Assignment 2

1. **Write a java program**

**# to compare two strings lexicographically, ignoring case differences.**

public class Exercise6

{

public static void main(String[] args)

{

String str1 = "my name is vivek";

String str2 = "my name is vivek";

System.out.println("String 1: " + str1);

System.out.println("String 2: " + str2);

int result = str1.compareToIgnoreCase(str2);

if (result < 0)

{

System.out.println("\"" + str1 + "\"" +" is less than " +"\"" + str2 + "\"");

}

else if (result == 0)

{

System.out.println("\"" + str1 + "\"" +" is equal to " +"\"" + str2 + "\"");

}

else // if (result > 0)

{

System.out.println("\"" + str1 + "\"" +" is greater than " +"\"" + str2 + "\"");

}

}

}

Output:

my name is vivek is equal to my name is vivek

**# to check whether a given string ends with the contents of another string.**

class vivek

{

public static void main(String[] args)

{

String str1 = "Python Exercises";

String str2 = "Python Exercise";

String end\_str = "se";

boolean ends1 = str1.endsWith(end\_str);

boolean ends2 = str2.endsWith(end\_str);

System.out.println("\"" + str1 + "\" ends with " +"\"" + end\_str + "\"? " + ends1);

System.out.println("\"" + str2 + "\" ends with " +"\"" + end\_str + "\"? " + ends2);

}

}

**# to print current date and time in the specified format.**

import java.util.Calendar;

public class Exercise15 {

public static void main(String[] args) {

Calendar c = Calendar.getInstance();

System.out.println("Current Date and Time :");

System.out.format("%tB %te, %tY%n", c, c, c);

System.out.format("%tl:%tM %tp%n", c, c, c);

}

}

**# to get the index of all the characters of the alphabet**.

public class Exercise19 {

public static void main(String[] args)

{

String str = "The quick brown fox jumps over the lazy dog.";

int a = str.indexOf("a", 0);

int b = str.indexOf("b", 0);

int c = str.indexOf("c", 0);

int d = str.indexOf("d", 0);

int e = str.indexOf("e", 0);

int f = str.indexOf("f", 0);

int g = str.indexOf("g", 0);

int h = str.indexOf("h", 0);

int i = str.indexOf("i", 0);

int j = str.indexOf("j", 0);

int k = str.indexOf("k", 0);

int l = str.indexOf("l", 0);

int m = str.indexOf("m", 0);

int n = str.indexOf("n", 0);

int o = str.indexOf("o", 0);

int p = str.indexOf("p", 0);

int q = str.indexOf("q", 0);

int r = str.indexOf("r", 0);

int s = str.indexOf("s", 0);

int t = str.indexOf("t", 0);

int u = str.indexOf("u", 0);

int v = str.indexOf("v", 0);

int w = str.indexOf("w", 0);

int x = str.indexOf("x", 0);

int y = str.indexOf("y", 0);

int z = str.indexOf("z", 0);

System.out.println(" a b c d e f g h i j");

System.out.println("=========================");

System.out.println(a + " " + b + " " + c + " " + d + " " +

e + " " + f + " " + g + " " + h + " " +

i + " " + j + "\n");

System.out.println("k l m n o p q r s t");

System.out.println("===========================");

System.out.println(k + " " + l + " " + m + " " + n + " " +

o + " " + p + " " + q + " " + r + " " +

s + " " + t + "\n");

System.out.println("u v w x y z");

System.out.println("================");

System.out.println(u + " " + v + " " + w + " " + x + " " +

y + " " + z);

}

}

**# To replace each substring of a given string that matches the given regular expression with the given replacement. In the below string replace all the fox with cat.**

public class Exercise

{

public static void main(String[] args)

{

String str = "The quick brown fox jumps over the lazy dog.";

String new\_str = str.replaceAll("fox", "cat");

System.out.println("Original string: " + str);

System.out.println("New String: " + new\_str);

}

}

**# to get a substring of a given string between two specified positions.**

public class Exercise27

{

public static void main(String[] args)

{

String str = "The quick brown fox jumps over the lazy dog.";

String new\_str = str.substring(10, 26);

System.out.println("old = " + str);

System.out.println("new = " + new\_str);

}

}

**# to trim any leading or trailing whitespace from a given string.**

public class Exercise31

{

public static void main(String[] args)

{

String str = " Java Exercises ";

String new\_str = str.trim();

System.out.println("Original String: " + str);

System.out.println("New String: " + new\_str);

}

}

**# to convert all the characters in a string to lowercase.**

public class Exercise29 {

public static void main(String[] args)

{

String str = "The Quick BroWn FoX!";

String lowerStr = str.toLowerCase();

System.out.println("Original String: " + str);

System.out.println("String in lowercase: " + lowerStr);

}

}

**# to get the length of a given string.**

public class Exercise22 {

public static void main(String[] args)

{

String str = "example.com";

int len = str.length();

System.out.println("The string length of '"+str+"' is: "+len);

}

}

**# to check whether two String objects contain the same data**

public class vivek

{

public static void main(String[] args)

{

String columnist1 = "Stephen Edwin King";

String columnist2 = "Walter Winchell";

String columnist3 = "Mike Royko";

boolean equals1 = columnist1.equals(columnist2);

boolean equals2 = columnist1.equals(columnist3);

System.out.println("\"" + columnist1 + "\" equals \"" +

columnist2 + "\"? " + equals1);

System.out.println("\"" + columnist1 + "\" equals \"" +

columnist3 + "\"? " + equals2);

}

}

1. Implement a class Account. An account has

* a balance
* functions to add
* and withdraw money,
* And a function to inquire the current balance.

Condition:

1. Pass a value into a constructor to set an initial balance.
2. If no value is passed the initial balance should be set to $0.
3. Charge a $5 penalty if an attempt is made to withdraw more money than available in the account.

Enhance the Account class to compute interest on the current balance.

Ans :

import java.io.\*;

import java.util.Scanner;

class login{

int ac\_number = 1249498014;

int ac\_pass = 41089494;

int ac, pw;

public void acceptInput(){

Scanner scanner = new Scanner(System.in);

System.out.print("Enter ABC Bank Account Number: ");

ac = scanner.nextInt();

System.out.print("Enter Password: ");

pw = scanner.nextInt();

}

public void verify() throws Exception{

if(ac == ac\_number && pw == ac\_pass)

{

System.out.println("Your ABC Bank Account Login Successfully !");

banking\_account b = new banking\_account();

System.out.println(" ");

System.out.println("Your Account Balance is: "+b.getBalance()+" Rupees");

System.out.println(" ");

menu m1 = new menu();

m1.showMenu();

}else{

invalid\_transaction loginfailed = new invalid\_transaction("Incorrect Login Credentials !");

System.out.println(loginfailed.getMessage());

throw loginfailed;

       }

    }

}

1. Given two strings needle and haystack, return the index of the first occurrence of needle in haystack, or -1 if needle is not part of haystack.

Ans:

class Solution:

def strStr(self, haystack: str, needle: str) -> int:

if(needle==""){

return 0}

else:

{for i in range(len(haystack)):

if haystack[i]==needle[0]:

if haystack[i:i+len(needle)]==needle:

return i}

return -1}

4 Given a string s consisting of words and spaces, return the length of the last word in the string.

A word is a maximal

substring

consisting of non-space characters only.

Ans:

public class GFG {

public int lengthOfLastWord(final String a)

{

int len = 0;

String x = a.trim();

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

if (x.charAt(i) == ' ')

len = 0;

else

len++;

}

return len;

}

public static void main(String[] args)

{

String input = "Geeks For Geeks  ";

GFG gfg = new GFG();

System.out.println("The length of last word is "

+ gfg.lengthOfLastWord(input));

}

}

5.find the errors in the following programming

import java.io.\*;

import java.util.\*;

class factor {

public static void main(String args[]) {

try {

Scanner sc=new Scanner(System.in);

in count=0,n=100,i,j=0,m=4;

int []a=new int [10];

System.out.println("Enter the number:");

n=sc.nextInt();

if(n<=0)

{

System.out.println("Enter valid number");

}

else {

for(i=1;i<=n;i--);

{

if(n%i!=0)

{

a[j] = i;

System.out.println("..." + i);

count++;

j++;

}

}

System.out.println("The number of factors:"+count);

}

System.out.println(m + "th item " + a[m-1]);

}

catch(Exception e) {

System.out.println("Enter only numbers");

}

}

}

Ans:

Error in the 7 the line :

**in** count=0,n=100,i,j=0,m=4;

correct answer is :

**int** count=0,n=100,i,j=0,m=4;