Module 1: SQL Assignment 1

Queries

1. Return the First Name, Last Name, Product Name, and Sale Price for all products sold in the month of October 2005.

Ans:

```
select      tblcustomers.firstname,
            tblcustomers.lastname,
            tblproducts.productname,
            tblsales.salesprice
from        tblcustomers,
            tblproducts,
            tblsales
where       tblcustomers.customerid = tblsales.customerid and
            tblproducts.p_id = tblsales.productid and
            tblsales.salesdate between '2005-10-01' and
            '2005-10-31'
```

Output:

	firstname	lastname	productname	salesprice
1	Heta	Dave	DVD	150.00
2	Sonal	Patel	Refrigerator	1100.00
3	Prakash	Rathod	Microwave	87.00

2. Return the CustomerID, First Name, and Last Name of those individuals in the Customer table who have made no Sales purchases.

Ans:

```
select      CustomerID,
            firstname,
            lastname
from        tblCustomers
where       tblcustomers.customerID not in (select CustomerID
            from tblSales)
```

Output:

	CustomerID	firstname	lastname
1	10	Nikita	Dave
2	11	Vaibhav	Dave
3	12	Paresh	Patel
4	13	Prakash	Patel
5	16	Payal	Shah

3. Return the First Name, Last Name, Sale Price, Recommended Sale Price, and the difference between the Sale Price and Recommended Sale Price for all Sales. The difference must be returned as a positive number.

Ans:

```
select      c.FirstName,
            c.LastName,
            s.SalesPrice,
            p.RecommandedPrice,
            abs(s.SalesPrice - p.RecommandedPrice)
            as Sale_Price_Difference
from        tblSales s
inner join tblCustomers c on s.CustomerID = c.CustomerID
inner join tblProducts p on s.ProductID = p.p_id
```

Output:

	FirstName	LastName	SalesPrice	RecommandedPrice	Sale_Price_Difference
1	chintan	Patel	105.00	105.00	0.00
2	Paresh	Prajapati	98.00	98.00	0.00
3	Pragnesh	Patel	200.00	200.00	0.00
4	Nilesh	dharsandia	80.00	105.00	25.00
5	Sonal	Patel	899.00	900.00	1.00
6	Harshal	Patel	150.00	165.00	15.00
7	Prakash	Rathod	209.00	200.00	9.00
8	Aarzoo	Dodhiya	90.00	105.00	15.00
9	Heta	Dave	130.00	165.00	35.00
10	Sandhya	Patel	85.00	98.00	13.00
11	Divesh	Patel	240.00	200.00	40.00

4. Return the average Sale Price by Product Category.

Ans:

```
select      p.Category ,
            avg(s.SalesPrice) as avarage_price
from        tblProducts p,tblSales s
where       s.ProductID = p.p_id
group by    p.Category
```

Output:

	Category	avarage_price
1	Kitchen	445.80
2	LivingRoom	121.90
3	Office	175.25

5. Add the following Customer and Sale information to the database.(using store procedure)

   FirstName:Priyanka
   LastName:Chopara
   City:Mumbai
   State:MH
   Zip:400001
   ProductID:3
   SalePrice:205
   SaleDate:12/31/2005

Ans:

```
create proc sp_customer_insert (
                                    @fisrtName varchar(50),
                                    @lastName varchar(50),
                                    @city varchar(50),
                                    @state char(2),
                                    @zip varchar(10),
                                    @p_id int,
                                    @salesprice money,
                                    @salesdate smalldatetime
                                    )
as

begin
      insert into tblCustomers(FirstName,LastName,City,State,Zip)
            values(@fisrtName,@lastName,@city,@state,@zip)
      insert into tblSales(ProductID,CustomerID,SalesPrice,SalesDate)
            Values(@p_id,SCOPE_IDENTITY(),@salesprice,@salesdate)
end

exec sp_customer_insert
'Priyanka','Chopara','Mumbai','MH','400001',3,205,'2005-12-31'
```

Output 5:

	CustomerID	FirstName	LastName	City	State	Zip
11	11	Vaibhav	Dave	Varanasi	UP	221002
12	12	Paresh	Patel	Pune	MH	411001
13	13	Prakash	Patel	Pune	MH	411001
14	14	Sandhya	Patel	Hyedr...	AP	500031
15	15	Divesh	Patel	Banglore	KA	560002
16	16	Payal	Shah	Banglore	KA	560002
17	17	Priyanka	Rana	Anand	GJ	388001
18	18	Sanket	Dhebar	V.V.N...	GJ	388121
19	19	Puja	Shah	Varanasi	UP	221002
20	20	Priya	Shah	Varanasi	UP	221002
21	21	Priyanka	Chopara	Mumbai	MH	400001

	SalesId	ProductID	CustomerID	SalesPrice	SalesDate
22	22	4	14	90.00	2005-07-22 00:00:00
23	23	1	1	130.00	2005-03-06 00:00:00
24	24	2	2	102.00	2005-04-07 00:00:00
25	25	1	3	114.00	2005-11-08 00:00:00
26	26	5	4	1000.00	2005-05-09 00:00:00
27	27	5	5	1100.00	2005-10-10 00:00:00
28	28	3	6	200.00	2005-06-11 00:00:00
29	29	2	7	87.00	2005-10-12 00:00:00
30	30	3	8	300.00	2005-07-13 00:00:00
31	31	3	20	205.00	2005-12-31 00:00:00
32	32	3	21	205.00	2005-12-31 00:00:00

6. Return the Product Category and the average Sale Price for those customers who have purchased two or more products.

Ans:

```
select      p.Category,
            avg(s.SalesPrice) as avarage_salesprice
from        tblsales s
inner join (select s.CustomerID from  tblSales s
             group by s.CustomerID having count(CustomerID)
             >= 2) x on s.CustomerID = x.CustomerID
inner join tblProducts p on s.ProductID = p.p_id
            group by p.Category
```

Output:

	Category	avarage_salesprice
1	Kitchen	484.3333
2	LivingRoom	122.75
3	Office	169.30

7. Update the Sale Price to the Recommended Sale Price of those Sales occurring between 6/10/2005 and 6/20/2005.

Ans:

```
update s

set         SalesPrice = p.RecommandedPrice

from        tblSales s
            inner join tblProducts p on s.ProductID = p.p_id
Where       SalesDate >= '2005-06-10' and
            SalesDate < '2005-06-21'

select * from tblSales where SalesDate
between '2005-06-10' AND '2005-06-21'
```

Output:

	SalesId	ProductID	CustomerID	SalesPrice	SalesDate
1	1	1	1	105.00	2005-06-14 00:00:00
2	2	2	2	98.00	2005-06-19 00:00:00
3	28	3	6	200.00	2005-06-11 00:00:00

8. Number of Sales by Product Category where the average Recommended Price is 10 or more dollars greater than the average Sale Price.

Ans:

```
Select      p.Category, COUNT(*) as Number_of_sales

From        tblSales s
            inner join tblProducts p on s.ProductID = p.p_id
            group by p.Category having
            AVG(p.RecommandedPrice) >= AVG(s.SalesPrice)
```

Output:

	Category	Number_of_sales
1	LivingRoom	10

9. Without using a declared iterative construct, return Sale Date and the running total for all sales, ordered by the Sale Date in Ascending Order.

Ans:

```
select
            c.FirstName, c.LastName, p.ProductName,s.SalesId,
            s.SalesPrice, s.SalesDate,(select SUM(SalesPrice)
            as TotalPrice FROM tblSales as s1
            WHERE s.SalesDate >= s1.SalesDate)
from
            tblSales s,
            tblCustomers c,
            tblProducts p
where       s.ProductID = p.p_id and
            s.CustomerID = c.CustomerID
order by    SalesDate asc
```

Output:

	FirstName	LastName	ProductName	SalesId	SalesPrice	SalesDate	(No column name)
1	Sonal	Patel	Refrigerator	5	899.00	2005-01-23 00:00:00	899.00
2	Sonal	Patel	Refrigerator	15	900.00	2005-03-06 00:00:00	1929.00
3	chintan	Patel	DVD	23	130.00	2005-03-06 00:00:00	1929.00
4	Prakash	Rathod	Moniter	7	209.00	2005-03-10 00:00:00	2138.00
5	Nilesh	dharsandia	Speakers	4	80.00	2005-03-22 00:00:00	2218.00
6	Harshal	Patel	VCR	6	150.00	2005-03-24 00:00:00	2368.00
7	Harshal	Patel	Speakers	16	86.00	2005-04-07 00:00:00	2556.00
8	Paresh	Prajapati	Microwave	24	102.00	2005-04-07 00:00:00	2556.00
9	Sandhya	Patel	VCR	20	99.00	2005-05-09 00:00:00	3853.00
10	Nilesh	dharsandia	Refrigerator	26	1000.00	2005-05-09 00:00:00	3853.00
11	Aarzoo	Dodhiya	Moniter	18	198.00	2005-05-09 00:00:00	3853.00
12	Divesh	Patel	Moniter	11	240.00	2005-05-14 00:00:00	4093.00
13	Harshal	Patel	Moniter	28	200.00	2005-06-11 00:00:00	4293.00
14	chintan	Patel	DVD	1	105.00	2005-06-14 00:00:00	4398.00
15	Paresh	Prajapati	Microwave	2	98.00	2005-06-19 00:00:00	4496.00
16	Aarzoo	Dodhiya	Moniter	30	300.00	2005-07-13 00:00:00	4796.00
17	Priyanka	Rana	DVD	12	87.00	2005-07-19 00:00:00	4883.00
18	Puja	Shah	VCR	14	150.00	2005-07-22 00:00:00	5123.00
19	Sandhya	Patel	Speakers	22	90.00	2005-07-22 00:00:00	5123.00
20	Aarzoo	Dodhiya	Speakers	8	90.00	2005-08-11 00:00:00	5213.00
21	Heta	Dave	VCR	9	130.00	2005-08-12 00:00:00	5343.00
22	Pragnesh	Patel	Moniter	3	200.00	2005-09-20 00:00:00	5746.00
23	Sanket	Dhebar	Microwave	13	99.00	2005-09-20 00:00:00	5746.00
24	Divesh	Patel	VCR	21	104.00	2005-09-20 00:00:00	5746.00

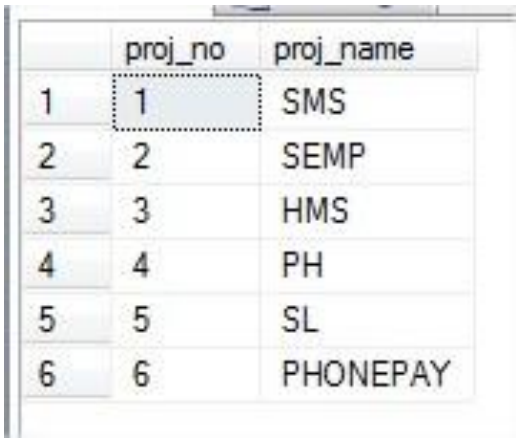
Note: Operational Statement with Employment

1. Write an SQL query that return the project number and name for projects with a budget greater than $ 10000?

Ans:

```
select      p.proj_no,
            p.proj_name
from        tblproject p
where       p.budget > 10000
```

Output:



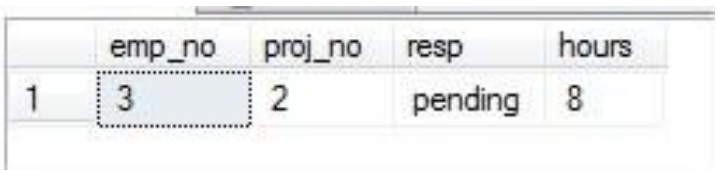
	proj_no	proj_name
1	1	SMS
2	2	SEMP
3	3	HMS
4	4	PH
5	5	SL
6	6	PHONEPAY

2. Write an SQL query that return all works on records where hours worked is less than 10 and the responsibility is manager?

Ans:

```
select * from tblworkson where hours<10
```

Output:



	emp_no	proj_no	resp	hours
1	3	2	pending	8

3. Write an SQL query that returns the employees (number and name only) who have a title of ‘EEE’ or ‘SA’ and make than $ 35000?

Ans:

```
select      tblemp.emp_no,
            tblemp.emp_name,
            tblemp.salary
from        tblemp
where       title in ('WebD','SoftD') and salary >= 35000
```

Output:

	emp_no	emp_name	salary
1	4	Raghav	35000.00
2	5	Priya	45000.00
3	9	Suryakant	40000.00

4. Write an SQL query that return the employees (name only) in department ‘D1’ order by decreasing salary?

Ans:

```
select      e.emp_name,
            d.dept_name
from        tblemp e,tbldept d
where       e.dept_no = d.dept_no and
            e.dept_no = 1
order by salary desc
```

Output:

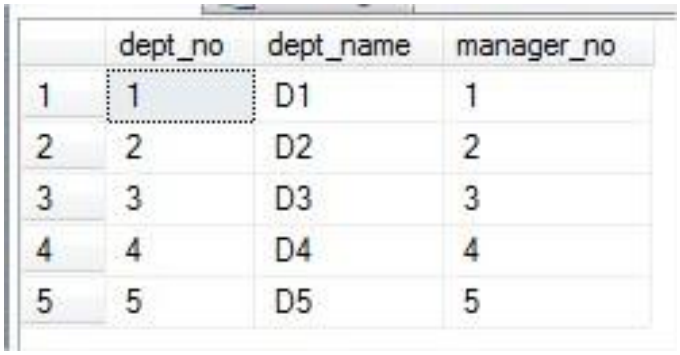
	emp_name	dept_name
1	Priyanka	D1
2	Jignesh	D1

5. Write an SQL query that returns the departments (all field) order by ascending department name?

Ans:

```
select * from tbldept order by dept_name asc
```

Output:



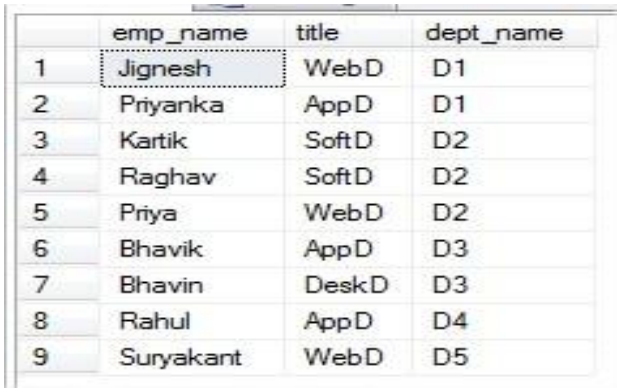
	dept_no	dept_name	manager_no
1	1	D1	1
2	2	D2	2
3	3	D3	3
4	4	D4	4
5	5	D5	5

6. Write an SQL query that return the employee name, department name, and employee title?

Ans:

```
select      e.emp_name,
            e.title,
            d.dept_name
from        tblemp e,
            tbldept d
where       e.dept_no = d.dept_no
```

Output:



	emp_name	title	dept_name
1	Jignesh	WebD	D1
2	Priyanka	AppD	D1
3	Kartik	SoftD	D2
4	Raghav	SoftD	D2
5	Priya	WebD	D2
6	Bhavik	AppD	D3
7	Bhavin	DeskD	D3
8	Rahul	AppD	D4
9	Suryakant	WebD	D5

7. Write SQL query that return the project name, hours worked, and project number for all woks on records where hours > 10?

Ans:

```
select      p.proj_no,
            p.proj_name,
            w.hours
from        tblproject p,
            tblworkson w
where       p.proj_no = w.proj_no and
            w.hours > 10
```

Output:

	proj_no	proj_name	hours
1	1	SMS	13
2	5	SL	18
3	3	HMS	16
4	4	PH	11
5	2	SEMP	15

8. Write an SQL query that returns the project name, department name, and budget for all projects with a budget < $50000?

Ans:

```
select      p.proj_name,
            d.dept_name,
            p.budget
from        tblproject p,
            tbldept d
where       p.dept_no = d.dept_no and
            budget < 50000
```

Output:

	proj_name	dept_name	budget
1	SMS	D1	40000.00
2	SEMP	D2	30000.00
3	SL	D4	40000.00

9. Write an SQL query that returns the employee numbers and salaries of all employees in the ‘consulting’ department order by descending salary?

Ans:

```
select      e.emp_no,
            e.salary
from        tblemp e
            inner join tbldept d on e.dept_no = d.dept_no
where       d.dept_name = 'd1'
            order by e.salary desc
```

Output:

	emp_no	salary
1	2	25000.00
2	1	15000.00

10. Write an SQL query that returns the employee name, project name, employee title, and hours for all works on records?

Ans:

```
select      e.emp_name,
            p.proj_name,
            e.title,
            w.hours
from        tblemp e,
            tblproject p,
            tblworkson w
where       e.emp_no = w.emp_no and
            p.proj_no = w.proj_no
```

Output:

	emp_name	proj_name	title	hours
1	Jignesh	SMS	WebD	10
2	Priyanka	SMS	AppD	13
3	Kartik	SEMP	SoftD	8
4	Raghav	HMS	SoftD	10
5	Priya	PH	WebD	10
6	Bhavik	SL	AppD	18
7	Bhavin	HMS	DeskD	16
8	Rahul	PH	AppD	11
9	Suryakant	SEMP	WebD	15

Perform for table Employee

A. Write an SQL query that returns the employee name their manager name by using manager code?

Ans:

```
select      e.emp_name,
            m.manager_name
from        tblemployee e,
            tblmanager m
where       e.manager_code = m.manager_code
```

Output:

	emp_name	manager_name
1	A	Raghav
2	B	Nilesh
3	D	Paresh
4	E	Nilesh