# Data Structures and Algorithm (DSA)

# Minor Project-1 (2023)

**(Last Date of Submission: 15/05/2023)**

**Problem:** To create an Employee database using class and object.

**Description:** Create a class **Employee** with the following members:

| Fields | Type |
|---|---|
| name | String |
| empId | int |
| salary | double |
| hireDate | Date |
| jobPosition | String |
| contactNumber | String |
| address | Address |

Observe here that **Date** and **Address** are also the classes. Add appropriate fields and methods to Date and Address classes. Add appropriate constructors to set the fields of Employee. More over you can add appropriate setter/getter methods if required. [2 points]

Write a Java program to do the following operations. (Create a **Test** class with a main() method)

- Create an employee database of a company having 500 employees: You can create an array of objects. [2 points]
- Arrange the employee details in descending order by salary: Create a method in Test class with the following signature: [2 points]

  ***public static void arrangeEmployeeBySalary(Employee e[])***
- Displaythe details of employees whose jobPosition is ***manager***: Create a method in Test class with the following signature: [2 points]

  ***public static void getEmployeesByJobPosition(Employee e[], String jp)***
- Display the details of employees whose hireDate is between 01-04-2022 to 31-03-2023: Create a method in Test class with the following signature: [3 points]

  ***public static void getEmployeesByHireDate(Employee e[], Date d1, Date d2)***
- Find the number of foreign employees: You can find it from the country code of the contactNumber field. Create a method in Test class with the following signature: [2 points]

  ***public static int foreignEmployeeCount(Employee e[])***
- Display the details of employees whose salary is in a range 150000 INR to 300000 INR: Create a method in Test class with the following signature: [2 points]

  ***public static void getEmployeesBySalary(Employee e[], double s1, double s2)***

Note: Create the required classes in a package named same as your registration number. Prepare a description file (word file) to show the process and output of your project. Keep the description file in the same package. Compress the package and submit.

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