

Practical Part7

Github link : https://github.com/kalp104/21CE084_java_prac7.git

Question 1:	Create a generic method for sorting an array of Comparable objects.
Code	<pre>//21CE084 kalp pandya 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); } }</pre>
Question 2	Write a program that counts the occurrences of words in a text and displays the words and their occurrences in alphabetical order of the words. Using Map and Set Classes.
Code	<p>source code:</p> <pre>//21CE084 kalp pandya import java.util.Map; import java.util.Set; import java.util.TreeMap; public class prac2_7 {</pre>

```

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. 15,000
 Minimum Total Work Experience - 1 year
 Citizenship – Indian
 Create a class AccountHolder to store above given information entered by a user. Create 5 objects of AccountHolder class and store them in an ArrayList. Display names of account holders , who are eligible to get a loan based on given criteria.

code

```

//21CE084 kalp pandya
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");
            }
        }
    }
}
```

	<pre> } } }</pre>
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