**By : ( Muhammad Ibrahim Khawer)**

**Task**-1 **Visual Basic**

Sub Main()

Dim alphabets, str1 As String

Dim i As Integer

Dim isPangram As Boolean

Dim nextChar As Char

alphabets = "abcdefghijlmnopqrstuvwxyz"

i = 0

isPangram = True

nextChar = ""

Console.Write("Enter string: ")

str1 = Console.ReadLine

str1 = LCase(str1)

For i = 1 To Len(alphabets)

nextChar = Mid(alphabets, i, 1)

If InStr(str1, nextChar) = 0 Then

isPangram = False

End If

Next i

If isPangram = True Then

Console.WriteLine("Input string is pangram.")

Else

Console.WriteLine("Input string is NOT a pangram.")

End If

Console.ReadKey()

End Sub

**Task-1 Psudocode**

DECLARE alphabets, str1 As String

DECLARE i : Integer

DECLARE isPangram : Boolean

DECLARE nextChar : Char

alphabets ← "abcdefghijlmnopqrstuvwxyz"

i ← 0

isPangram ← True

nextChar ← "

OUTPUT"Enter string: "

INPUT str1

str1 ← LOWER(str1)

FOR i ← 1 To LEN(alphabets)

nextChar ← MID(alphabets, i, 1)

IF LOCATE(str1, nextChar) ← 0 THEN

isPangram ← False

END IF

NEXT i

IF isPangram ← True Then

OUTPUT"Input string is pangram."

ELSE

OUTPUT"Input string is NOT a pangram."

END IF

**Task-2 Visual Basic**

Sub Main()

'DECLARATION

Dim Str1, Str2, Str3, Character, Word As String

Dim Count As Integer

'Initialisation

Str1 = ""

Str2 = ""

Str3 = ""

Character = ""

Word = ""

Count = 0

'INPUT

Console.Write("Enter The String : ")

Str1 = Console.ReadLine

Console.Write("Enter Character To Remove: ")

Str2 = Console.ReadLine

Console.Write("Enter Character To Add: ")

Str3 = Console.ReadLine

'PROCESS

For Count = 1 To Len(Str1)

Character = Mid(Str1, Count, 1)

If Character <> Str2 Then

Word = Word & Character

Else

Character = Str3

Word = Word & Character

End If

Next Count

Console.WriteLine("Updated String: " & Word)

Console.ReadKey()

End Sub

**Task-2 Pseudocode**

DECLARE Str1, Str2, Str3, Character, Word : String

DECLARE Count : Integer

Str1 ← ""

Str2 ← ""

Str3 ← ""

Character ← ""

Word ← ""

Count ← 0

OUTPUT"Enter a string: "

INPUT Str1

OUTPUT"Enter Character to Remove: "

INPUT Str2

OUTPUT"Enter Character to Add: "

INPUT Str3

FOR Count ← 1 To LEN(Str1)

Character ← MID(Str1, Count, 1)

IF Character <> Str2 Then

Word ← Word + Character

ELSE

Character ← Str3

Word ← Word + Character

END IF

NEXT Count

OUTPUT"Updated String: " + Word

**Task-3 Visual Basic**

Sub Main()

'DECLARATION

Dim Str1 As String

Dim Char1 As Char

Dim i, alphaCount, digitCount As Integer

'INITIALISATION

Str1 = ""

Char1 = ""

i = 0

alphaCount = 0

digitCount = 0

'INPUT

Console.Write("Enter string to process: ")

Str1 = Console.ReadLine

'PROCESS

For i = 1 To Len(Str1)

Char1 = Mid(Str1, i, 1)

If Char1 >= "A" And Char1 <= "Z" Then

alphaCount = alphaCount + 1

ElseIf Char1 >= "a" And Char1 <= "z" Then

alphaCount = alphaCount + 1

ElseIf Char1 >= "0" And Char1 <= "9" Then

digitCount = digitCount + 1

End If

Next

'OUTPUT

Console.WriteLine("Alphabets = " & alphaCount)

Console.WriteLine("Digits = " & digitCount)

Console.ReadKey()

End Sub

**Task-3 Pseudocode**

'DECLARATION

DECLARE Str1 : String

DECLARE Char1 : Char

DECLARE i, alphaCount, digitCount : Integer

'INITIALISATION

Str1 ← ""

Char1 ← "

i ← 0

alphaCount ← 0

digitCount ← 0

'INPUT

OUTPUT"Enter string to process: "

INPUT Str1

'PROCESS

FOR i ← 1 To LEN(Str1)

Char1 ← MID(Str1, i, 1)

IF Char1 >= "A" AND Char1 <= "Z" THEN

alphaCount ← alphaCount + 1

ELSEIF Char1 >= "a" AND Char1 <= "z" THEN

alphaCount ← alphaCount + 1

ELSEIF Char1 >= "0" AND Char1 <= "9" THEN

digitCount ← digitCount + 1

END IF

NEXT

'OUTPUT

OUTPUT"Alphabets: " + alphaCount

OUTPUT"Digits: " + digitCount

**Task-4 Visual Basic**

Sub main()

Dim str1, str2, str3, GratestChar, space As String

Dim Char1, Char2 As Char

Dim i, count As Integer

str1 = ""

str2 = ""

str3 = ""

space = " "

Char1 = ""

Char2 = ""

GratestChar = ""

i = 0

count = 0

Console.Write("Enter string: ")

str1 = LCase(space & Console.ReadLine)

For i = 1 To Len(str1)

Char1 = Mid(str1, i, 1)

For count = 1 To Len(str1)

Char2 = Mid(str1, count, 1)

If Char2 = Char1 Then

str2 = str2 + Char1

End If

Next

If InStr(GratestChar, Char1) = 0 Then

If Len(str3) < Len(str2) Then

GratestChar = Char1

End If

If Len(str2) > Len(str3) Then

str3 = str2

End If

End If

str2 = ""

Next

Console.WriteLine(" Most reoccering character is " & GratestChar)

Console.ReadKey()

End Sub

**Task-4 Pseudocode**

DECLARE str1, str2, str3, GratestChar, space : String

DECLARE Char1, Char2 : Char

DECLARE i, count : Integer

str1 ← ""

str2 ← ""

str3 ← ""

space ← " "

Char1 ← "

Char2 ← "

GratestChar ← "

i ← 0

count ← 0

OUTPUT"Enter string: "

INPUT str1

str1 = LOWER(str1)

FOR i ← 1 To LEN(str1)

Char1 ← MID(str1, i, 1)

FOR count ← 1 To LEN(str1)

Char2 ← MID(str1, count, 1)

IF Char2 ← Char1 THEN

str2 ← str2 + Char1

END IF

NEXT

IF LOCATE(GratestChar, Char1) ← 0 THEN

IF LEN(str3) < LEN(str2) THEN

GratestChar ← Char1

END IF

IF LEN(str2) > LEN(str3) THEN

str3 ← str2

END IF

END IF

str2 = ""

NEXT

OUTPUT" Most reoccering character is " + GratestChar

**Task-5 Visual Basic**

Sub Main()

'DECLARATION

Dim Str1, Str2, Str3 As String

Dim i, count, num1 As Integer

Dim Char1, Char2 As Char

'INITIALISATION

Str1 = ""

Str2 = "AEIOU"

Str3 = ""

i = 0

num1 = 0

count = 0

Char1 = ""

Char2 = ""

'INPUT

Console.Write("Enter string to process: ")

Str1 = Console.ReadLine

Str1 = UCase(Str1)

'PROCESS

For i = 1 To Len(Str1)

Char1 = Mid(Str1, i, 1)

For count = 1 To Len(Str1)

Char2 = Mid(Str1, count, 1)

If Char2 = Char1 Then

num1 = num1 + 1

End If

Next

If InStr(Str3, Char1) = 0 Then

Str3 = Str3 + Char1

If InStr(Str2, Char1) Then

Console.WriteLine(Char1 & " = " & num1)

End If

End If

num1 = 0

Next

End Sub

**Task-5 Pseudocode**

'DECLARATION

DECLARE Str1, Str2, Str3 : String

DECLARE i, count, num1 : Integer

DECLARE Char1, Char2 : Char

'INITIALISATION

Str1 ← ""

Str2 ← "AEIOU"

Str3 ← ""

i ← 0

num1 ← 0

count ← 0

Char1 ← "

Char2 ← "

'INPUT

OUTPUT"Enter string to process: "

INPUT Str1

Str1 ← UPPER(Str1)

'PROCESS

FOR i ← 1 To LEN(Str1)

Char1 ← MID(Str1, i, 1)

FOR count ← 1 To LEN(Str1)

Char2 ← MID(Str1, count, 1)

IF Char2 ← Char1 THEN

num1 ← num1 + 1

END IF

NEXT

IF LOCATE(Str3, Char1) ← 0 THEN

Str3 ← Str3 + Char1

IF LOCATE(Str2, Char1) THEN

OUTPUT Char1 + " = " + num1)

END IF

END IF

num1 ← 0

NEXT

**Task-6 Visual Basic**

Sub Main()

Dim count As Integer

count = 0

Console.Write("Enter The Amount Of Dounts: ")

count = Console.ReadLine()

If count < 10 Then

Console.WriteLine("Number Of Dounts: " & count)

Else

Console.WriteLine("Number Of Dounts: many")

End If

End Sub

**Task-6 Pseudocode**

DECLARE count : Integer

count ← 0

OUTPUT"Enter The Amount Of Dounts: "

INPUT count

IF count < 10 Then

OUTPUT "Number Of Dounts: " & count

Else

OUTPUT "Number Of Dounts: many"

END IF

**Task-7 Visual Basic**

Sub Main()

Dim str1, str2, str3 As String

str1 = ""

str2 = ""

str3 = ""

Console.Write("Enter String To Process: ")

str1 = Console.ReadLine()

If Len(str1) > 2 Then

str2 = Left(str1, 2)

str3 = Right(str1, 2)

Console.WriteLine("Processed String: " & str2 & str3)

Else

Console.WriteLine("Processed String: " & str1)

End If

End Sub

**Task-7 Pseudocode**

DECLARE str1, str2, str3 : String

str1 ← ""

str2 ← ""

str3 ← ""

OUTPUT "Enter String To Process: "

INPUT str1

IF LEN(str1) > 2 THEN

str2 ← LEFT(str1, 2)

str3 ← RIGHT(str1, 2)

OUTPUT "Processed String: " + str2 + str3)

ELSE

OUTPUT "Processed String: " & str1

END IF

**Task-8 Visual Basic**

Sub Main()

'DECLARATION

Dim Str1, Str2, Str3 As String

Dim Count, Letters As Integer

Dim Char1, Char2, Char3 As Char

'Initialisation

Str1 = ""

Str2 = ""

Str3 = "\*"

Char1 = ""

Char2 = ""

Char3 = ""

Count = 0

Letters = 0

'INPUT

Console.Write("Enter The String To Process: ")

Str1 = LCase(Console.ReadLine)

'PROCESS

Char1 = Left(Str1, 1)

For Count = 1 To Len(Str1)

Char2 = Mid(Str1, Count, 1)

If Char2 = Char1 Then

Char2 = Str3

End If

Letters = Letters + 1

If Letters > 1 Then

Str2 = Str2 + Char2

End If

Next

Char3 = Char1

Console.WriteLine("Processed String: " & Char3 & Str2)

Console.ReadKey()

End Sub

**Task-8 Pseudocode**

'DECLARATION

DECLARE Str1, Str2, Str3 : String

DECLARE Count, Letters : Integer

DECLARE Char1, Char2, Char3 : Char

'Initialisation

Str1 ← ""

Str2 ← ""

Str3 ← "\*"

Char1 ← "

Char2 ← "

Char3 ← "

Count ← 0

Letters ← 0

'INPUT

OUTPUT"Enter The String To Process: "

INPUT Str1

Str1 ← LOWER(Str1)

'PROCESS

Char1 ← LEFT(Str1, 1)

FOR Count ← 1 To LEN(Str1)

Char2 ← MID(Str1, Count, 1)

IF Char2 ← Char1 THEN

Char2 ← Str3

END IF

Letters ← Letters + 1

IF Letters > 1 THEN

Str2 ← Str2 + Char2

END IF

NEXT

Char3 ← Char1

OUTPUT "Processed String: " + Char3 + Str2

**Task-9 Visual Basic**

Sub Main()

Dim Str1, Str2, Str3, Str4, Str5, Str6 As String

'Initialisation

Str1 = ""

Str2 = ""

Str3 = ""

Str4 = ""

Str5 = ""

Str6 = ""

'INPUT

Console.Write("Enter First String: ")

Str1 = Console.ReadLine

Console.Write("Enter Scond String: ")

Str2 = Console.ReadLine

'PROCESS

Str3 = Left(Str1, 2)

Str4 = Left(Str2, 2)

Str5 = Mid(Str1, 3, Len(Str1))

Str6 = Mid(Str2, 3, Len(Str2))

Console.WriteLine("First String: " & Str4 & Str5)

Console.WriteLine("Scond String: " & Str3 & Str6)

Console.ReadKey()

End Sub

**Task-9 Pseudocode**

DECLARE Str1, Str2, Str3, Str4, Str5, Str6 : String

'Initialisation

Str1 ← ""

Str2 ← ""

Str3 ← ""

Str4 ← ""

Str5 ← ""

Str6 ← ""

'INPUT

OUTPUT "Enter First String: "

INPUT Str1

OUTPUT "Enter Scond String: "

INPUT Str2

'PROCESS

Str3 ← LEFT(Str1, 2)

Str4 ← LEFT(Str2, 2)

Str5 ← MID(Str1, 3, LEN(Str1))

Str6 ← MID(Str2, 3, LEN(Str2))

OUTPUT "First String: " + Str4 + Str5)

OUTPUT "Scond String: " + Str3 + Str6)

**Task-10 Visual Basic**

Sub Main()

Dim Str1, Str2, Str3, Str4 As String

Str1 = ""

Str2 = "ing"

Str3 = "ly"

Str4 = ""

Console.Write("Enter String: ")

Str1 = Console.ReadLine()

Str4 = Right(Str1, 3)

If Len(Str1) >= 3 And Str4 <> Str2 Then

Console.WriteLine("Updated String: " & Str1 & Str2)

ElseIf Str4 = Str2 Then

Console.WriteLine("Updated String: " & Str1 & Str3)

Else

Console.WriteLine("String Was Very Short: " & Str1)

End If

End Sub

**Task-10 Pseudocode**

DECLARE Str1, Str2, Str3, Str4 : String

Str1 ← ""

Str2 ← "ing"

Str3 ← "ly"

Str4 ← ""

OUTPUT "Enter String: "

INPUT Str1

Str4 ← RIGHT(Str1, 3)

IF LEN(Str1) >= 3 AND Str4 <> Str2 THEN

OUTPUT "Updated String: " + Str1 + Str2

ELSEIF Str4 = Str2 Then

OUTPUT "Updated String: " + Str1 + Str3

ELSE

OUTPUT "String Was Very Short: " + Str1

END IF

**Task-11 Visual Basic**

Sub Main()

Dim str1, str2 As String

Dim num1, num2 As String

Dim char1 As Char

str1 = ""

str2 = ""

char1 = ""

num1 = 0

num2 = 0

Console.Write("Enter string: ")

str1 = LCase(Console.ReadLine)

num1 = InStr(str1, "not")

num2 = InStr(str1, "bad")

If InStr(str1, "not") > 0 And InStr(str1, "bad") > 0 Then

If num2 > num1 Then

num2 = num2 + 3

num1 = num1 - 1

For i = 1 To Len(str1)

char1 = Mid(str1, i, 1)

If i > num1 And i < num2 Then

If InStr(str2, "good") = 0 Then

str2 = str2 + "good"

End If

Else

str2 = str2 + char1

End If

Next

End If

End If

Console.WriteLine("Updated String: " & str2)

Console.ReadKey()

End Sub

**Task-11 Pseudocode**

DECLARE str1, str2 : String

DECLARE num1, num2 : String

DECLARE char1 : Char

str1 ← ""

str2 ← ""

char1 ← "

num1 ← 0

num2 ← 0

OUTPUT "Enter string: "

INPUT str1

num1 ← LOCATE(str1, "not")

num2 ← LOCATE(str1, "bad")

IF LOCATE(str1, "not") > 0 AND LOCATE(str1, "bad") > 0 THEN

IF num2 > num1 THEN

num2 ← num2 + 3

num1 ← num1 - 1

FOR i ← 1 To LEN(str1)

char1 ← MID(str1, i, 1)

IF i > num1 And i < num2 THEN

IF LOCATE(str2, "good") = 0 THEN

str2 ← str2 + "good"

END IF

ELSE

str2 = str2 + char1

END IF

NEXT

END IF

END IF

OUTPUT "Updated String: " + str2