

ASSIGNMENT 4 (SQL)

1. Select all the details of courses?

```
select * from tblcourse
```

	CourseID	CourseName	CourseShortName	CourseType
1	1001	Bachelor of Computer Application	BCA	UG
2	1002	Bachelor in Science Computer Science	BSc CS	UG
3	1003	Master of Computer Application	MCA	PG
4	1004	Master in Science Computer Science	Msc CS	PG

2. Select the name of UG Courses?

```
select CourseName from tblcourse where CourseType='UG'
```

	CourseName
1	Bachelor of Computer Application
2	Bachelor in Science Computer Science

3. Select the name and short name of PG Courses?

```
select CourseName, CourseShortName from tblcourse where CourseType='PG'
```

	CourseName	CourseShortName
1	Master of Computer Application	MCA
2	Master in Science Computer Science	Msc CS

4. Select the details of batches?

```
select * from tblbatch
```

	BatchID	BatchName
1	331	2017-2020
2	332	2018-2021
3	333	2019-2022
4	334	2017-2019
5	335	2018-2020
6	336	2019-2021

5. Select the details of students?

```
select * from tbl_student
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5004	Akash	Male	13/08/2001	akash@gmail.com	1002	333	845
2	5010	Anju	Female	09/12/1999	anju@gmail.com	1001	331	793
3	5027	Dhamu	Male	17/11/1996	dhamu@gmail.com	1004	335	908
4	5030	Adharsh	Male	25/02/2000	ajr@gmail.com	1001	332	888
5	5037	Devika	Female	29/02/1997	devika@gmail.com	1003	334	785
6	5043	Dheeraj	Male	01/01/1998	dhrj@gmail.com	1003	336	728
7	5053	Rakesh	Male	25/12/1999	rakesh@gmail.com	1004	332	805
8	5061	Ram	Male	30/01/1996	ram@gmail.com	1002	335	892
9	5069	Riya	Female	01/07/1998	ajr@gmail.com	1001	332	773

6. Insert 3 students details whose course is MCA or BCA?

```
insert into tbl_student values(5078,'Sajith','Male','13/05/2000','sajith@gmail.com',1001,332,938)
insert into tbl_student values(5081,'Sreeja','Female','08/07/1997','sreeja@gmail.com',1003,334,751)
insert into tbl_student values(5090,'Visakh','Male','21/03/2001','visakh@gmail.com',1001,332,777)
```

(1 row affected)

(1 row affected)

(1 row affected)

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7. Select the count of male and female students(use if case Statement)?

```
select COUNT(case when Student_Gender='Male' then 1 end) AS Total_Male,
COUNT(case when Student_Gender='Female' then 1 end) AS Total_Female from tbl_student;
```

	Total_Male	Total_Female
1	8	4

8. Select the details of Female Students

```
select * from tbl_student where Student_Gender='Female';
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5010	Anju	Female	09/12/1999	anju@gmail.com	1001	331	793
2	5037	Devika	Female	29/02/1997	devika@gmail.com	1003	334	785
3	5069	Riya	Female	01/07/1998	ajr@gmail.com	1001	332	773
4	5081	Sreeja	Female	08/07/1997	sreeja@gmail.com	1003	334	751

9. Select the details Males students whose course is MCA

```
select * from tbl_student where Course_id=(select Course_id from
tblcourse where Courseshortname='MCA') and Student_Gender='Male';
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5004	Akash	Male	13/08/2001	akash@gmail.com	1002	333	845
2	5027	Dhamu	Male	17/11/1996	dhamu@gmail.com	1004	335	908
3	5030	Adharsh	Male	25/02/2000	ajr@gmail.com	1001	332	888
4	5043	Dheeraj	Male	01/01/1998	dhrj@gmail.com	1003	336	728
5	5053	Rakesh	Male	25/12/1999	rakesh@gmail.com	1004	332	805
6	5061	Ram	Male	30/01/1996	ram@gmail.com	1002	335	892
7	5078	Sajith	Male	13/05/2000	sajith@gmail.com	1001	332	938
8	5090	Visakh	Male	21/03/2001	visakh@gmail.com	1001	332	777

12. Select the details BCA Students

```
select * from tbl_student where Course_id=(select CourseID from
tblcourse where CourseShortName='BCA') ;
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5010	Anju	Female	09/12/1999	anju@gmail.com	1001	331	793
2	5030	Adharsh	Male	25/02/2000	ajr@gmail.com	1001	332	888
3	5069	Riya	Female	01/07/1998	ajr@gmail.com	1001	332	773
4	5078	Sajith	Male	13/05/2000	sajith@gmail.com	1001	332	938
5	5090	Visakh	Male	21/03/2001	visakh@gmail.com	1001	332	777

11. Select the details of MCA students whose batch is 2017-2019

```
select * from tbl_student where Course_id=(select CourseID from
tblcourse where CourseShortName='MCA') and Batch_id=(select BatchID
from tblbatch where BatchName='2017-2019');
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5037	Devika	Female	29/02/1997	devika@gmail.com	1003	334	785
2	5081	Sreeja	Female	08/07/1997	sreeja@gmail.com	1003	334	751

12. Select all the course short name and total number of students

```
SELECT c.CourseShortName AS CourseName ,COUNT(*) AS Count_students FROM
tblcourse c JOIN tbl_student s ON s.Course_id = c.CourseID GROUP BY c.CourseShortName;
```

	CourseName	Count_students
1	BCA	5
2	BSc CS	2
3	MCA	3
4	Msc CS	2

13. Select the details UG Students

```
select * from tbl_student where Course_id IN(select CourseID from
tblcourse where CourseType='UG');
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5004	Akash	Male	13/08/2001	akash@gmail.com	1002	333	845
2	5010	Anju	Female	09/12/1999	anju@gmail.com	1001	331	793
3	5030	Adharsh	Male	25/02/2000	ajr@gmail.com	1001	332	888
4	5061	Ram	Male	30/01/1996	ram@gmail.com	1002	335	892
5	5069	Riya	Female	01/07/1998	ajr@gmail.com	1001	332	773
6	5078	Sajith	Male	13/05/2000	sajith@gmail.com	1001	332	938
7	5090	Visakh	Male	21/03/2001	visakh@gmail.com	1001	332	777

14. Select the details of PG Students

```
select * from tbl_student where Course_id IN(select CourseID from
tblcourse where CourseType='PG');
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5027	Dhamu	Male	17/11/1996	dhamu@gmail.com	1004	335	908
2	5037	Devika	Female	29/02/1997	devika@gmail.com	1003	334	785
3	5043	Dheeraj	Male	01/01/1998	dhrj@gmail.com	1003	336	728
4	5053	Rakesh	Male	25/12/1999	rakesh@gmail.com	1004	332	805
5	5081	Sreeja	Female	08/07/1997	sreeja@gmail.com	1003	334	751

15. Select the details of MCA Students whose batch is 2019-2021

```
select * from tbl_student where Course_id =(select CourseID from
tblcourse where CourseShortName='MCA') AND Batch_id=(select BatchID
from tblbatch where BatchName='2019-2021');
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5043	Dheeraj	Male	01/01/1998	dhrj@gmail.com	1003	336	728

16. Select the email and DOB of BCA Students

```
select Student_Email,Student_DOB from tbl_student where Course_id=
(select CourseID from tblcourse where CourseShortName='BCA');
```

	Student_Email	Student_DOB
1	anju@gmail.com	09/12/1999
2	ajr@gmail.com	25/02/2000
3	ajr@gmail.com	01/07/1998
4	sajith@gmail.com	13/05/2000
5	visakh@gmail.com	21/03/2001

17. Select the students details with their course name and batch name

```
select s.Student_Name AS Student_Name ,c.Coursename AS
Course_Name,b.BatchName from tblcourse c JOIN tbl_student s ON
s.Course_id=c.CourseID JOIN tblbatch b ON b.BatchID=s.Batch_id;
```

	Student_Name	Course_Name	BatchName
1	Akash	Bachelor in Science Computer Science	2019-2022
2	Anju	Bachelor of Computer Application	2017-2020
3	Dhamu	Master in Science Computer Science	2018-2020
4	Adharsh	Bachelor of Computer Application	2018-2021
5	Devika	Master of Computer Application	2017-2019
6	Dheeraj	Master of Computer Application	2019-2021
7	Rakesh	Master in Science Computer Science	2018-2021
8	Ram	Bachelor in Science Computer Science	2018-2020
9	Riya	Bachelor of Computer Application	2018-2021
10	Sajith	Bachelor of Computer Application	2018-2021
11	Sreeja	Master of Computer Application	2017-2019
12	Visakh	Bachelor of Computer Application	2018-2021

18. Select Batch name and number of students

```
SELECT b.BatchName AS Batch_Name ,COUNT(*) AS Count_students FROM tblbatch b
JOIN tbl_student s ON s.Batch_id = b.BatchID GROUP BY b.BatchName;
```

	Batch_Name	Count_students
1	2017-2019	2
2	2017-2020	1
3	2018-2020	2
4	2018-2021	5
5	2019-2021	1
6	2019-2022	1

19. Select the students name, course name and students email

```
select s.Student_Name AS Student_Name ,c.CourseName AS Course_Name,
S.Student_Email from tblcourse c JOIN tbl_student s ON s.Course_id=c.CourseID ;
```

	Student_Name	Course_Name	Student_Email
1	Akash	Bachelor in Science Computer Science	akash@gmail.com
2	Anju	Bachelor of Computer Application	anju@gmail.com
3	Dhamu	Master in Science Computer Science	dhamu@gmail.com
4	Adharsh	Bachelor of Computer Application	ajr@gmail.com
5	Devika	Master of Computer Application	devika@gmail.com
6	Dheeraj	Master of Computer Application	dhrj@gmail.com
7	Rakesh	Master in Science Computer Science	rakesh@gmail.com
8	Ram	Bachelor in Science Computer Science	ram@gmail.com
9	Riya	Bachelor of Computer Application	ajr@gmail.com
10	Sajith	Bachelor of Computer Application	sajith@gmail.com
11	Sreeja	Master of Computer Application	sreeja@gmail.com
12	Visakh	Bachelor of Computer Application	visakh@gmail.com

20. Select the Students details and their Batch name also

```
select s.* ,b.BatchName AS Batch_Name from tblbatch b JOIN
tbl_student s ON s.Batch_id=b.BatchID ;
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark	Batch_Name
1	5004	Akash	Male	13/08/2001	akash@gmail.com	1002	333	845	2019-2022
2	5010	Anju	Female	09/12/1999	anju@gmail.com	1001	331	793	2017-2020
3	5027	Dhamu	Male	17/11/1996	dhamu@gmail.com	1004	335	908	2018-2020
4	5030	Adharsh	Male	25/02/2000	ajr@gmail.com	1001	332	888	2018-2021
5	5037	Devika	Female	29/02/1997	devika@gmail.com	1003	334	785	2017-2019
6	5043	Dheeraj	Male	01/01/1998	dhrj@gmail.com	1003	336	728	2019-2021
7	5053	Rakesh	Male	25/12/1999	rakesh@gmail.com	1004	332	805	2018-2021
8	5061	Ram	Male	30/01/1996	ram@gmail.com	1002	335	892	2018-2020
9	5069	Riya	Female	01/07/1998	ajr@gmail.com	1001	332	773	2018-2021
10	5078	Sajith	Male	13/05/2000	sajith@gmail.com	1001	332	938	2018-2021
11	5081	Sreeja	Female	08/07/1997	sreeja@gmail.com	1003	334	751	2017-2019
12	5090	Visakh	Male	21/03/2001	visakh@gmail.com	1001	332	777	2018-2021

21. Select the count of male and female students in batch wise Sample output

```
SELECT b.BatchName,COUNT(case when Student_Gender='Male' then 1 end) AS Total_Male,
COUNT(case when Student_Gender='Female' then 1 end)As Total_Female from tbl_student s
JOIN tblbatch b ON b.BatchID=s.Batch_id GROUP BY b.BatchName;
```

	BatchName	Total_Male	Total_Female
1	2017-2019	0	2
2	2017-2020	0	1
3	2018-2020	2	0
4	2018-2021	4	1
5	2019-2021	1	0
6	2019-2022	1	0

22. Select the name of the BCA Student who have Maximum Mark

```
SELECT Student_Name FROM tbl_student WHERE Student_Mark=(select
MAX(Student_Mark)from tbl_student where Course_id=(select CourseID
from tblcourse where CourseShortName='BCA'));
```

	Student_Name
1	Sajith

23. Select the Male MCA Student who have Minimum Mark

```
SELECT Student_Name FROM tbl_student WHERE Student_mark=(select
MIN(Student_mark)from tbl_student where Course_id=(select CourseID
from tblcourse where CourseShortName='MCA') and Student_Gender='Male')
```

	Student_Name
1	Dheeraj

24. Select the students details of UG Students who have greater than the average mark

```
SELECT * FROM tbl_student WHERE Student_Mark > (select
AVG(Student_Mark) from tbl_student where Course_id IN (select
CourseID from tblcourse where CourseType='UG')) AND Course_id IN
(select CourseID from tblcourse where CourseType='UG');
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5004	Akash	Male	13/08/2001	akash@gmail.com	1002	333	845
2	5030	Adharsh	Male	25/02/2000	ajr@gmail.com	1001	332	888
3	5061	Ram	Male	30/01/1996	ram@gmail.com	1002	335	892
4	5078	Sajith	Male	13/05/2000	sajith@gmail.com	1001	332	938

25. Select the BCA student details who have Max Mark

```
SELECT * FROM tbl_student WHERE Student_Mark=(select
MAX(Student_Mark) from tbl_student where Course_id=(select CourseID
from tblcourse where CourseShortName='BCA'));
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5078	Sajith	Male	13/05/2000	sajith@gmail.com	1001	332	938

26. Select Name and Email of the students who have second highest mark

```
SELECT Student_Name, Student_Email from tbl_student where
Student_mark= (select MAX(Student_mark) FROM tbl_student WHERE
Student_mark < (SELECT MAX(Student_mark) FROM tbl_student));
```

	Student_Name	Student_Email
1	Dhamu	dhamu@gmail.com

27. Select the Dob and Current Age of All students

```
Select Student_Name, Student_DOB, datediff(YY, Student_DOB, getdate())
as Age from tbl_student;
```

	Student_Name	Student_Dob	Age
1	Adith	2000-02-12	22
2	Nakul	2001-12-09	21
3	Vedha	2002-06-06	20
4	Akshay	2002-04-16	20
5	Diya	2002-05-19	20
6	Ivaniya	2004-01-19	18
7	JITHIN	1999-06-01	23
8	ARYA	2002-03-12	20

28. Select the Student name , Month name of birth and year of birth for

all the students

```
Select Student_Name,DATENAME(MONTH,DATEADD(MONTH,MONTH(Student_DOB),-1 ))
)AS Birth_Month,YEAR(Student_DOB) AS Year_Of_Birth FROM tbl_student;
```

	Student_Name	Birth_Month	Year_Of_Birth
1	Adith	February	2000
2	Nakul	December	2001
3	Vedha	June	2002
4	Akshay	April	2002
5	Diya	May	2002
6	Ivaniya	January	2004
7	JITHIN	June	1999
8	ARYA	March	2002

29. Select the Email and Student DOB of MCA Female Student

```
select Student_Email,Student_DOB from tbl_student where
Course_id=(select CourseID from tblcourse where
CourseShortName='MCA') AND Student_Gender='Female';
```

	Student_Email	Student_DOB
1	devika@gmail.com	29/02/1997
2	sreeja@gmail.com	08/07/1997

30. Select the name of all the students who have maximum mark in course wise

```
SELECT c.CourseShortName AS Course, MAX(s.Student_Mark) AS Max_Mark FROM tblcourse c
JOIN tbl_student s ON s.Course_id = c.CourseID GROUP BY c.CourseShortName;
```

	Course	Max_Mark
1	BCA	938
2	BSc CS	892
3	MCA	785
4	Msc CS	908

31. Select the Details students whose year of birth less than 1995

```
Select * from tbl_student where YEAR(Student_DOB)<1995;
```

Student_id	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_Mark
------------	--------------	----------------	-------------	---------------	-----------	----------	--------------

32. Select the Details students whose year of birth less than 1995


```
Select * from tbl_student where YEAR(Student_DOB)<1995;
```

Student_id	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_Mark
------------	--------------	----------------	-------------	---------------	-----------	----------	--------------

33. Select details of BCA Students whose year of birth between 1992 and 1996

```
Select * from tbl_student where Course_id=(select CourseID from tblcourse where CourseShortName='BCA') AND YEAR(Student_DOB)BETWEEN 1992 AND 1996;
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5078	Sajith	Male	13/05/2000	sajith@gmail.com	1001	332	938

34. Select the details of Male PG Students

```
SELECT * FROM tbl_student WHERE Student_Gender='Male' AND Course_id in(select CourseID from tblcourse where Coursetype='PG');
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5027	Dhamu	Male	17/11/1996	dhamu@gmail.com	1004	335	908
2	5043	Dheeraj	Male	01/01/1998	dhrj@gmail.com	1003	336	728
3	5053	Rakesh	Male	25/12/1999	rakesh@gmail.com	1004	332	805

35. Select the details of BCA Students who have greater than average mark

```
SELECT * FROM tbl_student WHERE Student_Mark >(select AVG(Student_Mark)from tbl_student where Course_id IN (select CourseID from tblcourse where Courseshortname='BCA'))AND Course_id IN (select CourseID from tblcourse where Courseshortname='BCA');
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5030	Adharsh	Male	25/02/2000	ajr@gmail.com	1001	332	888
2	5078	Sajith	Male	13/05/2000	sajith@gmail.com	1001	332	938

36. Select the name of student having maximum age?

```
SELECT Student_Name from tbl_student ORDER BY datediff(YY,Student_DOB,getdate()) DESC OFFSET 0 ROWS FETCH FIRST 1 ROWS ONLY;
```

	Student_Name
1	Sajith

37. Select the name and email of the BCA Students whose have

Minimum age

```
SELECT Student_Name,Student_Email from tbl_student WHERE  
Course_id=(select CourseID from tblcourse where  
Courseshortname='BCA')  
ORDER BY datediff(YY,Student_DOB,getdate()) ASC OFFSET 0 ROWS FETCH  
FIRST 1 ROWS ONLY;
```

	Student_Name	Student_Email
1	Ivaniya	Diyaniya@gmail.com

38. Select the details of the students in descending order of their DOB

```
:Select * from tbl_student ORDER BY Student_DOB DESC;
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5061	Ram	Male	30/01/1996	ram@gmail.com	1002	335	892
2	5037	Devika	Female	29/02/1997	devika@gmail.com	1003	334	785
3	5053	Rakesh	Male	25/12/1999	rakesh@gmail.com	1004	332	805
4	5030	Adharsh	Male	25/02/2000	ajr@gmail.com	1001	332	888
5	5090	Visakh	Male	21/03/2001	visakh@gmail.com	1001	332	777
6	5027	Dhamu	Male	17/11/1996	dhamu@gmail.com	1004	335	908
7	5004	Akash	Male	13/08/2001	akash@gmail.com	1002	333	845
8	5078	Sajith	Male	13/05/2000	sajith@gmail.com	1001	332	938
9	5010	Anju	Female	09/12/1999	anju@gmail.com	1001	331	793
10	5081	Sreeja	Female	08/07/1997	sreeja@gmail.com	1003	334	751
11	5069	Riya	Female	01/07/1998	ajr@gmail.com	1001	332	773
12	5043	Dheeraj	Male	01/01/1998	dhrj@gmail.com	1003	336	728

39. Select the details of the students have mark between 850 and 900

```
SELECT * FROM tbl_student WHERE Student_Mark BETWEEN 850 AND 900;
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5030	Adharsh	Male	25/02/2000	ajr@gmail.com	1001	332	888
2	5061	Ram	Male	30/01/1996	ram@gmail.com	1002	335	892

40. Select the details of BCA Students in their mark wise

```
SELECT * FROM tbl_student WHERE Course_id=(SELECT CourseID from  
tblcourse where Courseshortname='BCA') ORDER BY Student_Mark DESC;
```

	Studentid	Student_Name	Student_Gender	Student_DOB	Student_Email	Course_id	Batch_id	Student_mark
1	5078	Sajith	Male	13/05/2000	sajith@gmail.com	1001	332	938
2	5030	Adharsh	Male	25/02/2000	ajr@gmail.com	1001	332	888
3	5010	Anju	Female	09/12/1999	anju@gmail.com	1001	331	793
4	5090	Visakh	Male	21/03/2001	visakh@gmail.com	1001	332	777
5	5069	Riya	Female	01/07/1998	ajr@gmail.com	1001	332	773

