#QUERY 1 Display customer details with business as ‘Consultant’

SELECT \* FROM Clients

WHERE Business = 'Consultant'

#QUERY 2 Display employee details who are not ‘Developers’

SELECT \* FROM Employees

WHERE not job = 'Developer'

#QUERY 3 Display project details with budget > 100000

SELECT \* FROM Projects

WHERE Budget>100000

#QUERY 4 Display details of project that are already finished

SELECT \* FROM Projects

WHERE Actual\_End\_date <= GETDATE()

#QUERY 5 Display employee names beginning with ‘M’

SELECT \* FROM Employees

WHERE Ename LIKE 'M%'

#QUERY 6 Display employee names ending with ‘a’

SELECT \* FROM Employees

WHERE Ename LIKE '%a'

#QUERY 7 Display the number of months project ‘Inventory’ took for completion

SELECT Descr = 'Inventory',DATEDIFF(month,"Start\_Date","Planned\_End\_Date") as Total\_Month from Projects

where Descr = 'Inventory'

#QUERY 8 Display the task that is ‘In Progress’

SELECT \* FROM EmpProjectTasks

WHERE Status = 'In Progress'

#QUERY 9 Display details of departments located in Pune

SELECT \* FROM Departments

where Loc = 'Pune'

#QUERY 10 Display employee name and salary in descending order of salary

select Ename, Salary from Employees

ORDER BY Ename, Salary DESC

#QUERY 11 Display tasks in ascending order of end date

SELECT TASK FROM EmpProjectTasks

ORDER BY End\_Date ASC

#QUERY 12 Display distinct jobs from Employees table

SELECT DISTINCT Job from Employees

#QUERY 13 Display employee names in all uppercase

select UPPER(Ename) FROM Employees

#QUERY 14 Display employee name, salary and bonus calculated as 25% of salary

Select Ename, Salary, Salary\*1.25 AS BONUS From Employees

#SELECT 15 Display concatenated string ‘Employee works as Job’ (e.g. Manoj works as Developer) for all employees

select CONCAT(Ename, ' ','work',' ','as',' ' ,Job) from Employees

#SELECT 16 Display day of week (e.g. Friday) for each start date of projects

select datename(weekday, Start\_Date) AS DAY\_OF\_PROJECT from EmpProjectTasks

#SELECT 17 Display position number of ‘@’ symbol in each email id of clients

select CHARINDEX('@',Email) as matchposition from Clients

#QUERY 18 Display first 3 characters of each client name

select SUBSTRING(Cname,1,3) AS First\_3\_Char from Clients

#QUERY 19 Display project budget values formatted as ‘$150,000’

select FORMAT(Budget, 'C') from Projects

#QUERY 20 Display planned end date and review date as 3 months after planned end date for each project

alter table Projects add review\_date DATE

SELECT DATEADD(m,3,'Planned\_End\_Date')

#AFTER QUERY 20 PUT BELOW QUERY TO DISPLAY RESULTS

Select Planned\_End\_Date, review\_date from Projects

#QUERY 21 Display count of clients

select count('Cname') As Count\_of\_Clients From Projects

#QUERY 22 Display count of employees and sum of their salaries

Select count(Ename) AS NO\_OF\_Employees,sum(Salary) as Total\_Salary from Employees

#QUERY 23 Display max salary per department

SELECT Departments.Dname, MAX(Employees.Salary) AS MaxSalary

FROM Employees

JOIN Departments ON Employees.Deptno = Departments.Deptno

GROUP BY Departments.Dname;

#QUERY 24 Display min salary per job

select Job, min(Salary) from Employees

GROUP BY Job

#QUERY 25 Display average salary

select AVG(Salary) as Avg\_Salary from Employees

#QUERY 26 Display sum of budget

select SUM(Budget) as Total\_Budget from Projects

#QUERY 27 Display count of ‘Coding’ task

select count(Task) as Total\_Coding from EmpProjectTasks

where Task = 'Coding'

#QUERY 28 Display department wise count and sum of salary of employees

select Deptno, Count(Deptno) AS Total\_Count\_Dept, Sum(Salary) AS Total\_Salary from Employees

GROUP BY Deptno

#QUERY 29 Display client names and their project desc, start date and budget

select Clients.Cname,Projects.Descr,Projects.Start\_Date,Projects.Budget from Clients

Clients LEFT JOIN Projects on Clients.Client\_ID = Projects.Client\_ID

#QUERY 30 Display department name, employee name and job

SELECT Departments.Dname, Employees.Ename,Employees.Job from Departments

Departments RIGHT JOIN Employees on Departments.Deptno = Employees.Deptno

#QUERY 31 Display names of employees doing ‘System Analysis’ along with project name

SELECT Employees.Ename AS EmployeeName, Projects.Descr AS ProjectName

FROM Employees

JOIN EmpProjectTasks ON Employees.Empno = EmpProjectTasks.Empno

JOIN Projects ON EmpProjectTasks.Project\_ID = Projects.Project\_ID

WHERE EmpProjectTasks.Task = 'System Analysis';

#QUERY 32 Display job wise count

select COUNT(DISTINCT Job) AS JOB\_COUNT from Employees

#QUERY 33 Display employee numbers not present in EmpProjectTasks table using necessary set operator

select Employees.Empno from Employees

Employees LEFT JOIN EmpProjectTasks on Employees.Empno = EmpProjectTasks.Empno

EXCEPT

SELECT EmpProjectTasks.Empno from EmpProjectTasks

Employees RIGHT JOIN EmpProjectTasks on Employees.Empno = EmpProjectTasks.Empno

#QUERY 34 Display employee numbers present in both Employees and EmpProjectTasks table using necessary set operator

select Employees.Empno from Employees

Employees LEFT JOIN EmpProjectTasks on Employees.Empno = EmpProjectTasks.Empno

union

SELECT EmpProjectTasks.Empno from EmpProjectTasks

Employees RIGHT JOIN EmpProjectTasks on Employees.Empno = EmpProjectTasks.Empno

#QUERY 35 Display all employee numbers present in both Employees and EmpProjectTasks table using necessary set operator

select Employees.Empno from Employees

Employees LEFT JOIN EmpProjectTasks on Employees.Empno = EmpProjectTasks.Empno

union all

SELECT EmpProjectTasks.Empno from EmpProjectTasks

Employees RIGHT JOIN EmpProjectTasks on Employees.Empno = EmpProjectTasks.Empno

#QUERY 36 Display the project name with highest budget

SELECT Descr AS ProjectName

FROM Projects

WHERE Budget = (SELECT MAX(Budget) FROM Projects);

#QUERY 37 Display employee names who have same job as ‘Madhav’

select Ename, job from Employees

where Employees.Job = (select Employees.Job from Employees where Employees.Ename = 'Madhav')

#QUERY 38 Display employee’s name and job who worked on ‘Code Change’ task of project 401

select Employees.Ename,Employees.Job from Employees

Employees LEFT JOIN EmpProjectTasks on Employees.Empno = EmpProjectTasks.Empno

where Task = 'Code Change' and Project\_ID = 401

#QUERY 39 Display client name whose project’s ‘Coding’ task is ‘In Progress’

SELECT Clients.Cname AS ClientName

FROM Clients

JOIN Projects ON Clients.Client\_ID = Projects.Client\_ID

JOIN EmpProjectTasks ON Projects.Project\_ID = EmpProjectTasks.Project\_ID

WHERE EmpProjectTasks.Task = 'Coding' AND EmpProjectTasks.Status = 'In Progress'

#QUERY 40 Display department number, names and salaries of employees who are earning max salary in their departments

SELECT Departments.Deptno AS DepartmentNumber, Employees.Ename AS EmployeeName, Employees.Salary

FROM Departments

JOIN Employees ON Departments.Deptno = Employees.Deptno

WHERE Employees.Salary = (SELECT MAX(Salary) FROM Employees WHERE Deptno = Departments.Deptno)

#QUERY 41 Display name of department with highest SUM of salary

SELECT Departments.Dname AS DepartmentName, SUM(Employees.Salary) AS TotalSalary

FROM Departments

JOIN Employees ON Departments.Deptno = Employees.Deptno

GROUP BY Departments.Dname

HAVING SUM(Employees.Salary) = (SELECT MAX(TotalSalary) FROM (SELECT SUM(Salary) AS TotalSalary

FROM Employees

GROUP BY Deptno) TotalSalary)

#QUERY 42 - Create a table named ‘CLIENT\_PROJECTS’ using CTAS method that includes CLIENT\_ID,CNAME, ADDRESS,BUSINESS,DESCR,BUDGET columns from CLIENTS and PROJECTS tables

with CLIENT\_PROJECTS AS

(SELECT Clients.Client\_ID,Clients.Cname,Clients.Address,Clients.Business,Projects.Descr,Projects.Budget FROM Clients join Projects on Clients.Client\_ID = Projects.Client\_ID)

select \* from CLIENT\_PROJECTS

#QUERY 43 Increase salary of employees by 15% who have performed task of ‘Testing’ on projects

UPDATE Employees

set salary = Salary + Salary\*0.15

From Employees

Inner Join EmpProjectTasks ON Employees.Empno = EmpProjectTasks.Empno

where EmpProjectTasks.Task in ('Testing')

#2 rows affected for above query

#QUERY 44 Create a view named DEPT\_EMP with DEPTNO,DNAME,LOC,ENAME,JOB, and SALARY columns

CREATE VIEW DEPT\_EMP AS

SELECT Employees.Ename,Employees.Job,Employees.Salary,Departments.Deptno,Departments.Dname,Departments.Loc FROM Employees,Departments

where Employees.Deptno = Departments.Deptno

#AFTER QUERY 44 PUT BELOW QUERY TO GET RESULTS

select \* FROM DEPT\_EMP

#QUERY 45 Create synonym EPT for table EmpProjectTasks

CREATE SYNONYM EPT FOR EmpProjectTasks

#Checking above output

select \* from EPT