|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Hands-on Assignment** | **Topics Covered** | **Status** |
| 1 | Develop a java class with a method saveEvenNumbers(int N) using ArrayList to store even numbers from 2 to N, where N is a integer which is passed as a parameter to the method saveEvenNumbers().  The method should return the ArrayList (A1) created. In the same class create a method printEvenNumbers()which iterates through the arrayList A1 in step 1, and It should multiply each number with 2 and display it in format 4,8,12….2\*N. and add these numbers in a new ArrayList (A2).  The new ArrayList (A2) created needs to be returned. Create a method printEvenNumber(int N) parameter is a number N. This method should search the arrayList (A1) for the existence of the number ‘N’ passed. If exists it should return the Number else return zero.Hint: Use instance variable for storing the ArrayList A1 and A2.  NOTE: You can test the methods using a main method. | List ArrayList |  |
| 2 | Create an Employee class with the related attributes and behaviours.  Create one more class EmployeeDB which has the following methods.   1. boolean addEmployee(Employee e) 2. boolean deleteEmployee(int eCode) 3. String showPaySlip(int eCode) 4. Employee[] listAll()   Use an ArrayList which will be used to store the emplyees and use enumeration/iterator to process the employees.  Write a Test Program to test that all functionalities are operational. | List enumeration / Iterator |  |
| 3 | Create an ArrayList which will be able to store only Strings. Create a printAll method which will print all the elements using an Iterator. | List iterator |  |
| 4 | Create an ArrayList which will be able to store only numbers like int,float,double,etc, but not any other data type. | List ArrayList |  |
| 5 | Create an ArrayList of Employee( id,name,address,sal) objects and search for particular Employee object based on id number. | List ArrayList |  |
| 6 | Implement the assignment 1 using Linked List | List Linked List |  |
| 7 | Implement the assignment 1 using Vector | List, Vector |  |
| 8 | Write a program that will have a Vector which is capable of storing emp objects. Use an Iterator and enumeration to list all the elements of the Vector. |  |  |

Develop a java class with a instance variable CountryMap HashMap (M1)

\* add a method saveCountryCapital(String CountryName, String capital) ,

\* the method should add the passed country and capital as key/value in the map M1 and return the Map (M1).

Key- Country Value - Capital

India Delhi

Japan Tokyo

2. Develop a method getCapital(String CountryName) which returns the capital for the country passed from the Map M1 created in step 1.

3. Develop a method getCountry(String capitalName) which returns the country for the capital name passed from the Map M1 created in step 1.

4. Develop a method which iterates through the map M1 and creates another map M2 with Capital as the key and value as Country and returns the Map M2.

Key – Capital Value – Country

Delhi India

Tokyo Japan

5. Develop a method which iterates through the map M1 and creates an ArrayList with all

the Country names stored as keys. This method should return the ArrayList.

NOTE: You can test the methods using a main method.