ASSIGNMENT-LAB 05

Course Code: CSE-2340 **Course Title:** Software Development 1
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Problem 01: Convert the characters of a string into opposite case.

Answer:

```
import java.util.Scanner;
public class OC
{
public static void main (String[]args)
  {
Scanner s = new Scanner (System.in);
System.out.print ("Enter a string: ");
String input = s.nextLine ();
String result = "";
for (int i = 0; i < input.length (); i++)
      {
char c = input.charAt (i);
if (Character.isLowerCase (c))
     {
result += Character.toUpperCase (c);

}
   else if (Character.isUpperCase (c))
     {
result += Character.toLowerCase (c);

}
   else
     {
result += c;

}
}
System.out.println ("String with opposite case: " + result);
s.close ();
}
}
```

Problem 02: Calculate the frequency of characters of a string.

Answer:

```
import java.util.Scanner;
```

```
public class CF
{

public static void main (String[]args)
  {

Scanner s = new Scanner (System.in);

System.out.print ("Enter a string: ");

String k = s.nextLine ();


int[] f = new int[256];

for (char c:k.toCharArray ())
      {

f[c]++;

}

System.out.println ("Character frequencies:");

for (int i = 0; i < 256; i++)
      {

if (f[i] > 0)
     {

System.out.println ((char) i + ": " + f[i]);

}

}

s.close ();

}
}
```

Problem 03: **Palindrom.**

Answer:

```
import java.util.Scanner;
public class PL
{
public static void main (String[]args)
```

```
  {
Scanner s = new Scanner (System.in);
System.out.print ("Enter a string: ");
String input = s.nextLine ();
String re = new StringBuilder (input).reverse ().toString ();
if (input.equalsIgnoreCase (re))
      {
System.out.println ("The string is palindrome.");

}
    else
      {
System.out.println ("The string is not palindrome.");
}
s.close ();
}
}
```

Problem 04: Anagram.

Answer:

```
import java.util.Arrays;
import java.util.Scanner;
public class AN
{
public static void main (String[]args)
  {
Scanner s = new Scanner (System.in);
System.out.print ("Enter the first string: ");
String a = s.nextLine ();
System.out.print ("Enter the second string: ");
String b = s.nextLine ();
char[] ac = a.toCharArray ();
char[] bc = b.toCharArray ();
Arrays.sort (ac);
Arrays.sort (bc);
if (Arrays.equals (ac, bc))
      {
System.out.println ("The strings are anagrams.");

}
    else
      {
System.out.println ("The strings are not anagrams.");

}
s.close ();
}
}
```

Problem 05: **Calculate the sum of 2 big integers (string).**

Answer:

```
import java.math.BigInteger;
import java.util.Scanner;
public class BI
{
public static void main (String[]args)
  {
Scanner s = new Scanner (System.in);
System.out.print ("Enter the first big integer: ");
String a = s.nextLine ();
System.out.print ("Enter the second big integer: ");
String b = s.nextLine ();
BigInteger c = new BigInteger (a);
BigInteger d = new BigInteger (b);
BigInteger sum = c.add (d);
System.out.println ("Sum: " + sum.toString ());
s.close ();
}
}
```

Problem 06: **String sort.**

Answer:

```
import java.util.Arrays;

import java.util.Scanner;


public class SS
{

public static void main (String[]args)
  {

Scanner s = new Scanner (System.in);

System.out.print ("Enter a string: ");

String i = s.nextLine ();
    char[] c = i.toCharArray ();

      Arrays.sort (c);
```

```
      String st = new String (c);

System.out.println ("Sorted string: " + st);

s.close ();

}
}
```