. Find out remainder of 5 divided 2 and 5 divided by 3.
6. Find out value of 3 raised to 2<sup>nd</sup> power and 4 raised 3<sup>rd</sup> power.
7. Find out the square root of 25, 30 and 50.
8. Find out the square of 5, 15, and 25.
9. Find out the value of PI.
10. Find out round value of 157.732 for 2, 0 and -2 decimal points.
11. Find out exponential value of 2 and 3.
12. Find out logarithm having base b having value 10 of 5 and 100.
13. Find sine, cosine and tangent of 3.1415.
14. Find sign of -25, 0 and 25.
15. Generate random number using function.

### 4. String Functions

1. Find the length of following. (I) NULL (II) 'hello' (III) Blank
2. Display your name In lower & upper case.
3. Display first three characters of your name.
4. Display 3<sup>rd</sup> to 10<sup>th</sup> character of your name.
5. Write a query to convert 'abc123efg' to 'abcXYZefg' & 'abcabcabc' to 'ab5ab5ab5' using REPLACE.
6. Write a query to display ASCII code for 'a','A','z','Z', 0, 9.
7. Write a query to display character based on number 97, 65,122,90,48,57.
8. Write a query to remove spaces from left of a given string 'hello world'.
9. Write a query to remove spaces from right of a given string 'hello world'.
10. Write a query to display first 4 & Last 5 characters of 'SQL Server'.
11. Write a query to convert a string '1234.56' to number (Use CAST()).
12. Write a query to convert a float 10.58 to integer (Use CONVERT()).
13. Put 10 space before your name using function.
14. Combine two strings (Your name & Surname) using + sign as well as CONCAT ().
15. Find reverse of "Darshan".
16. Repeat your name 3 times.
17. Delete 3 characters from a string, starting in position 1, and then insert "HTML" in position 1. (Use STUFF())
18. From Data, returns the first non-null value in a list. (Use COALESCE())
19. Tests whether the expression is numeric. (Use ISNUMERIC())
20. Search for "t" in string "Customer", and return its position. (Use CHARINDEX())

## 5. Date Functions

1. Write a query to display the current date & time. Label the column Today\_Date.
2. Write a query to find new date after 365 day with reference to today.
3. Display the current date in a format that appears as may 5 1994 12:00AM.
4. Display the current date in a format that appears as 03 Jan 1995.
5. Display the current date in a format that appears as Jan 04, 96.
6. Write a query to find out total number of months between 31-Dec-08 and 31-Mar-09.
7. Write a query to find out total number of years between 25-Jan-12 and 14-Sep-10.
8. Write a query to find out total number of hours between 25-Jan-12 7:00 and 26-Jan-12 10:30.
9. Write a query to extract Day, Month, Year from given date 12-May-16.
10. Write a query that adds 5 years to current date.
11. Write a query to subtract 2 months from current date.
12. Extract month from current date using datename () and datepart () function.
13. Write a query to find out last date of current month.
14. Write a query to display date & time after 30 days from today.
15. Calculate your age in years and months.