Assignment – 3

Creating table :

```sql
CREATE TABLE PROGRAMMER
(
    PNAME VARCHAR(20),
    DOB DATE,
    DOJ DATE,
    SEX VARCHAR(1),
    PROF1 VARCHAR(20),
    PROF2 VARCHAR(20),
    SALARY NUMBER(30),
    PRIMARY KEY(PNAME)
);

CREATE TABLE STUDIES
(
    PNAME VARCHAR(20),
    INSTITUTE VARCHAR(20),
    COURSE VARCHAR(20),
    COURSEFEE NUMBER(10),
    FOREIGN KEY(PNAME) REFERENCES PROGRAMMER(PNAME)
);

CREATE TABLE SOFTWARE
(
    PNAME VARCHAR(20),
    TITLE VARCHAR(20),
    DEVELOPING VARCHAR(30),
    SCOST FLOAT,
    DCOST FLOAT,
    SOLD NUMBER(3),
    FOREIGN KEY(PNAME) REFERENCES PROGRAMMER(PNAME)
);
```

Inserting Values

```sql
INSERT INTO PROGRAMMER VALUES
( 'ALTAF','02-JUL-64', '13-NOV-90','M', 'CLIPPER', 'COBOL',2800);
INSERT INTO PROGRAMMER VALUES
( 'ANAND','12-APR-66', '21-APR-92','M', 'PASCAL', 'BASIC',3200);
INSERT INTO PROGRAMMER VALUES
( 'JULIANA','31-JAN-60', '21-APR-90','F', 'COBOL', 'DBASE',3000);
```

```sql
INSERT INTO PROGRAMMER VALUES
( 'KAMALA','30-OCT-68', '02-JAN-92','F', 'C', 'DBASE',2900);
INSERT INTO PROGRAMMER VALUES
( 'MARY','24-JUN-70', '01-FEB-91','F', 'CPP', 'ORACLE',4500);
INSERT INTO PROGRAMMER VALUES
( 'NELSON','11-SEP-85', '11-MAR-89','M', 'COBOL', 'DBASE',2500);
INSERT INTO PROGRAMMER VALUES
( 'PATTRICK','10-NOV-65', '21-APR-90','M', 'PASCAL',NULL,2800);
INSERT INTO PROGRAMMER VALUES
( 'QADIR','31-AUG-65', '21-APR-90','M', 'ASSEMBLY', 'C',3000);
INSERT INTO PROGRAMMER VALUES
( 'RAMESH','03-MAY-67', '26-FEB-91','M', 'PASCAL', 'DBASE',3200);
INSERT INTO PROGRAMMER VALUES
( 'REBECCA','01-JAN-67', '01-DEC-90','F', 'BASIC', 'COBOL',2500);
INSERT INTO PROGRAMMER VALUES
( 'REMITHA','19-APR-70', '20-APR-93','F', 'C', 'ASSEMBLY',3000);
INSERT INTO PROGRAMMER VALUES
( 'REVATHI','02-DEC-69', '02-JAN-92','F', 'PASCAL', 'BASIC',3200);
INSERT INTO PROGRAMMER VALUES
( 'VIJAYA','14-DEC-65', '02-MAY-92','F', 'FOXPRO', 'C',4500);


INSERT INTO STUDIES VALUES
( 'ANAND', 'SABHARI', 'PGDCA',4500);
INSERT INTO STUDIES VALUES
( 'ALTAF', 'COIT', 'DCA',7200);
INSERT INTO STUDIES VALUES
( 'JULIANA', 'BITS', 'MCA',22000);
INSERT INTO STUDIES VALUES
( 'KAMALA', 'PRAGATHI', 'DCP',5000);
INSERT INTO STUDIES VALUES
( 'MARY', 'SABHARI', 'PGDCA',4500);
INSERT INTO STUDIES VALUES
( 'NELSON', 'PRAGATHI', 'DAP',6200);
INSERT INTO STUDIES VALUES
( 'PATTRICK', 'PRAGATHI', 'DCAP',5200);
INSERT INTO STUDIES VALUES
( 'QADIR', 'APPLE', 'HDCP',14000);
INSERT INTO STUDIES VALUES
( 'RAMESH', 'SABHARI', 'PGDCA',4500);
INSERT INTO STUDIES VALUES
( 'REMITHA', 'BDPS', 'DCS',6000);
INSERT INTO STUDIES VALUES
( 'VIJAYA', 'BDPS', 'DCA',48000);


INSERT INTO SOFTWARE VALUES
```

```
( 'MARY', 'README', 'CPP',100.00,1200,84);
INSERT INTO SOFTWARE VALUES
( 'ANAND', 'PARACHUTES', 'BASIC',399.95,6000,43);
INSERT INTO SOFTWARE VALUES
( 'ANAND', 'VIDEOTITLING', 'PASCAL',7500.00,16000,9);
INSERT INTO SOFTWARE VALUES
( 'JULIANA', 'INVENTORY', 'COBOL',3000.00,3500,0);
INSERT INTO SOFTWARE VALUES
( 'KAMALA', 'PAYROLLPRG', 'DBASE',9000.00,20000,7);
INSERT INTO SOFTWARE VALUES
( 'MARY', 'FINANCIALACC', 'ORACLE',18000.00,85000,4);
INSERT INTO SOFTWARE VALUES
( 'MARY', 'CODEGENRRATOP', 'C',4500.00,20000,23);
INSERT INTO SOFTWARE VALUES
( 'PATTRICK', 'README', 'CPP',300.00,1200,84);
INSERT INTO SOFTWARE VALUES
( 'QADIR', 'BOMBSAWAY', 'ASSEMBLY',750.00,5000,11);
INSERT INTO SOFTWARE VALUES
( 'QADIR', 'VACCINES', 'C',1900.00,3400,21);
INSERT INTO SOFTWARE VALUES
( 'RAMESH', 'HOTLIMGMT', 'DBASE',12000.00,35000,4);
INSERT INTO SOFTWARE VALUES
( 'RAMESH', 'DEADLEE', 'PASCAL',599.95,4500,73);
INSERT INTO SOFTWARE VALUES
( 'REMITHA', 'PCUTILITIES', 'C',725.00,5000,51);
INSERT INTO SOFTWARE VALUES
( 'REMITHA', 'TSRHELPPKG', 'ASSEMBLY',2500.00,6000,7);
INSERT INTO SOFTWARE VALUES
( 'REVATHI', 'HOSPITALMGMT', 'PASCAL',1100.00,75000,2);
INSERT INTO SOFTWARE VALUES
( 'VIJAYA', 'TSREDITOR', 'C',900.00,700,6);
```

Queries:

1	Find out the selling cost of Packages developed in Pascal.

```
select title, developing, scost from software
where developing='PASCAL';
```

	TITLE	DEVELOPING	SCOST
1	VIDEOTITLING	PASCAL	7500
2	DEADLEE	PASCAL	599.95
3	HOSPITALMGMT	PASCAL	1100

2	Display the names ages of all programmers

```
select pname name, FLOOR((SYSDATE-DOB)/365) age from programmer;
```

	NAME	AGE
1	ALTAF	56
2	ANAND	54
3	JULIANA	61
4	KAMALA	52
5	MARY	50
6	NELSON	35
7	PATTRICK	55
8	QADIR	55
9	RAMESH	53
10	REBECCA	54
11	REMITHA	50
12	REVATHI	51
13	VIJAYA	55

3	Display the names of those who have done the dap course.

```
select pname from studies where course='DAP';
```

	PNAME
1	NELSON

4	Display the names and date of births of all programmers born in january

```
select pname, DOB from programmer where TO_CHAR(DOB,'MON')
like 'JAN';
```

	PNAME	DOB
1	JULIANA	31-01-60
2	REBECCA	01-01-67

5	What is the highest number of copies sold by a package ?

```
select max(sold) from software;
```

	MAX(SOLD)
1	84

6	Display the lowest course fee.

```
select min(coursefee) from studies;
```

	MIN(COURSEFEE)
1	4500

7	How many programmers done the pgdca course ?

```
select count(*) from studies where course='PGDCA';
```

	COUNT(*)
1	3

8	How much revenue has been earned thru sales of packages developed in c.

```
select sum(sold*scost) from software where developing='C';
```

	SUM(SOLD*SCOST)
1	185775

9	Display the details of the software developed by Ramesh

```
select * from software where pname='RAMESH';
```

	PNAME	TITLE	DEVELOPING	SCOST	DCOST	SOLD
1	RAMESH	HOTLIMGMT	DBASE	12000	35000	4
2	RAMESH	DEADLEE	PASCAL	599.95	4500	73

10	How may programmers studied at Sabhari ?

```
select count(*) from studies where institute='SABHARI';
```

	COUNT(*)
1	3

11	Display details of packages whose sales crossed the 2000 mark

```
SELECT * FROM software WHERE (sold*scost)>2000;
```

	PNAME	TITLE	DEVELOPING	SCOST	DCOST	SOLD
1	MARY	README	CPP	100	1200	84
2	ANAND	PARACHUTES	BASIC	399.95	6000	43
3	ANAND	VIDEOTITLING	PASCAL	7500	16000	9
4	KAMALA	PAYROLLPRG	DBASE	9000	20000	7
5	MARY	FINANCIALACC	ORACLE	18000	85000	4
6	MARY	CODEGENRRATOP	C	4500	20000	23
7	PATTRICK	README	CPP	300	1200	84
8	QADIR	BOMBSAWAY	ASSEMBLY	750	5000	11
9	QADIR	VACCINES	C	1900	3400	21
10	RAMESH	HOTLIMGMT	DBASE	12000	35000	4
11	RAMESH	DEADLEE	PASCAL	599.95	4500	73
12	REMITHA	PCUTILITIES	C	725	5000	51
13	REMITHA	TSRHELPPKG	ASSEMBLY	2500	6000	7
14	REVATHI	HOSPITALMGMT	PASCAL	1100	75000	2
15	VIJAYA	TSREDITOR	C	900	700	6

12	Find out the number of copies which should be sold in order to

```
SELECT TITLE, CEIL(DCOST/SCOST) NO_OF_COPIES FROM SOFTWARE;
```

	TITLE	NO_OF_COPIES
1	README	12
2	PARACHUTES	16
3	VIDEOTITLING	3
4	INVENTORY	2
5	PAYROLLPRG	3
6	FINANCIALACC	5
7	CODEGENRRATOP	5
8	README	4
9	BOMBSAWAY	7
10	VACCINES	2
11	HOTLIMGMT	3
12	DEADLEE	8
13	PCUTILITIES	7
14	TSRHELPPKG	3
15	HOSPITALMGMT	69
16	TSREDITOR	1

13	Display the details of packages for which developments cost have been recovered.

```
SELECT * FROM SOFTWARE WHERE (sold*scost)>=dcost;
```

	PNAME	TITLE	DEVELOPING	SCOST	DCOST	SOLD
1	MARY	README	CPP	100	1200	84
2	ANAND	PARACHUTES	BASIC	399.95	6000	43
3	ANAND	VIDEOTITLING	PASCAL	7500	16000	9
4	KAMALA	PAYROLLPRG	DBASE	9000	20000	7
5	MARY	CODEGENRRATOP	C	4500	20000	23
6	PATTRICK	README	CPP	300	1200	84
7	QADIR	BOMBSAWAY	ASSEMBLY	750	5000	11
8	QADIR	VACCINES	C	1900	3400	21
9	RAMESH	HOTLIMGMT	DBASE	12000	35000	4
10	RAMESH	DEADLEE	PASCAL	599.95	4500	73
11	REMITHA	PCUTILITIES	C	725	5000	51
12	REMITHA	TSRHELPPKG	ASSEMBLY	2500	6000	7
13	VIJAYA	TSREDITOR	C	900	700	6

14	What is the cost of the costliest software developed in basic?

```
SELECT MAX(SCOST) FROM SOFTWARE WHERE developing='BASIC';
```

	MAX(SCOST)
1	399.95

15	How many packages developed in dbase ?

```
SELECT COUNT(*) FROM SOFTWARE WHERE developing='DBASE';
```

	COUNT(*)
1	2

16	How many programmers studies in Pragathi ?

```
select count(*) from studies where institute='PRAGATHI';
```

	COUNT(*)
1	3

17	How many programmers paid 5000 to 10000 for their studies ?

```
select count(*) from studies where coursefee BETWEEN 5000 AND 10000;
```

	COUNT(*)
1	5

18	What is avg course fee?

```
SELECT CAST(AVG(COURSEFEE) AS DECIMAL(10,2)) Average FROM studies;
```

	AVERAGE
1	11554.55

19	Display the detail the programmers knowing c

```
SELECT * FROM PROGRAMMER WHERE PROF1='C' OR PROF2='C';
```

	PNAME	DOB	DOJ	SEX	PROF1	PROF2	SALARY
1	KAMALA	30-10-68	02-01-92	F	C	DBASE	2900
2	QADIR	31-08-65	21-04-90	M	ASSEMBLY	C	3000
3	REMITHA	19-04-70	20-04-93	F	C	ASSEMBLY	3000
4	VIJAYA	14-12-65	02-05-92	F	FOXPRO	C	4500

20	How many programmers know either Cobol or Pascal ?

```
SELECT COUNT(*) FROM PROGRAMMER
WHERE PROF1='COBOL' OR PROF1='PASCAL' OR PROF2='COBOL' OR PROF2='PASCAL';
```

	COUNT(*)
1	8

21	How many programmers don't know Pascal and C?

```
SELECT COUNT(*) FROM PROGRAMMER
WHERE PROF1 NOT IN ('PASCAL','C') AND PROF2 NOT IN ('PASCAL','C');
```

	COUNT(*)
1	5

22	How old is the oldest male programmers?

```
SELECT FLOOR((SYSDATE-DOB)/365) AGE FROM PROGRAMMER
WHERE dob IN (SELECT MIN(DOB) FROM PROGRAMMER WHERE SEX='M');
```

	AGE
1	56

23	Calculate the experience in years for each programmers and. display along with the names in descending order.

```
SELECT PNAME , FLOOR((SYSDATE-DOJ)/365) AS EXPERIENCE
FROM PROGRAMMER ORDER BY EXPERIENCE DESC;
```

	PNAME	EXPERIENCE
1	NELSON	31
2	JULIANA	30
3	ALTAF	30
4	PATTRICK	30
5	REBECCA	30
6	RAMESH	30
7	QADIR	30
8	MARY	30
9	REVATHI	29
10	KAMALA	29
11	VIJAYA	28
12	ANAND	28
13	REMITHA	27

24	Who are the programmers who celebrate their birthdays during the current month?

```
SELECT PNAME FROM PROGRAMMER
WHERE TO_CHAR(DOB,'MM')=TO_CHAR(SYSDATE,'MM');
```

PNAME

25	How many female programmers are there ?

```
SELECT COUNT(*) FROM PROGRAMMER WHERE SEX='F';
```

	COUNT(*)
1	7

26	What are the languages by male programmers?

```
SELECT DISTINCT PROF1 AS LANGUAGE FROM PROGRAMMER
WHERE SEX='M' AND PROF1 IS NOT NULL
UNION
SELECT DISTINCT PROF2 AS LANGUAGE FROM PROGRAMMER
WHERE SEX='M' AND PROF2 IS NOT NULL;
```

	LANGUAGE
1	ASSEMBLY
2	BASIC
3	C
4	CLIPPER
5	COBOL
6	DBASE
7	PASCAL

27	What is the average salary?

```
SELECT CAST(AVG(SALARY) AS DECIMAL(10,2)) AS AVERAGE_SALARY FROM PROGRAMMER;
```

	AVERAGE_SALARY
1	3161.54

28	How many people draw salary 2000 to 4000 ?

```
SELECT COUNT(*) FROM PROGRAMMER WHERE salary BETWEEN 2000 AND 4000;
```

	COUNT(*)
1	11

29	Display the details of those who don't know clipper Cobol or Pascal.

```
SELECT * FROM PROGRAMMER
MINUS
SELECT * FROM PROGRAMMER WHERE PROF1 IN ('COBOL','PASCAL') OR PROF2 IN ('COB
OL','PASCAL');
```

	PNAME	DOB	DOJ	SEX	PROF1	PROF2	SALARY
1	KAMALA	30-10-68	02-01-92	F	C	DBASE	2900
2	MARY	24-06-70	01-02-91	F	CPP	ORACLE	4500
3	QADIR	31-08-65	21-04-90	M	ASSEMBLY	C	3000
4	REMITHA	19-04-70	20-04-93	F	C	ASSEMBLY	3000
5	VIJAYA	14-12-65	02-05-92	F	FOXPRO	C	4500

30	Display the cost of package developed by each programmer.

```
SELECT PNAME, SUM(DCOST) AS COST FROM SOFTWARE GROUP BY PNAME;
```

	PNAME	COST
1	PATTRICK	1200
2	REMITHA	11000
3	JULIANA	3500
4	REVATHI	75000
5	KAMALA	20000
6	ANAND	22000
7	QADIR	8400
8	MARY	106200
9	RAMESH	39500
10	VIJAYA	700

31	Display the sales values of the packages developed by the each programmer.

```
SELECT PNAME, SUM(SOLD*SCOST) SALES FROM SOFTWARE GROUP BY PNAME;
```

	PNAME	SALES
1	PATTRICK	25200
2	REMITHA	54475
3	JULIANA	0
4	REVATHI	2200
5	KAMALA	63000
6	ANAND	84697.85
7	QADIR	48150
8	MARY	183900
9	RAMESH	91796.35
10	VIJAYA	5400

32	Display the number of packages sold by each programmer

```
SELECT PNAME, count(*) NUM FROM SOFTWARE GROUP BY PNAME;
```

	PNAME	NUM
1	PATTRICK	1
2	REMITHA	2
3	JULIANA	1
4	REVATHI	1
5	KAMALA	1
6	ANAND	2
7	QADIR	2
8	MARY	3
9	RAMESH	2
10	VIJAYA	1

33	Display the sales cost of the packages developed by each programmer.

```
SELECT PNAME, SUM(SCOST) FROM SOFTWARE GROUP BY PNAME;
```

	PNAME	SUM(SCOST)
1	PATTRICK	300
2	REMITHA	3225
3	JULIANA	3000
4	REVATHI	1100
5	KAMALA	9000
6	ANAND	7899.95
7	QADIR	2650
8	MARY	22600
9	RAMESH	12599.95
10	VIJAYA	900

34	Display the sales cost of the packages developed by each programmer language wise.

```
SELECT DEVELOPING, SUM(SCOST) FROM SOFTWARE GROUP BY DEVELOPING;
```

	DEVELOPING	SUM(SCOST)
1	CPP	400
2	BASIC	399.95
3	ORACLE	18000
4	C	8025
5	PASCAL	9199.95
6	DBASE	21000
7	COBOL	3000
8	ASSEMBLY	3250

35	Display each language name with average development cost, average selling cost and average price per copy

```
SELECT DEVELOPING, CAST(AVG(DCOST) AS DECIMAL(10,2)) AS DEVELOPMENT_COST,
AVG(SCOST) AS DEVELOPMENT_COST  FROM SOFTWARE GROUP BY DEVELOPING;
```

	DEVELOPING	DEVELOPMENT_COST	DEVELOPMENT_COST_1
1	CPP	1200	200
2	BASIC	6000	399.95
3	ORACLE	85000	18000
4	C	7275	2006.25
5	PASCAL	31833.33	3066.65
6	DBASE	27500	10500
7	COBOL	3500	3000
8	ASSEMBLY	5500	1625

36	Display each programmers name costliest and cheapest packages developed.

```
SELECT X.PNAME AS NAME , X.DEVELOPING AS CHEAPEST, Y.DEVELOPING AS COSTLIEST
FROM SOFTWARE X, SOFTWARE Y
WHERE X.PNAME=Y.PNAME AND X.DCOST=(SELECT MIN(DCOST) FROM SOFTWARE
WHERE PNAME=X.PNAME) AND Y.DCOST=(SELECT MAX(DCOST) FROM SOFTWARE
WHERE PNAME=Y.PNAME);
```

	NAME	CHEAPEST	COSTLIEST
1	ANAND	BASIC	PASCAL
2	JULIANA	COBOL	COBOL
3	KAMALA	DBASE	DBASE
4	MARY	CPP	ORACLE
5	PATTRICK	CPP	CPP
6	QADIR	C	ASSEMBLY
7	RAMESH	PASCAL	DBASE
8	REMITHA	C	ASSEMBLY
9	REVATHI	PASCAL	PASCAL
10	VIJAYA	C	C

37	Display each institute name with number of courses average cost per course.

```
SELECT INSTITUTE , COUNT(*), CAST(AVG(COURSEFEE) AS DECIMAL(10,2)) Average
FROM STUDIES X
WHERE COURSE IN (SELECT DISTINCT(COURSE) FROM STUDIES
WHERE INSTITUTE=X.INSTITUTE) GROUP BY INSTITUTE;
```

	INSTITUTE	COUNT(*)	AVERAGE
1	BITS	1	22000
2	BDPS	2	27000
3	COIT	1	7200
4	PRAGATHI	3	5466.67
5	APPLE	1	14000
6	SABHARI	3	4500

38	Display each institute name with number of students.

```
SELECT INSTITUTE , COUNT(*)
AS NO_OF_STUDENTS FROM STUDIES GROUP BY INSTITUTE;
```

	INSTITUTE	NO_OF_STUDENTS
1	BITS	1
2	BDPS	2
3	COIT	1
4	PRAGATHI	3
5	APPLE	1
6	SABHARI	3

39	Display names of male and female programmers name and sex also

```
SELECT PNAME, SEX FROM PROGRAMMER ORDER BY SEX;
```

	PNAME	SEX
1	REVATHI	F
2	REMITHA	F
3	REBECCA	F
4	MARY	F
5	KAMALA	F
6	JULIANA	F
7	VIJAYA	F
8	RAMESH	M
9	QADIR	M
10	NELSON	M
11	ANAND	M
12	ALTAF	M
13	PATTRICK	M

40	Display the name of programmers and their packages

```sql
select PNAME, TITLE from software;
```

	PNAME	TITLE
1	MARY	README
2	ANAND	PARACHUTES
3	ANAND	VIDEOTITLING
4	JULIANA	INVENTORY
5	KAMALA	PAYROLLPRG
6	MARY	FINANCIALACC
7	MARY	CODEGENRRATOP
8	PATTRICK	README
9	QADIR	BOMBSAWAY
10	QADIR	VACCINES
11	RAMESH	HOTLIMGMT
12	RAMESH	DEADLEE
13	REMITHA	PCUTILITIES
14	REMITHA	TSRHELPPKG
15	REVATHI	HOSPITALMGMT
16	VIJAYA	TSREDITOR

41	Display the number of packages in each languages except c and c++.

```sql
SELECT DEVELOPING, COUNT(*) FROM SOFTWARE
WHERE DEVELOPING NOT IN ('CPP','C') GROUP BY DEVELOPING;
```

	DEVELOPING	COUNT(*)
1	BASIC	1
2	ORACLE	1
3	PASCAL	3
4	DBASE	2
5	COBOL	1
6	ASSEMBLY	2

42	Display the number of packages in each language for which development cost is less than 1000.

```
SELECT DEVELOPING, COUNT(*) FROM SOFTWARE
WHERE DCOST<=1000 GROUP BY DEVELOPING;
```

	DEVELOPING	COUNT(*)
1	C	1

43	Display the average difference between Scost and Dcost for each package.

```
SELECT DEVELOPING , CAST(AVG(SCOST-DCOST) AS DECIMAL(10,2)) AS DIFF
FROM SOFTWARE GROUP BY DEVELOPING;
```

	DEVELOPING	DIFF
1	CPP	-1000
2	BASIC	-5600.05
3	ORACLE	-67000
4	C	-5268.75
5	PASCAL	-28766.68
6	DBASE	-17000
7	COBOL	-500
8	ASSEMBLY	-3875

44	Display the total Scost, Dcost and amount to be recovered for each programmer for those whose Dcost has not yet been recovered.

```
SELECT PNAME,SUM(SCOST), SUM(DCOST), SUM(DCOST-(SOLD*SCOST)) FROM SOFTWARE
GROUP BY PNAME HAVING SUM(DCOST)>SUM(SOLD*SCOST);
```

	PNAME	SUM(SCOST)	SUM(DCOST)	SUM(DCOST-(SOLD*SCOST))
1	JULIANA	3000	3500	3500
2	REVATHI	1100	75000	72800

45	Display highest, lowest and average salaries for those earning more than 2000.

```
SELECT MAX(SALARY), MIN(SALARY), CAST(AVG(SALARY) AS DECIMAL(10,2)) AVERAGE
FROM PROGRAMMER WHERE SALARY > 2000;
```

	MAX(SALARY)	MIN(SALARY)	AVERAGE
1	4500	2500	3161.54