https://github.com/PatelVraj10/java-practical-file-7

**1.**

**/\* By 21CE105 Vraj Patel**

**Question : Create a generic method for sorting an array of Comparable objects.**

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**import java.util.\*;**

**class Student implements Comparable<Student>**

**{**

**private String name;**

**private int age;**

**public Student(String name, int age)**

**{**

**this.name = name;**

**this.age = age;**

**}**

**@Override**

**public String toString()**

**{**

**return "{" + "name='" + name + '\'' + ", age=" + age + '}';**

**}**

**public String getName()**

**{**

**return name;**

**}**

**public int getAge()**

**{**

**return age;**

**}**

**@Override**

**public int compareTo(Student o)**

**{**

**if (this.age != o.getAge())**

**{**

**return this.age - o.getAge();**

**}**

**return this.name.compareTo(o.getName());**

**}**

**}**

**class P7P1**

**{**

**public static void main(String[] args)**

**{**

**Student[] students = { new Student("John", 15), new Student("Sam", 20),new Student("Dan", 20), new Student("Joe", 10) };**

**Arrays.sort(students);**

**System.out.println(Arrays.toString(students));**

**}**

**}**

**2.**

**/\* By 21CE105 Vraj Patel**

**Question : 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**

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**import java.util.\*;**

**class P7P2**

**{**

**public static void main(String... args)**

**{**

**Scanner sc=new Scanner(System.in);**

**String str="a set of words that is complete in itself, typically containing a subject and predicate, conveying a statement, question, exclamation, or command, and consisting of a main clause and sometimes one or more subordinate clauses.";**

**String[] splitStr=str.split(" ",CountSpaces(str));**

**TreeMap<String,Integer> occr=new TreeMap<String,Integer>();**

**for(String s:splitStr)**

**{**

**if(occr.containsKey(s))**

**{**

**int cnt=occr.get(s);**

**cnt=cnt+1;**

**occr.put(s,cnt);**

**}**

**else**

**{**

**occr.put(s,1);**

**}**

**}**

**System.out.println(occr);**

**}**

**public static int CountSpaces(String str)**

**{**

**int cnt=1;**

**for(int i=0;i<str.length();i++)**

**{**

**if(str.charAt(i)==' ')**

**{**

**cnt++;**

**}**

**}**

**return cnt;**

**}**

**}**

**3.**

**/\* By 21CE105 Vraj Patel**

**Question : 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**

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**import java.util.\*;**

**class AccountHolder**

**{**

**private int age;**

**private float monthly\_income;**

**private int work\_experience;**

**private String citizenship;**

**AccountHolder(int age,float monthly\_income,int work\_experience,String citizenship)**

**{**

**this.age=age;**

**this.monthly\_income=monthly\_income;**

**this.work\_experience=work\_experience;**

**this.citizenship=citizenship;**

**}**

**boolean isEligible()**

**{**

**if(this.age>=21 && this.age<=60 && this.monthly\_income>=15000 && this.work\_experience>=1 && this.citizenship.equals("Indian"))**

**{**

**return true;**

**}**

**else**

**{**

**return false;**

**}**

**}**

**}**

**class P7P3**

**{**

**public static void main(String... args)**

**{**

**ArrayList<AccountHolder> arr=new ArrayList<AccountHolder>();**

**arr.add(new AccountHolder(28,50000,3,"Indian"));**

**arr.add(new AccountHolder(48,25000,20,"Indian"));**

**arr.add(new AccountHolder(31,1000,1,"American"));**

**arr.add(new AccountHolder(18,20000,0,"Indian"));**

**arr.add(new AccountHolder(43,5200,5,"Pakistani"));**

**for(AccountHolder A:arr)**

**{**

**if(A.isEligible())**

**{**

**System.out.println("Eligible for loan");**

**}**

**else**

**{**

**System.out.println("Not Eligible fot loan");**

**}**

**}**

**}**

**}**