NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA
NH 66, Srinivas Nagar, Surathkal, Mangaluru, Karnataka 575025, India

DBMS Assignment-7 on Stored Procedure and Function

1. Create stored procedure **usp_get_employees_salary_above** that ***accept a number*** as parameter and return **all employees' first and last names** whose salary is **above or equal** to the given number. The result should be sorted by **first_name** then by **last_name alphabetically**.

   Example
   Schema for this question is:
   Employee(Emp_number, first_name, last_name, Salary)
   Output:
   Supplied number for that example is 48100.

first_name	last_name
Terri	Duffy
Jean	Trenary
Ken	Sanchez
…	…

2. Write a stored procedure **usp_get_towns_starting_with** that **accept string as parameter** and returns **all town names starting with that string**. The result should be sorted by **town name** alphabetically.

   Example
   Here is the list of all towns **starting with "b"**

town
Bellevue
Bothell
Bordeaux
Berlin

3. Write a function **ufn_get_salary_level** that receives **salary of an employee** and returns the **level of the salary**.
   If salary is < **30000** return "**Low**"
   If salary is **between 30000 and 50000 (inclusive)** return "**Average**"
   If salary is > **50000** return "**High**"

4. Create a function **ufn_calculate_future_value** that accepts as **parameters – sum, yearly interest rate and number of years**. It should calculate and return the future value of the initial sum. Using the following formula:
   FV= I×((1+R)T), I – Initial sum, R – Yearly interest rate, T – Number of years

   Example

Input	Output
Initial sum: 1000 **Yearly Interest rate:** 10% **Years:** 5 ufn_calculate_future_value(1000, 0.1, 5)	1610

5. Create stored procedure **Student_Marks** that **accept a Roll_number** as parameter and return **all students Name with their total marks** whose total is **above or equal** to the given Roll number student Marks. The result should be reversely sorted by **Total**.

   Example
   Schema for this question is:
   Student(Roll_number, Name, Total_Marks)

   Supplied number for that example is 101 (Assume the marks of 101 students is 435)

   Output

Name	Total_ Marks
Vijay	490
Kumar	460
Hari	450
…	…

6. Write a function **Get_Grade_level** that receives **Roll_number of a student** and returns **the level of the marks of him / her**.

   Schema for this question is:
   Student(Roll_number, Name, Total_Marks,Grade)
   If Total_Marks is < **300** return "C"
   If Total_Marks is **between 300 and 400 (inclusive)** return "**B**"
   If Total_Marks is **between 401 and 450 (inclusive)** > return "**A**"

If Total_Marks is **between 451 and 475 (inclusive)**> return "**A+**"
If Total_Marks is **> 475** return "**S**"

7. Write a function **Get_Sum** that receives **Limit** as a parameter and returns **sum of Natural numbers** up to Limit.

8. Write a function **IT_Rate_employee** that accepts a **salary** as input and returns **Income-tax** amount to the calling function as output. IT_Rate Calculated based on the Salary is given below
   Schema for this question is:
   Employee(Emp_number, Name, Basicpay)
   If Basicpay is **> 100000**, IT = 20%
   If Basicpay is **between 100000 and 50000 (inclusive)**, IT = 15%
   If Basicpay is **< 50000**, IT = 10%

9. Create a *Stored Procedure* **Net_Pay_employee** that accepts a **Emp_no**. as input parameter and returns **Gross_pay** and **Net_Pay** of all employees.
   (For IT Calculation to use **IT_Rate _employee** function)
   The result should be sorted based on the Net_Pay value (HRA= 12% of BP and DA=10% of BP)
   GP = BP + HRA+DA
   NP = GP – IT
   Schema for this question is:
   Employee(Emp_number, Name, Basicpay, Gross_pay, Net_pay)

10. Create a *Stored Procedure* for to implement anyone error/*exception handler* in Mysql.

Put all your screenshots (query with output) in a single PDF file and upload. The PDF must comntain your name and roll no.

(10)