Practical Assignment 1: Procedures and Functions

1. Write a PL/SQL block that selects the maximum department number in the department table and store it in a SQL*PLUS variable. And print the results to screen.
2. Create a PL/SQL block to insert a new department number into the Departments table. Use maximum dept number fetched from above and adds 10 to it. Use SQL*PLUS substitution variable for department name. Leave the location AS null.

3. Create a PL/SQL block to update the location for an existing department. Use substitution variable for dept no. and dept location.

4. Create a PL/SQL Block to delete the department created in exercise 2. Print to the screen the number of rows affected.
5. Write a PL/SQL block which accepts employee name, basic and should display Employee name, PF and net salary.
   HRA=31% of basic salary
   DA=15% of basic salary
   Net salary=basic+HRA+DA-PF
   If the basic is less than 3000 PF is 5% of basic salary.
   If the basic is between 3000 and 5000 PF is 7% of basic salary.
   If the basic is between 5000 and 8000 PF is 8% of basic salary.
6. Write a PL/SQL block to find the salary grade of the specified employee.
   If grade is 1 display 'the employee is junior engineer'
   If grade is 2 display 'the employee is engineer'
   If grade is 3 display 'the employee is lead engineer'
   If grade is 4 display 'the employee is Manager'
   If grade is 5 display 'the employee is Project manager'
   (Use case expression)

7. Wrtie a PL/SQL block to award an employee with the bonus.
   Bonus is 15% of commission drawn by the employee.
   If the employee does not earn any commission then display a message that 'employee does not earn any commission'. Otherwise add bonus to the salary of the employee. The block should accept an input for the employee number.

8. Write a PL/SQL block which displays the department name, total no of employees in the department, avg salary of the employees in the department for all the departments from department 10 to department 40 in the Dept table.If no employees are working in the department ,then display a message that no employees are working in that department.

9. Write a PL/SQL block which accepts employee number and finds the average salary of the employees working in the department where that employee works.
   If his salary is more than the average salary of his department, then display message that 'employee's salary is more than average salary' else display 'employee's salary is less than average salary'

10. Create a procedure that deletes rows from the emp table. It should accept 1 parameter, job; only delete the employee's with that job. Display how many employees were deleted.
11. Change the above procedure so that it returns the number of employees removed via an OUT parameter.

12. Convert the above program to a function. Instead of using an OUT parameter for the number of employees deleted, use the functions return value and display how many employees were deleted.
13. Create a table having the following structure
    Accounts(Account_id, branch_name, amount_balance)
    a. Write a PL/SQL procedure to perform withdraw operation that only permits a withdrawal if there sufficient funds in the account. The procedure should take Account_id and withdrawal amount as input.
    b. Write a procedure to deposit money into someone's account. The procedure should accept account_id and deposit amount.
    c. Write a procedure to transfer money from one person's account to another. The procedure should table two account_id's one for giver and one for receiver and the amount to be transferred.

Cursors and Data Types as in 3GL

14. Write a PL/SQL block to accept an employee number. and use a record variable to store the record of that employee. and insert it into retired_employee table.
    Retired_employee table has the following structure
    Retired_employee (empno, ename, hiredate, leaveDate, salary, mgr_id, deptno).
    Set the leavedate to the current date.

15. Write a PL/SQL Block to create a PL/SQL table which can store grade and on of employees with that grade. Get the information about the grade and number of employees with that grade and store it in the PL/SQL table. Then retrieve the information from the PL/SQL table and display it on the screen in the following way.
    No of employees with the grade 1 are 3
    No of employees with the grade 2 are 2
    No of employees with the grade 3 are 1
    No of employees with the grade 4 are 2
    No of employees with the grade 5 are 5

Cursors

16. Write a program that gives all employees in department 10 a 15% pay increase. Display a message displaying how many Employees were awarded the increase.
17. Write a PL/SQL block and use cursor to retrieve the details of the employees with grade 5.and then display employee no,job_id ,max_sal and min_sal and grade for all these employees.
18. Write a PL/SQL block that copies all departments to a table called old_dept. Do not use a cursor FOR loop. Display how many rows were copied.

19. Display the names of employees who are working for Department 30.
20. Write a PL/SQL Block that mimics selecting all columns and rows from the dept table. There is no need to format the output, just select all columns and all rows. Use a cursor FOR loop.
21. Write a PL/SQL block to display the top 6 employees with respect to salaries using cursors.
22. Use a cursor to retrieve the department number and the department name from the dept table. Pass the department number to another cursor to retrieve from the emp table the details of employee name, job, hiredate and salary of all the employees who work in that department.
23. Write a procedure Raise_salary which gives a specified hike to all the employees working in a specified department.The procedure should take department number and percemtage of hike as input.(Use for update and where current of)