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ENROLLMENT NUMBER-2020CSB102

SUBJECT-ASSIGNMENT-8 OF DBMS

DEPARTMENT-COMPUTER SCIENCE AND TECHNOLOGY

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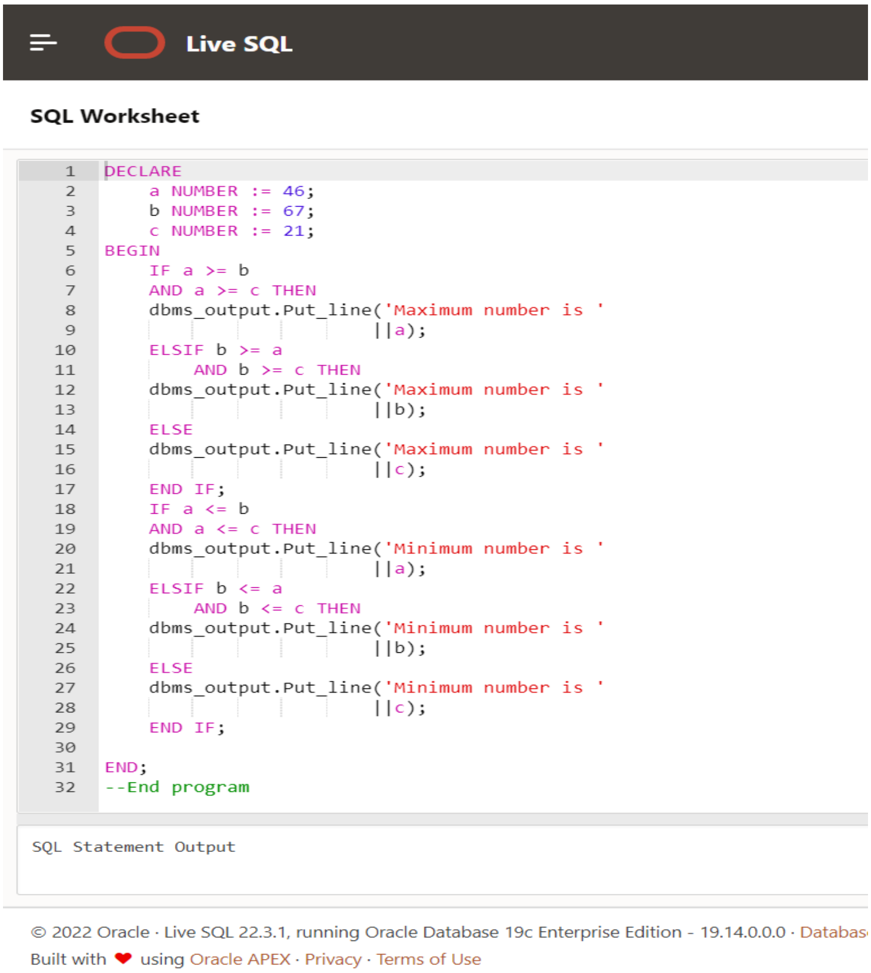
Q1. Find the maximum and minimum of three given numbers.

Ans-

```
DECLARE
        a NUMBER := 46;
        b NUMBER := 67;
        c NUMBER := 21;
BEGIN
        IF a >= b
        AND a >= c THEN
        dbms_output.Put_line('Maximum number is '||a);
        ELSIF b >= a
                AND b >= c THEN
        dbms_output.Put_line('Maximum number is '||b);
        ELSE
        dbms_output.Put_line('Maximum number is '||c);
        END IF;
        IF a <= b
        AND a <= c THEN
        dbms_output.Put_line('Minimum number is '||a);
        ELSIF b <= a
                AND b <= c THEN
        dbms_output.Put_line('Minimum number is '||b);
        ELSE
        dbms_output.Put_line('Minimum number is '||c);
        END IF;

END;
--End program
```

Output plus program-



SQL Worksheet

```
DECLARE
    a NUMBER := 46;
    b NUMBER := 67;
    c NUMBER := 21;
BEGIN
    IF a >= b
    AND a >= c THEN
    dbms_output.Put_line('Maximum number is '
                        ||a);
    ELSIF b >= a
        AND b >= c THEN
    dbms_output.Put_line('Maximum number is '
                        ||b);
    ELSE
    dbms_output.Put_line('Maximum number is '
                        ||c);
    END IF;
    IF a <= b
    AND a <= c THEN
    dbms_output.Put_line('Minimum number is '
                        ||a);
    ELSIF b <= a
        AND b <= c THEN
    dbms_output.Put_line('Minimum number is '
                        ||b);
    ELSE
    dbms_output.Put_line('Minimum number is '
                        ||c);
    END IF;

END;
--End program
```

SQL Statement Output

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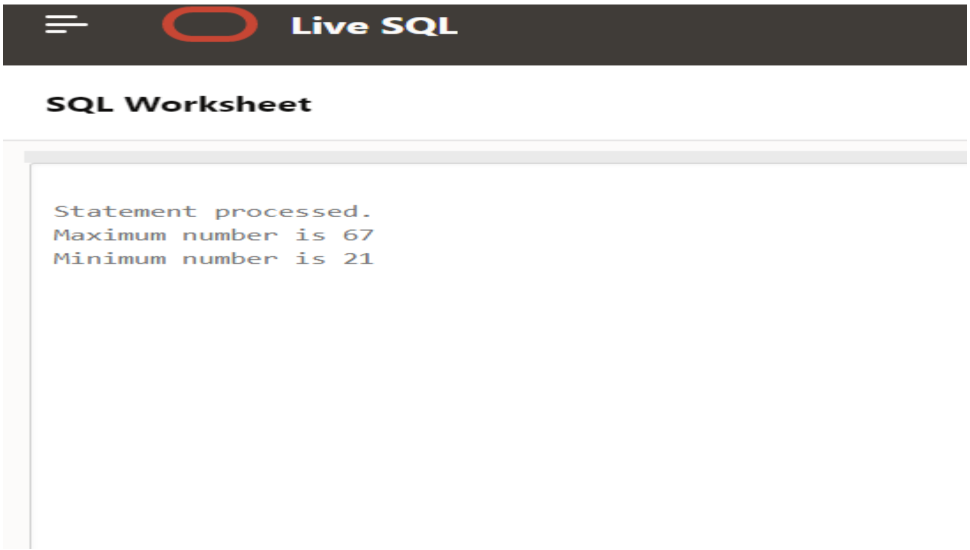
Output-



SQL Worksheet

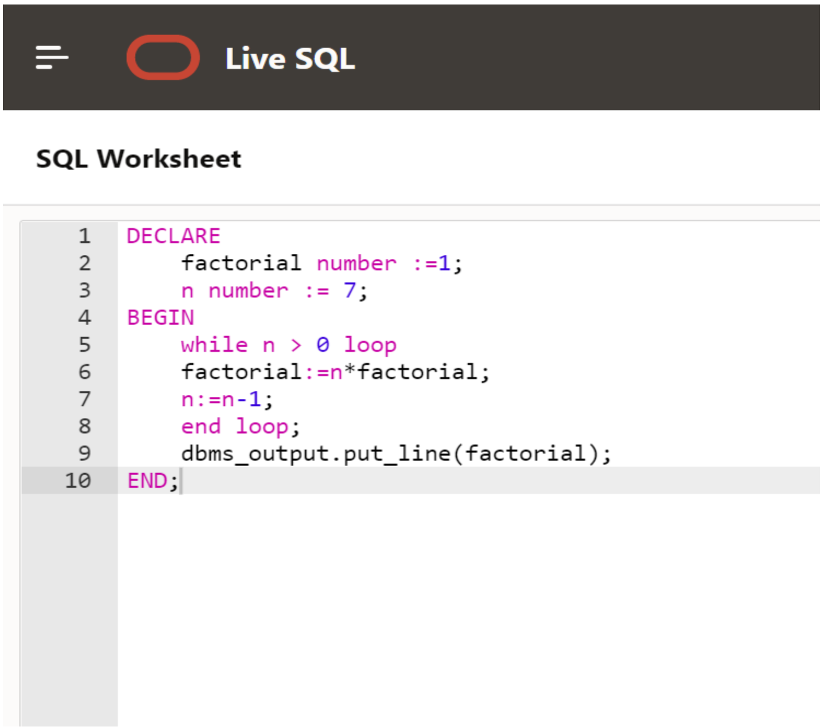
```
Statement processed.
Maximum number is 67
Minimum number is 21
```

Q2. Find the factorial of a given number.

Ans-Code-

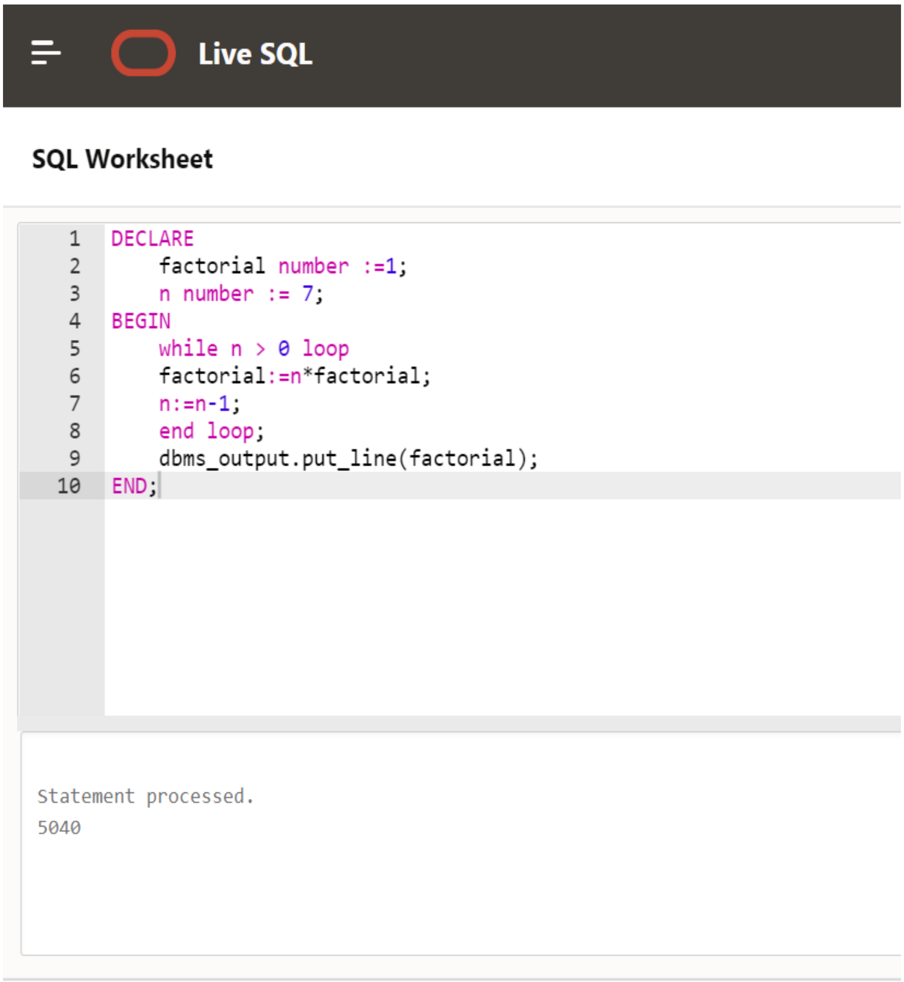
```
DECLARE
   factorial number :=1;
   n number := 7;
BEGIN
   while n > 0 loop
   factorial:=n*factorial;
   n:=n-1;
   end loop;
   dbms_output.put_line(factorial);
END;
```

Code-



```
DECLARE
    factorial number :=1;
    n number := 7;
BEGIN
    while n > 0 loop
    factorial:=n*factorial;
    n:=n-1;
    end loop;
    dbms_output.put_line(factorial);
END;
```

Output-



SQL Worksheet

```
DECLARE
    factorial number :=1;
    n number := 7;
BEGIN
    while n > 0 loop
    factorial:=n*factorial;
    n:=n-1;
    end loop;
    dbms_output.put_line(factorial);
END;
```

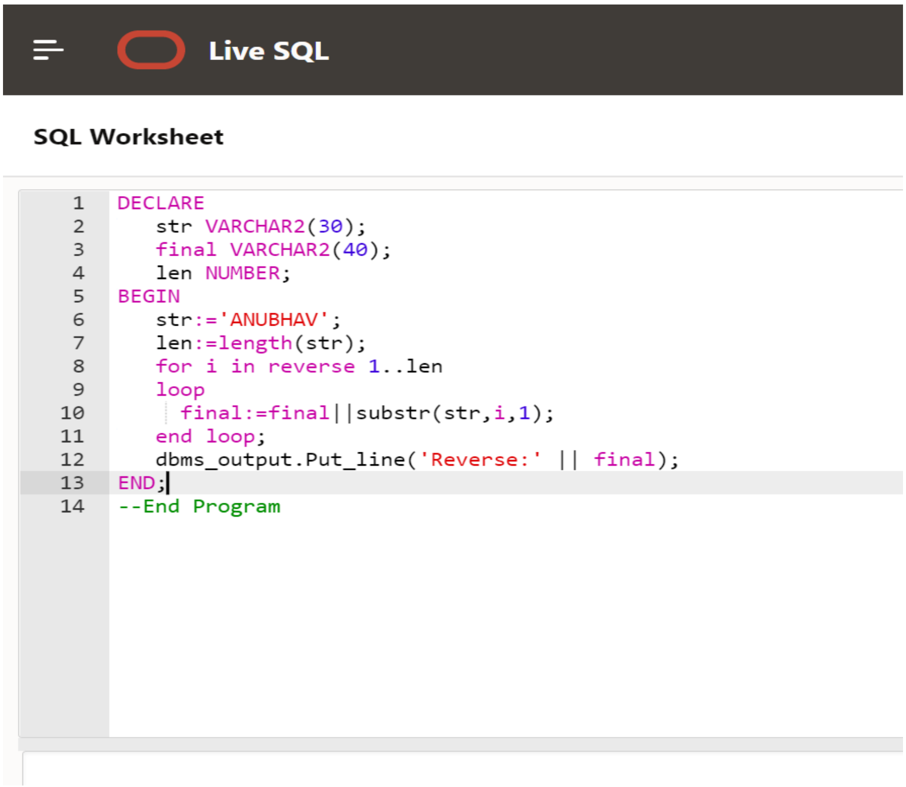
```
Statement processed.
5040
```

Q3. Reverse a given string.

Ans-Code-

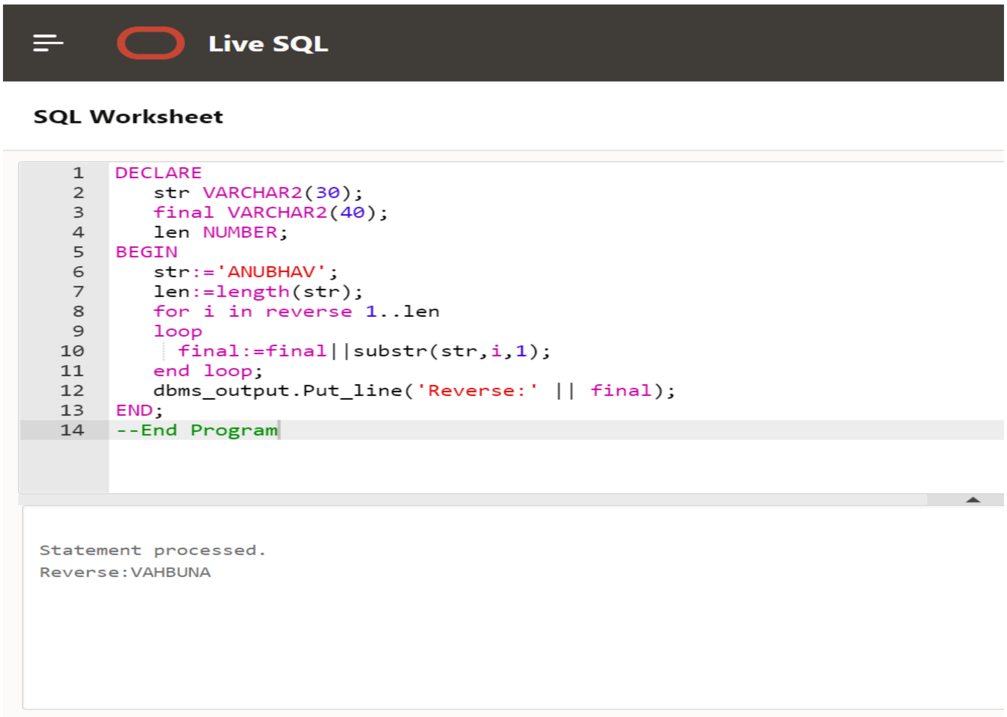
```
DECLARE
  str VARCHAR2(30);
  final VARCHAR2(40);
  len NUMBER;
BEGIN
  str:='ANUBHAV';
  len:=length(str);
  for i in reverse 1..len
  loop
    final:=final||substr(str,i,1);
  end loop;
  dbms_output.Put_line('Reverse:' || final);
END;
--End Program
```

Code+Output-



```
DECLARE
    str VARCHAR2(30);
    final VARCHAR2(40);
    len NUMBER;
BEGIN
    str:='ANUBHAV';
    len:=length(str);
    for i in reverse 1..len
    loop
      final:=final||substr(str,i,1);
    end loop;
    dbms_output.Put_line('Reverse:' || final);
END;
--End Program
```

Output-



```
DECLARE
    str VARCHAR2(30);
    final VARCHAR2(40);
    len NUMBER;
BEGIN
    str:='ANUBHAV';
    len:=length(str);
    for i in reverse 1..len
    loop
      final:=final||substr(str,i,1);
    end loop;
    dbms_output.Put_line('Reverse:' || final);
END;
--End Program
```

```
Statement processed.
Reverse:VAHBUNA
```

Q4. Consider a banking database. Accept an account number from the user, check if the

balance in the account is less than the minimum balance to be kept in bank account, only

then deduct Rs. 100/= from the balance. The process is fired on the ACCT_MSTR table.

ACCT_MSTR (acct_no, type, curbal, ststus)

‘type’ can hold the values:

‘CA’ for Current Account,

‘SB’ for Savings Bank Account.

‘status’ can hold the values:

‘A’ for Active account,

‘S’ for suspended account,

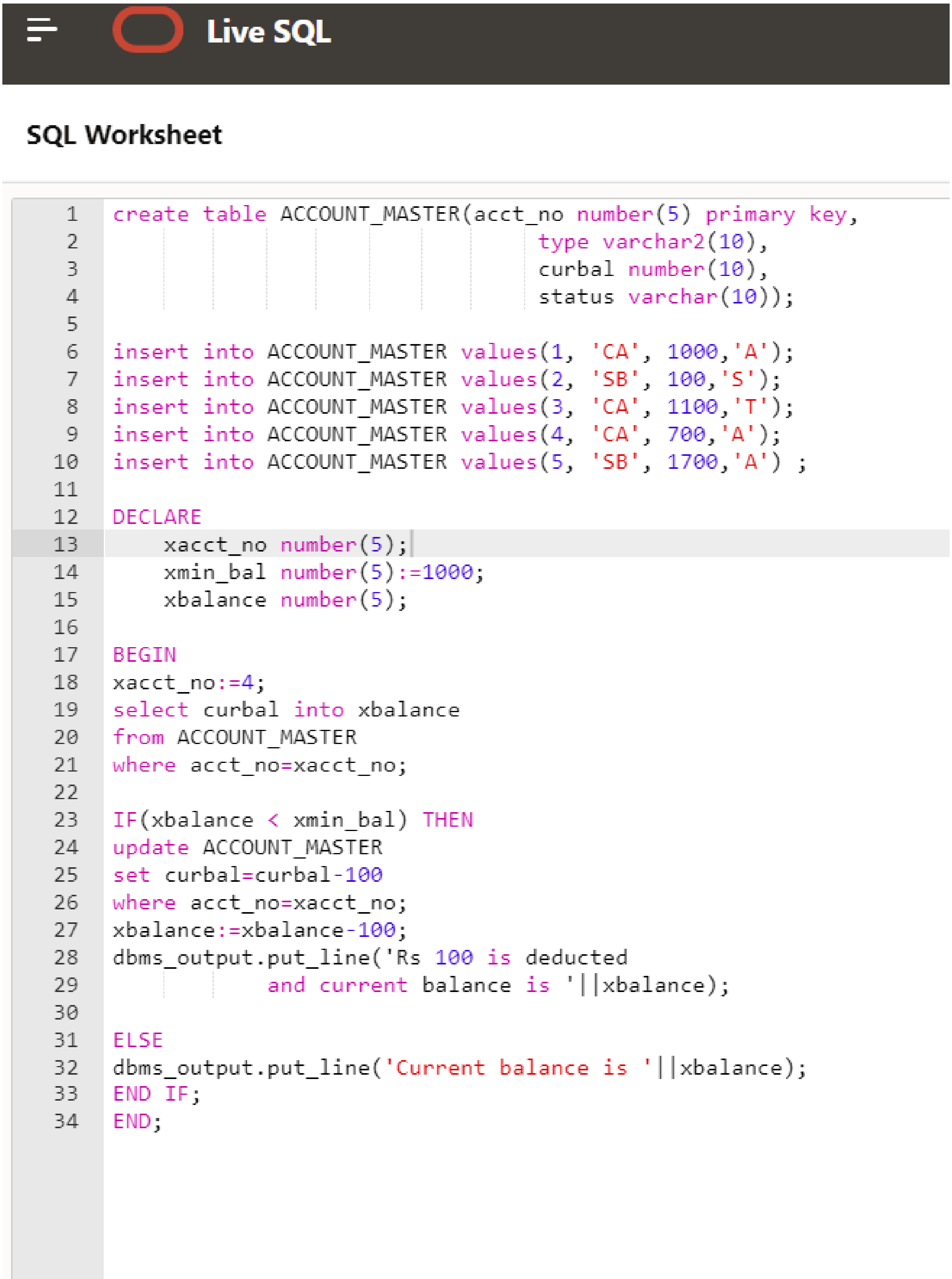
‘T’ for Terminated account.

Ans-Code-

```
create table ACCOUNT_MASTER(acct_no number(5) primary key,
                            type varchar2(10),
                            curbal number(10),
                            status varchar(10));

insert into ACCOUNT_MASTER values(1, 'CA', 1000,'A');
insert into ACCOUNT_MASTER values(2, 'SB', 100,'S');
insert into ACCOUNT_MASTER values(3, 'CA', 1100,'T');
insert into ACCOUNT_MASTER values(4, 'CA', 700,'A');
insert into ACCOUNT_MASTER values(5, 'SB', 1700,'A') ;

DECLARE
   xacct_no number(5);
   xmin_bal number(5):=1000;
   xbalance number(5);

BEGIN
xacct_no:=4;
select curbal into xbalance
from ACCOUNT_MASTER
where acct_no=xacct_no;

IF(xbalance < xmin_bal) THEN
update ACCOUNT_MASTER
set curbal=curbal-100
```

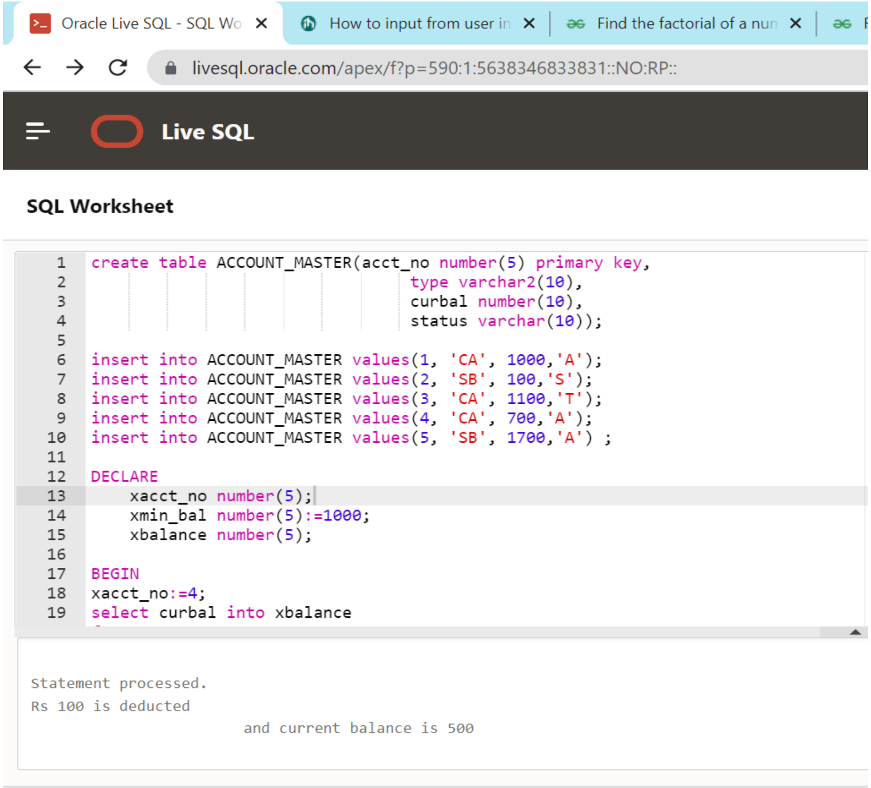
```
where acct_no=xacct_no;
xbalance:=xbalance-100;
dbms_output.put_line('Rs 100 is deducted
                        and current balance is '||xbalance);

ELSE
dbms_output.put_line('Current balance is '||xbalance);
END IF;
END;
```

Code+output-



```
create table ACCOUNT_MASTER(acct_no number(5) primary key,
                                 type varchar2(10),
                                 curbal number(10),
                                 status varchar(10));

insert into ACCOUNT_MASTER values(1, 'CA', 1000,'A');
insert into ACCOUNT_MASTER values(2, 'SB', 100,'S');
insert into ACCOUNT_MASTER values(3, 'CA', 1100,'T');
insert into ACCOUNT_MASTER values(4, 'CA', 700,'A');
insert into ACCOUNT_MASTER values(5, 'SB', 1700,'A') ;

DECLARE
    xacct_no number(5);
    xmin_bal number(5):=1000;
    xbalance number(5);

BEGIN
xacct_no:=4;
select curbal into xbalance
from ACCOUNT_MASTER
where acct_no=xacct_no;

IF(xbalance < xmin_bal) THEN
update ACCOUNT_MASTER
set curbal=curbal-100
where acct_no=xacct_no;
xbalance:=xbalance-100;
dbms_output.put_line('Rs 100 is deducted
            and current balance is '||xbalance);

ELSE
dbms_output.put_line('Current balance is '||xbalance);
END IF;
END;
```

Output-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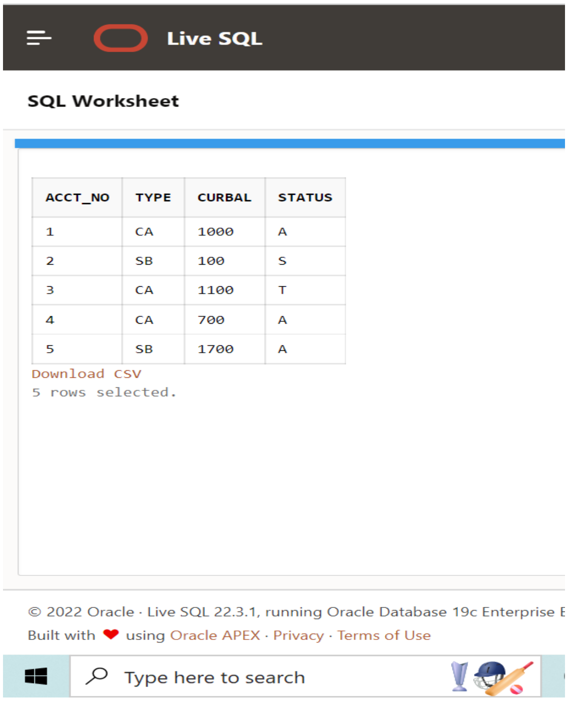
Live SQL
SQL Worksheet

```
create table ACCOUNT_MASTER(acct_no number(5) primary key,
                                type varchar2(10),
                                curbal number(10),
                                status varchar(10));

insert into ACCOUNT_MASTER values(1, 'CA', 1000,'A');
insert into ACCOUNT_MASTER values(2, 'SB', 100,'S');
insert into ACCOUNT_MASTER values(3, 'CA', 1100,'T');
insert into ACCOUNT_MASTER values(4, 'CA', 700,'A');
insert into ACCOUNT_MASTER values(5, 'SB', 1700,'A') ;

DECLARE
    xacct_no number(5);
    xmin_bal number(5):=1000;
    xbalance number(5);

BEGIN
xacct_no:=4;
select curbal into xbalance
```

```
Statement processed.
Rs 100 is deducted
                      and current balance is 500
```

Table pic after insertion-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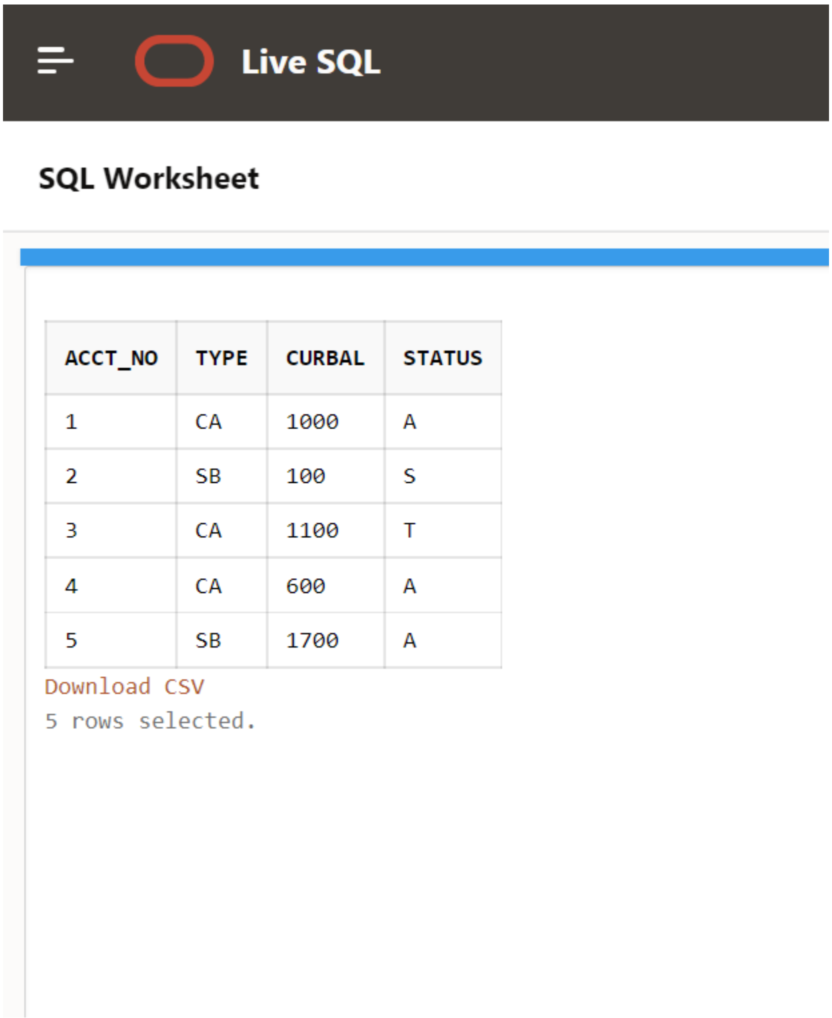
ACCT_NO	TYPE	CURBAL	STATUS
1	CA	1000	A
2	SB	100	S
3	CA	1100	T
4	CA	700	A
5	SB	1700	A

```
5 rows selected.
```

Table pic after deduction-



SQL Worksheet

ACCT_NO	TYPE	CURBAL	STATUS
1	CA	1000	A
2	SB	100	S
3	CA	1100	T
4	CA	600	A
5	SB	1700	A

```
Download CSV
5 rows selected.
```

Q5. Calculate the area of a circle for a value of radius varying from 3 to 7. Store the radius

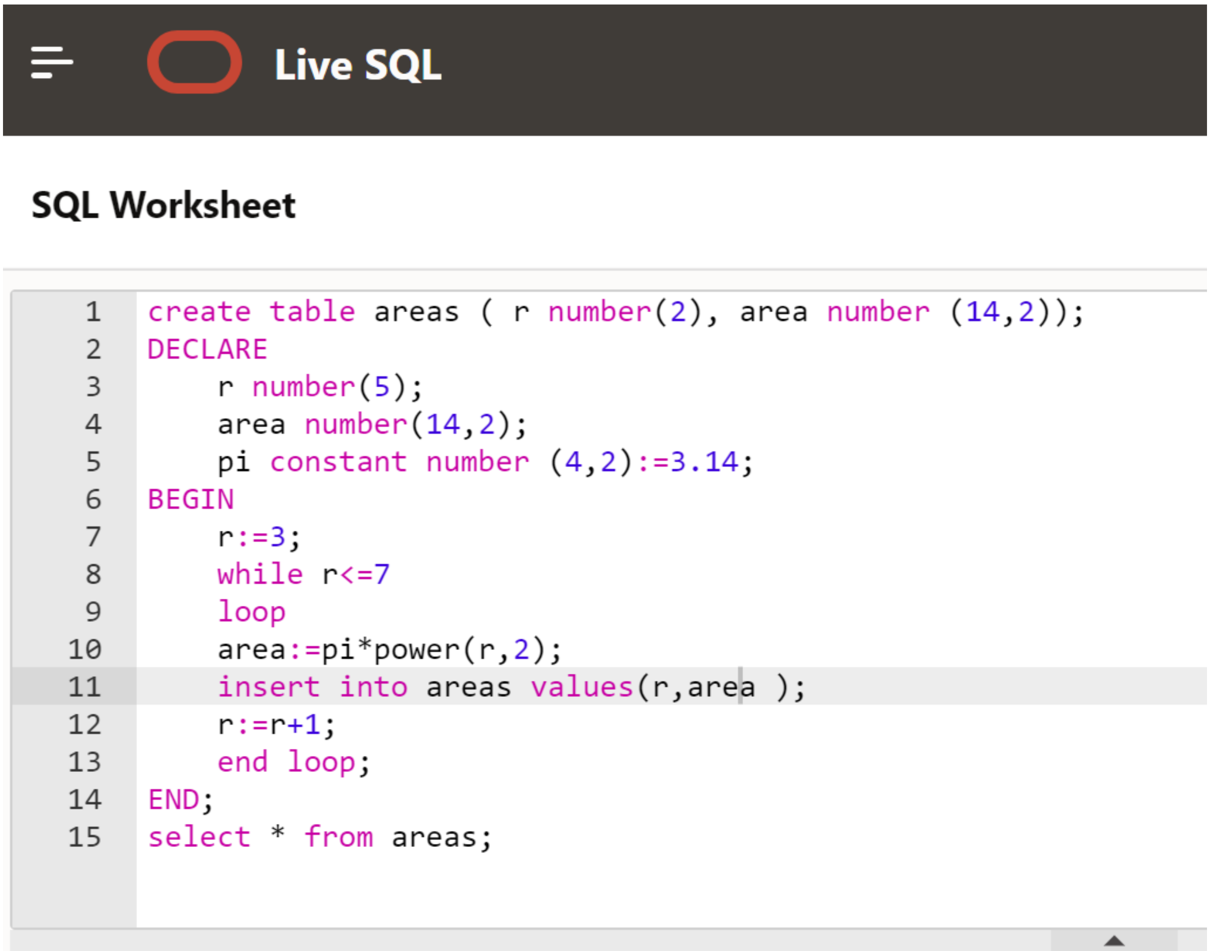
and the corresponding values of calculated area in an empty table named 'Areas',

containing two columns 'Radius' and 'Area'.

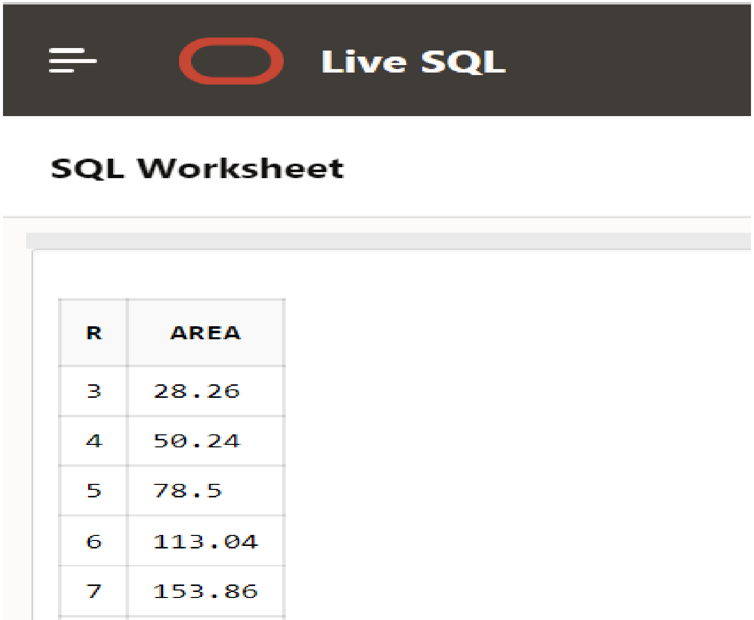
Ans-Code-

```
create table areas ( r number(2), area number (14,2));

DECLARE

   r number(5);

   area number(14,2);

   pi constant number (4,2):=3.14;

BEGIN

   r:=3;

   while r<=7

   loop

   area:=pi*power(r,2);

   insert into areas values(r,area );

   r:=r+1;

   end loop;

END;

select * from areas;
```

Code-



```
create table areas ( r number(2), area number (14,2));
DECLARE
     r number(5);
     area number(14,2);
     pi constant number (4,2):=3.14;
BEGIN
     r:=3;
     while r<=7
     loop
     area:=pi*power(r,2);
     insert into areas values(r,area );
     r:=r+1;
     end loop;
END;
select * from areas;
```



R	AREA
3	28.26
4	50.24
5	78.5
6	113.04
7	153.86