# Practical Part-7

| Question 1: | Create a generic method for sorting an array of Comparable objects. |
|---|---|
| Code | |

```java
//21CE124 Aary
public class prac1_7 {


    public static < E > void printArray( E[] inputArray ) {
    for(E element : inputArray) {
    System.out.printf("%s ", element);
    }
    System.out.println();
    }

    public static void main(String args[]) {

    Integer[] intArray = { 1, 2, 3, 4, 5 };
    Double[] doubleArray = { 1.1, 2.2, 3.3, 4.4 };
    Character[] charArray = { 'H', 'E', 'L', 'L', 'O' };

    System.out.println("Array integerArray contains:");
    printArray(intArray);

    System.out.println("\nArray doubleArray contains:");
    printArray(doubleArray);

    System.out.println("\nArray characterArray contains:");
    printArray(charArray);
    }
}
```

| Question 2 | Write a program that counts the occurrences of words in a text and displays the words<br>and their occurrences in alphabetical order of the words. Using Map and Set Classes. |
|---|---|
| Code | source code: |

```java
//21CE124 Aary
import java.util.Map;
import java.util.Set;
import java.util.TreeMap;

public class prac2_7 {
```

```
    public static void main(String[] args) {
        String text = "Good morning. Have a good  night.  " +"Have
a good Day.  Have  fun!";
        System.out.println(text);
        Map<String, Integer> map = new TreeMap<>(); String[]
        words = text.split("[ \n\t\r.,;:!?()]");for (int i =
        0; i < words.length; i++) {
            String key = words[i].toLowerCase();
            if (key.length() > 0) {
                if (!map.containsKey(key)) {
                    map.put(key, 1);
                } else {
                    int value = map.get(key);
                    value++;
                    map.put(key, value);
                }
            }
        }
        Set<Map.Entry<String, Integer>> entrySet = map.entrySet();for
        (Map.Entry<String, Integer> entry : entrySet) {
            System.out.println(entry.getKey() + "--> " +
entry.getValue());
        }
        System.out.println(map);

    }

}
```

Question 3:

Personal Loan Eligibility Criteria for Salaried Applicant is as follows:Eligible Age Group - 21 years to 60 years
Minimum Net Monthly Income - Rs. 15,000Minimum Total
Work Experience - 1 year Citizenship – Indian
Create a class AccountHolder to store above given information enteredby a user. Create 5 objects of AccountHolder class and store them in an ArrayList. Displaynames of account holders , who are eligible to get a loan based on given criteria.

code

```
//21CE124 Aary

import java.util.*;

class AccountHolder {
    int age, monthlyIncome, workExperience;
```

```
    String name, citizenship;

    AccountHolder(int age, int monthlyIncome, int workExperience,
String name, String citizenship) {
        this.age = age;
        this.monthlyIncome = monthlyIncome;
        this.workExperience = workExperience;
        this.name = name;
        this.citizenship = citizenship;
    }

    boolean checkEligibility() {
        if ((age >= 21 && age <= 60) && (monthlyIncome >= 15000) &&
(workExperience >= 1)
                && (citizenship == "Indian")) {
            return true;
        } else {
            return false;
        }
    }
}

public class prac3_7 {
    public static void main(String[] args) {
        AccountHolder a1 = new AccountHolder(17, 16000, 1,
"AccountHolder0", "Indian");
        AccountHolder a2 = new AccountHolder(22, 16000, 2,
"AccountHolder1", "Indian");
        AccountHolder a3 = new AccountHolder(21, 20000, 1,
"AccountHolder2", "Canadian");
        AccountHolder a4 = new AccountHolder(25, 25000, 0,
"AccountHolder3", "Indian");
        AccountHolder a5 = new AccountHolder(65, 20000, 1,
"AccountHolder4", "Indian");
        ArrayList<AccountHolder> arrayList = new ArrayList<>();
        arrayList.add(a1);
        arrayList.add(a2);
        arrayList.add(a3);
        arrayList.add(a4);
        arrayList.add(a5);
        for (int i = 0; i < 5; i++) {
            if (arrayList.get(i).checkEligibility()) {
                System.out.println("AccountHolder" + i + " is eligible
for personal loan");
            } else {
                System.out.println("AccountHolder" + i + " is not
eligible for personal loan");
            }
```

```
        }

    }
}
```