import java.util.Arrays;

import java.util.Scanner;

class StringMethods

{

String capitalizeEachWord(String s)

{

String[] temp = s.split(" ");

String returnvalue = "";

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

{

returnvalue += (Character.toUpperCase(temp[i].charAt(0)) + ((temp[i].length()>1)?temp[i].substring(1):"") + " ");

}

return returnvalue;

}

String removeVowels(String s)

{

s = s.replaceAll("[aeiouAEIOU]", "");

return s;

}

boolean isAnagram(String s1,String s2)

{

for(int i=0;i<s1.length();i++)

{

if(s2.contains(Character.toString(s1.charAt(i)))) s2 = s2.replaceFirst(Character.toString(s1.charAt(i)),"");

else return false;

}

return true;

}

String removeDuplicates(String s)

{

String temp = "";

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

{

if (!temp.contains(Character.toString(s.charAt(i))))

temp = temp + Character.toString(s.charAt(i));

}

return temp;

}

char secondMostFrequent(String s)

{

String temp = this.removeDuplicates(s);

int[ ] charcount = new int[temp.length()];

int[ ] tempa = new int[temp.length()];

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

{

charcount[i] = ( s.length() - s.replace(Character.toString(temp.charAt(i)) , "").length());

tempa[i] = charcount[i];

}

Arrays.sort(charcount);

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

if(tempa[i] == charcount[charcount.length -2]) return temp.charAt(i);

return ' ';

}

String reverse(String s)

{

String temp = "";

for(int i=s.length()-1;i>=0;i--)

{

temp+= Character.toString(s.charAt(i));

}

return temp;

}

}

public class Main

{

public static void main(String[] args) {

StringMethods sm = new StringMethods();

Scanner sc = new Scanner(System.in);

boolean flag = true;

while(flag)

{

System.out.println("Select a Choice : ");

System.out.println("1) Capitalize Each Word ");

System.out.println("2) Remove all Vowels ");

System.out.println("3) Check is 2 Strings are Anagrams ");

System.out.println("4) Calculate the 2nd most frequent character");

System.out.println("5) Reverse a String ");

System.out.println("6) Exit \n");

int choice = sc.nextInt();

sc.nextLine();

String s;

switch(choice)

{

case 1 : System.out.println("\n\nEnter a String to Capitalize");

s=sc.nextLine();

System.out.println("\nResult : "+sm.capitalizeEachWord(s));

break;

case 2 : System.out.println("\n\nEnter a String to remove all vowels");

s = sc.nextLine();

System.out.println("\nResult : "+sm.removeVowels(s));

break;

case 3 : System.out.println("\n\nEnter 2 Strings to check for Anagrams");

s= sc.nextLine();

String s2 = sc.nextLine();

System.out.println("\nThe 2 Strings are anagrams : "+sm.isAnagram(s,s2));

break;

case 4 : System.out.println("\n\nEnter a String for 2 most frequent character");

s=sc.nextLine();

System.out.println("\nThe 2nd most repeated character in "+s+"is :"+sm.secondMostFrequent(s));

break;

case 5 : System.out.println("\n\nEnter a String to reverse it");

s=sc.nextLine();

System.out.println("\nReverse : "+sm.reverse(s));

break;

case 6 : flag = false; break;

default : System.out.println("\n\nEnter a valid option");

}

}

}

}