Assignments on SQL
(Oracle/PostgreSQL/MySql/ MS-SQL Server)

This document contains few assignments on topics that covered under the SQL Course

Tables to be used to write the queries. First create the tables with sample data and start writing the queries.

Table Structure

1) Table Name	Programmers		
Progid	Not null	Int	Programmer id (PK) Auto generated
name	not null	varchar2(50)	name
dob	not null	Date	date of birth
doj	not null	Date	date of joining
Gender	not null	Char(1)	male/ female
prof1		varchar2(50)	known language/Proficiency 1
prof2		varchar2(50)	known language/Proficiency 2
salary	not null	number(6)	salary

Sample Data							
1	Janardhan	21-Apr-2001	21-Apr-2020	M	Python	Java	32000

2) Table Name	SoftwaresDeveloped		
Softid	Not null	Int	Software id (PK)
Progid	not null	Int	Developed by Programmer id (FK)
title	not null	varchar2(50)	software project name
dev_in	not null	varchar2(50)	language developed
scost		number(7,2)	software cost
dcost		number(5)	development cost
sold		number(3)	number of softwares sold

Sample Data						
1	1	ERP	Java	399.95	6000	43

3) Table Name	CoursesStudied		
Progid	Not null	Int	Programmer –FK(Progid)
Corsindex	Not null	Int	Course index -1,2 composite PK
splace	not null	varchar2(50)	studied institute
course	not null	varchar2(50)	course studied
ccost	not null	Numeric(7,2)	course cost

Sample Data				
1	1	NKXGEN	pgdca	4500
1	1	SQL*STAR	dcs	5000

Table: Programmers

PROGID	NAME	DOB	DOJ	GENDER	PROF1	PROF2	SALARY
1	ANAND	12-APR-66	21-APR-92	M	PASCAL	BASIC	3200
2	ALTAF	02-JUL-64	13-NOV-90	M	CLIPPER	COBOL	2800
3	JULIANA	31-JAN-60	21-APR-90	F	COBOL	DBASE	3000
4	KAMALA	30-OCT-68	02-JAN-92	F	C	DBASE	2900
5	MARY	24-JUN-70	01-FEB-91	F	CPP	ORACLE	4500
6	NELSON	11-SEP-65	11-OCT-89	M	COBOL	DBASE	2500
7	PATTRICK	10-NOV-65	21-APR-90	M	PASCAL	CLIPPER	2800
8	QADIR	31-AUG-65	21-APR-91	M	ASSEMBLY	C	3000
9	RAMESH	03-MAY-67	28-FEB-91	M	PASCAL	DBASE	3200
10	REBECCA	01-JAN-67	01-DEC-90	F	BASIC	COBOL	2500
11	REMITHA	19-APR-70	20-APR-93	F	C	ASSEMBLY	3600
12	REVATHI	02-DEC-69	02-JAN-92	F	PASCAL	BASIC	3700
13	VIJAYA	14-DEC-65	02-MAY-92	F	FOXPRO	C	3500

Table : SoftwaresDeveloped

Softid	Progid	TITLE	DEVELOPIN	SCOST	DCOST	SOLD
1		README	CPP	300.00	1200	84
2		PARACHUTES	BASIC	399.95	6000	43
3		VIDEO TITLING	PASCAL	7500.00	16000	9
4		INVENTORY	COBOL	3000.00	3500	0
5		PAYROLL PKG.	DBASE	9000.00	20000	7
6		FINANCIAL ACCT.	ORACLE	18000.00	85000	4
7		CODE GENERATOR	C	4500.00	20000	23
8		README	CPP	300.00	1200	84
9		BOMBS AWAY	ASSEMBLY	750.00	3000	11
10		VACCINES	C	1900.00	3100	21
11		HOTEL MGMT.	DBASE	13000.00	35000	4
12		DEAD LEE	PASCAL	599.95	4500	73

13		PC UTILITIES	C	725.00	5000	51
14		TSR HELP PKG.	ASSEMBLY	2500.00	6000	7
15		HOSPITAL MGMT.	PASCAL	1100.00	75000	2
16		TSR EDITOR	C	900.00	700	6

Table : CoursesStudied

Progid	corsindex	INSTITUTE	COURSE	COURSE FEE
1	1	NKIITS	PGDCA	4500
		COIT	DCA	7200
		BDPS	MCA	22000
		NKXGEN	DCA	5000
		NKIITS	PGDCA	4500
		NKXGEN	DAP	6200
		NKXGEN	DCAP	5200
		APPLE	HDCA	14000
		NKIITS	PGDCA	4500
		BRILLIANT	DCAP	11000
		BDPS	DCS	6000
		NKIITS	DAP	5000
		BDPS	DCA	4800

QUERIES - I

1) Find out the SELLING COST AVERAGE for the packages developed in PASCAL?
2) Display the names and ages of all programmers.
3) Display the names and ages of all the programmers who have undergone training in DCS course.
4) What is the highest numbers of copies sold by a package?
5) Display the names and date of birth of all the programmer born in JANUARY.
6) Display lowest course fee.
7) How many programmer has done PGDCA course.
8) How much revenue has been earned through sales of packages in C.
9) Display the details of software developed by Ramesh?
10) How many programmers studied at NKIITS.
11) Display the details of PACKAGES whose sales crossed the 20000 mark.
12) Find out the number of copies which should be sold in order to recover the development cost of each package.
13) What is the price of the costliest software developed in BASIC?
14) Display the details of packages for which development cost has been recovered.
15) How many packages were developed in dbase?
16) How many programmers studies at NKXGEN?
17) How many programmers paid 5000 to 10000 for their course?
18) What is the average course fee?
19) Display the details of programmers knowing c?
20) How many programmers know either Cobol or Pascal?
21) How many programmers don't know Pascal & C?
22) How old is the oldest male programmers?
23) What is the average age of female programmers?
24) Calculate the experience in years for each programmers and display along with the names in descending order?

25) Who are the programmers who celebrate their birthday during the current month?
26) How many female programmers are there?
27) What are the languages known by the male programmers?
28) What is the Average salary?
29) How many people draw 2000 to 4000?

30) Display the details of those who don't know Clipper, Cobol or Pascal?

31) How many Female programmers knowing C are above 24 years of age?
32) Who are the programmers who will be celebrating their Birthday within a week?
33 Display the details of those with less than a year's experience?
34 Display the details of those who will be completing 2 years of service this year?
35 Calculate the amount to be recovered for those packages whose development cost has not been recovered?
36) List the packages which have not been sold so far?
37) Find out the cost of the software developed by Mary?
38) Display the institute's names from the studies table without duplicates?
39) How many different courses are mentioned in the studies table?
40) Display the names of the programmers whose names contain 2 occurrences of the letter A?
41) Display the names of programmers whose names contain unto 5 characters?
42) How many female programmers knowing COBOL have more than 2 years experience?
43) What is the length of the shortest name in the programmer table?
44) What is the average development cost of a package developed in COBOL?
45) Display the name, sex, dob (DD/MM/YY format), doj for all the programmers without using conversion function?
46) Who are the programmers who were born on the last day of the month?
47) What is the amount paid in salaries of the male programmers who do not know Cobol?
48) Display the title, scost, dcost and difference between scost and dcost in descending order of difference?
49) Display the name, dob, doj of those month of birth and month of joining are same?
50) Display the names of the packages whose names contain more than 1 word?

QUERIES - II

1) Display THE NUMBER OF packages developed in EACH language.
2) Display THE NUMBER OF packages developed by EACH person.
3) Display THE NUMBER OF male and female programmer.
4) Display THE COSTLIEST packages and HIGEST selling developed in EACH language.
5) Display THE NUMBER OF people BORN in EACH YEAR.
6) Display THE NUMBER OF people JOINED in EACH YEAR.
7) Display THE NUMBER OF people BORN in EACH MONTH.
8) Display THE NUMBER OF people JOINED in EACH MONTH.
9) Display the language wise COUNTS of prof1.
10) Display the language wise COUNTS of prof2.
11) Display THE NUMBER OF people in EACH salary group.
12) Display THE NUMBER OF people who studied in EACH institute.
13) Display THE NUMBER OF people who studied in EACH course.
14) Display the TOTAL development COST of the packages developed in EACH language.
15) Display the selling cost of the package developed in EACH language.
16) Display the cost of the package developed by EACH programmer.
17) Display the sales values of the package developed in EACH programmer.
18) Display the NUMBER of packages developed by EACH programmer.
19) Display the sales COST of packages developed by EACH programmer language wise.
20) Display EACH programmers name, costliest package and cheapest packages developed by Him/Her.
21) Display EACH language name with AVERAGE development cost, AVERAGE cost, selling cost and AVERAGE price per copy.
22) Display EACH institute name with NUMBER of courses, AVERAGE cost per course.
23) Display EACH institute name with NUMBER of students.

4

24) Display names of male and female programmers.
25) Display the programmer's name and their packages.
26) Display the NUMBER of packages in EACH language.
27) Display the NUMBER of packages in EACH language for which development cost is less than 1000.
28) Display the AVERAGE difference BETWEEN scost and dcost for EACH language.
29) Display the TOTAL scost, dcsot and amount TOBE recovered for EACH programmer for whose dcost HAS NOT YET BEEN recovered.
30) Display highest, lowest and average salaries for THOSE earning MORE than 2000.

QUERIES - III

1) Who is the highest paid C programmer?
2) Who is the highest paid female cobol programmer?
3) Display the name of the HIGEST paid programmer for EACH language (prof1)
4) Who is the LEAST experienced programmer?
5) Who is the MOST experienced programmer?
6) Which language is known by ONLY ONE programmer?
7) Who is the YONGEST programmer knowing DBASE?
8) Which institute has MOST NUMBER of students?
9) Who is the above programmer?
10) Which female programmer earns MORE than 3000/- but DOES NOT know C, C++, Oracle or Dbase?
11) Which is the COSTLIEST course?
12) Which course has been done by MOST of the students?
13) Display name of the institute and course Which has below AVERAGE course fee?
14) Which institute conducts COSTLIEST course?
15) Which course has below AVERAGE number of students?
16) Which institute conducts the above course?
17) Display names of the course WHOSE fees are within 1000(+ or -) of the AVERAGE fee.
18) Which package has the HIGEST development cost?
19) Which package has the LOWEST selling cost?
20) Who developed the package, which has sold the LEAST number of copies?
21) Which language was used to develop the package WHICH has the HIGEST sales amount?
22) How many copies of the package that has the LEAST DIFFRENCE between development and selling cost were sold?
23) Which is the COSTLIEAST package developed in PASCAL?
24) Which language was used to develop the MOST NUMBER of package?
25) Which programmer has developed the HIGEST NUMBER of package?
26) Who is the author of the COSTLIEST package?
27) Display names of packages WHICH have been sold LESS THAN the AVERAGE number of copies?
28) Who are the female programmers earning MORE than the HIGEST paid male programmers?
29) Which language has been stated as prof1 by MOST of the programmers?
30) Who are the authors of packages, WHICH have recovered MORE THAN double the development cost?
31) Display programmer names and CHEAPEST package developed by them in EACH languuage?
32) Who is the YOUNGEST male programmer born in 1965?
33) Display language used by EACH programmer to develop the HIGEST selling and LOWEST selling package.
34) Who is the OLDEST female programmer WHO joined in 1992

5

35) In WHICH year where the MOST NUMBER of programmer born?
36) In WHICH month did MOST NUMBRER of programmer join?
37) In WHICH language are MOST of the programmer's proficient?
38) Who are the male programmers earning BELOW the AVERAGE salary of female programmers?

QUERY - IV

1) Display the details of THOSE WHO are drawing the same salary.
2) Display the details of software developed by male programmers earning MORE than 3000.
3) Display details of packages developed in PASCAL by female programmers.
4) Display the details of the programmer WHO joined BEFORE 1990.
5) Display details of software developed in C by female programmers of NKXGEN.
6) Display NUMBER of packages NUMBER of copies sold and sales value of EACH programmer Institute-wise.
7) Display details of software developed in DBASE by male programmers WHO belong to the institute on which MOST NUMBER OF programmer's studies.
8) Display the details of the software that was developed by male programmers born BEFORE 1965 and female programmers born AFTER 1975.
9) Display the details of the software that was developed in the language that is NOT the programmer's first proficiency.
10) Display details of software that was developed in the language which is NEITHER first NOR second proficiency of the programmer.
11) Display details of software developed by male students of NKIITS.
12) Display the names of programmers WHO HAVE NOT developed any package.
13) What is the total cost of the software developed by the programmers byAPPLE?
14) Who are the programmers WHO JOINED in the same day?
15) Who are the programmers WHO HAVE THE SAME PROF2?
16) Display the total sales values of software, institutes-wise.
17) In which institutes did the person who developed the COSTLIEST package study?
18) Which language listed in prof1 and prof2 HAS NOT BEEN used to develop any package?
19) How much does the person WHO developed the HIGHEST selling package earn and WHAT course did he/she undergo?
20) How many months will it take for each programmer to recover the cost of the course underwent?
21) Which is the COSTLIEST package developed by a person with under 3 year's expenences?
22) What is the AVERAGE salary for those WHOSE software's sales value is more than 50,000?
23) How many packages were developed by the students WHO studied in the institute that Charge the LOWEST course fee?
24) How many packages were developed by the person WHO developed the CHEAPEST package? Where did he\she study?
25) How many packages were developed by female programmers earning MORE than the HIGHEST paid male programmer?
26) How many packages were developed by the MOST experienced programmers from BDPS?
27) List the programmers (from software table) and institutes they studied, including those WHO DIDN'T develop any package.
28) List each profit with the number of programmers having that prof1 and the number of packages developed in that prof1.
29) List programmer names (from programmer table) and number of packages EACH developed.
30) List all the details of programmers who have done a course at S.S.I.L.

6