DATABASE MANAGEMENT SYSTEM

ASSIGNMENT 5

Submitted by:

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Q1) Use the following functions:

1. chr(n)

```
1 • use assignment5;
2 • SELECT CHAR(69);
```

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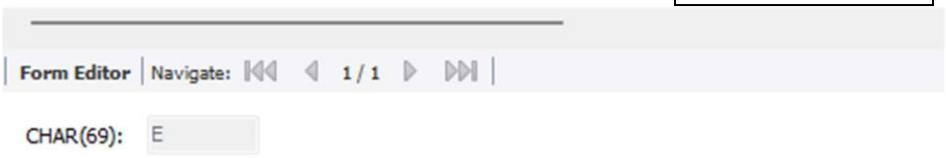

2. cancat(char1,char2):

```
1 • use assignment5;
2 • SELECT concat("management", "systems");
```

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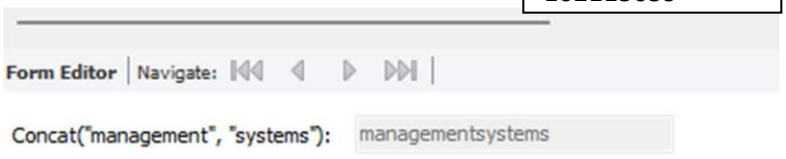

3. instr(string,char):

```
1 • use assignment5;
2 • SELECT instr("management", 'a');
```

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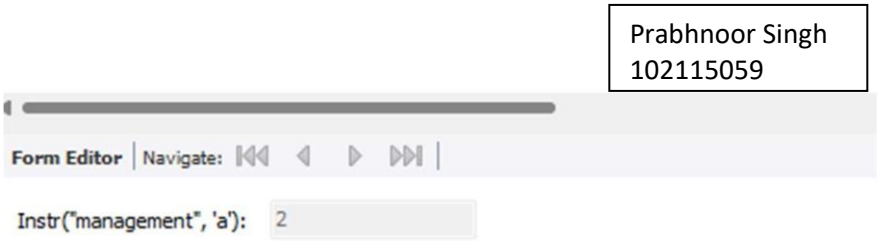

4. Length(n):

```
1 • use assignment5;
2 • SELECT length("managementsystem");
```

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5. lpad(char1 ,n [,char2]):

```
use assignment5;
select lpad("management",3,"ma");
```

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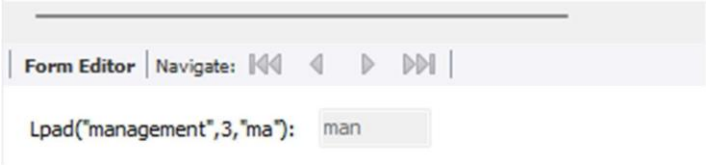
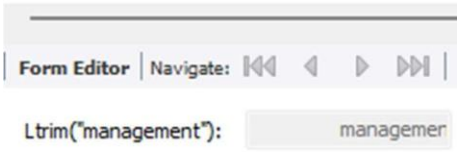


6. ltrim(string [,char(s)]):

```
use assignment5;
select ltrim("  management");
```



7. rpad(char1 ,n [,char2]):

```
use assignment5;
select rpad('m',3,'s');
```

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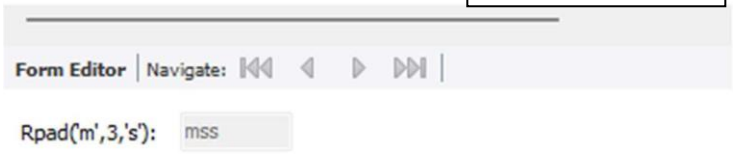

8. rtrim(string [,char(s)])

```
use assignment5;
SELECT RTRIM('     management     ');
```

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Form Editor | Navigate:

RTRIM(' management '):	management

9. replace(char ,search_string , replacement_string):

```
use assignment5;
SELECT REPLACE('Hello, World!', 'World', 'Universe');
```

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Form Editor | Navigate:

REPLACE('Hello, World!', 'World', 'Universe'):	Hello, Universe!

10. substr(string ,position ,substring length):

```
use assignment5;
SELECT SUBSTR("HELLO WORLD!",4,8);
```

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SUBSTR("HELLO WORLD!",4,8):	LO WORLD

11. lower(string):

```
1 • use assignment5;
2 • SELECT lower("HELLO WORLD!");
```

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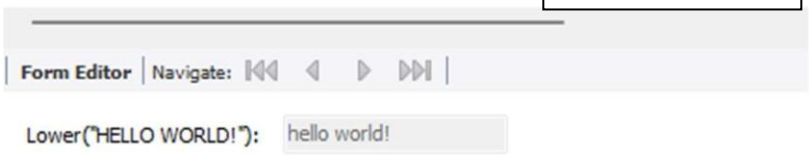

12. upper(string):

```
1 • use assignment5;
2 • SELECT upper("hello world!");
```

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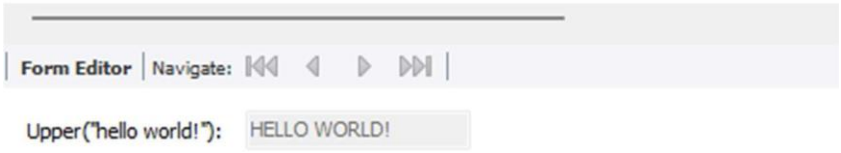

13. abs(n):

```
1 • use assignment5;
2 • SELECT abs(-9);
```

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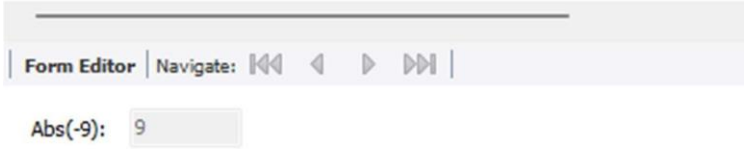

14. ceil(n):

```
1 • use assignment5;
2 • SELECT ceil(5.65);
```

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Ceil(5.65): 6

15. cos(n):

```
1 • use assignment5;
2 • SELECT cos(45);
```

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Form Editor | Navigate:

Cos(45): 0.5253219888177297

16. exp(n):

```
1 • use assignment5;
2 • SELECT exp(5);
```

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Exp(5): 148.4131591025766

17. floor(n):

```
use assignment5;
SELECT floor(5.75);
```

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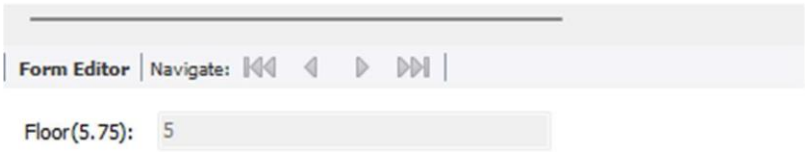

18. mod(m ,n):

```
use assignment5;
SELECT mod(3,2);
```

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19. power(x ,y):

```
use assignment5;
SELECT power(2,3);
```

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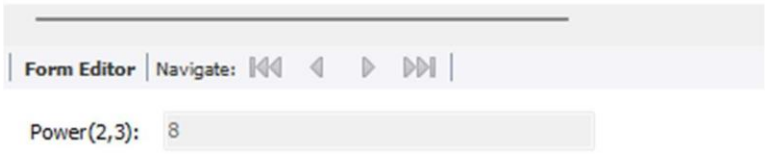

20. round(x [,y]):

```
1 •  use assignment5;
2 •  SELECT round(3,2);
```

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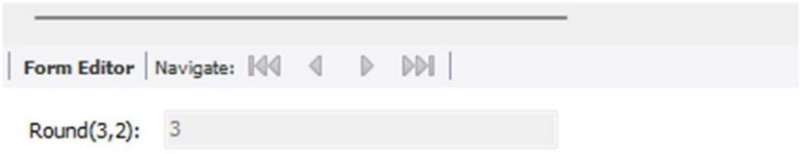

21. sign(n):

```
1 •  use assignment5;
2 •  SELECT sign(54);
```

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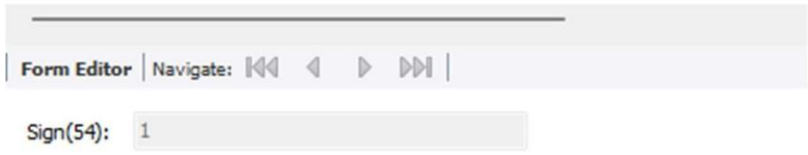

22. sqrt(n);

```
1 •  use assignment5;
2 •  SELECT sqrt(64);
```

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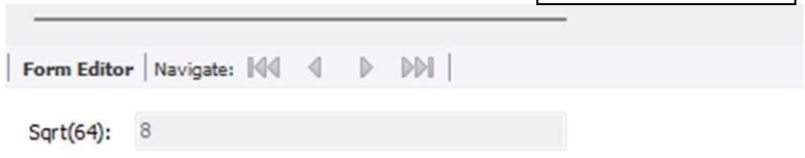

23. trunc(x ,n):

```
use assignment5;
SELECT truncate(3421,2);
```

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24. sysdate:

```
use assignment5;
SELECT sysdate();
```

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25. last_day():

```
use assignment5;
SELECT last_day('2023-09-16');
```

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26. greatest(expr):

```
1 • use assignment5;
2 • SELECT greatest(1021,5063);
```

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27. least(expr):

```
1 • use assignment5;
2 • SELECT least(1021,5063);
```

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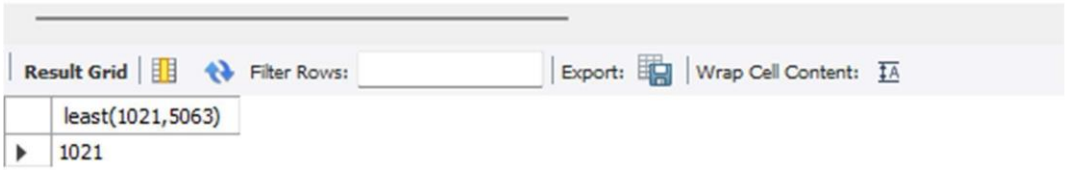

Q2:

```
1  use assignment5;
2  create table Student(
3      RollNo int,
4      FName varchar(255),
5      MName varchar(255),
6      LName varchar(255),
7      Branch varchar(255),
8      BranchID int,
9      SPI int
10 );
11 insert into Student values(1,'A','B','C','ENC',15,9);
12 insert into Student values(2,'D','E','F','ENC',15,8);
13 insert into Student values(3,'G','H','I','COE',10,7);
14 insert into Student values(4,'J','K','L','ENC',15,7);
15 insert into Student values(5,'M','N','O','ENC',15,4);
16 insert into Student values(6,'P','Q','R','COE',10,9);
17 insert into Student values(7,'S','T','U','EEC',5,6);
18 insert into Student values(8,'V','W','X','EEC',5,3);
19 insert into Student values(9,'Y','Z','A','COE',10,8);
20 insert into Student values(10,'B','C','D','EEC',5,8);
21
```

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1. Find the average number of students enrolled in each branch.

```
22 select Branch, avg(RollNo) from Student group by Branch;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content

Branch	avg(RollNo)
ENC	3.0000
COE	6.0000
EEC	8.3333

Result Grid

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2. Find the average Grade of students enrolled in each branch

```
23 •  select Branch, avg(SPI) from Student group by Branch;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content

Branch	avg(SPI)
ENC	7.0000
COE	8.0000
EEC	5.6667

Result Grid | Form Editor

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3. Find the name of the student who got highest Grade enrolled in each branch.

```
24 •  select s.Branch,s.FName,s.MName,s.LName FROM Student s
25    JOIN (
26        select Branch, max(SPI) as MaxSPI from Student
27        group by Branch
28    ) t
29    on s.Branch = t.Branch and s.SPI = t.MaxSPI;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content

Branch	FName	MName	LName
ENC	A	B	C
COE	P	Q	R
EEC	B	C	D

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4. Find the name of the student who got lowest Grade enrolled in each branch

```
30 •  select s.Branch,s.FName,s.MName,s.LName FROM Student s
31    JOIN (
32        select Branch, min(SPI) as MinSPI from Student
33        group by Branch
34    ) t
35    on s.Branch = t.Branch and s.SPI = t.MinSPI;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content

Branch	FName	MName	LName
ENC	M	N	O
COE	G	H	I
EEC	V	W	X

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5. Find the sum of all grades of the table students.

```
36 •  select sum(SPI) as SUM_OF_GRADES from Student;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Cont

SUM_OF_GRADES
69

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6. Find the name of the students having grade greater than 8.0

```
37 •  select FName,MName,LName from Student where SPI>8;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Conter

FName	MName	LName
A	B	C
P	Q	R

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7. Find the name of the students having grade less than 6.0.

```
38 •  select FName,MName,LName from Student where SPI<6;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Con

FName	MName	LName
M	N	O
V	W	X

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