**Hangman Technical Solution**

**Code:**

Imports System.IO.File

Public Class Form1

 Dim LetterButton(26) As Button

 Dim AlreadyGuessed(26) As Boolean

 Dim Word As String

 Dim guesses As Integer = 0

 Dim spaces As String = ""

 Dim SpacesLabel As New Label

 Dim GallowsCounter As Integer

 Private Sub CreateLetters\_Click()

 For i = 1 To 26

 LetterButton(i) = New Button

 LetterButton(i).Size = New Size(30, 30)

 LetterButton(i).BackColor = Color.WhiteSmoke

 If i \ 10 = 0 Then

 LetterButton(i).Location = New Size(30 \* i, 30)

 ElseIf i \ 10 = 1 Then

 LetterButton(i).Location = New Size((30 \* i) - 285, 60)

 ElseIf i \ 10 = 2 Then

 LetterButton(i).Location = New Size((30 \* i) - 540, 90)

 End If

 LetterButton(i).Text = Chr(i + 64)

 AddHandler LetterButton(i).Click, AddressOf letter\_click

 Me.Controls.Add(LetterButton(i))

 Next

 End Sub

 Sub GenerateWord()

 Dim lineCount = IO.File.ReadAllLines("words.txt").Length

 Dim CanBeUsed As Boolean

 If lineCount = IO.File.ReadAllLines("usedwords.txt").Length Then

 System.IO.File.WriteAllText("usedwords.txt", "")

 End If

 Do

 CanBeUsed = True

 Randomize()

 Dim LineNumber As Integer = Int((LineCount \* Rnd()) + 1)

 Dim wordfile As System.IO.StreamReader = System.IO.File.OpenText("words.txt")

 Dim line As String = "start"

 Dim counter As Integer = 0

 Do Until line = Nothing

 line = wordfile.ReadLine()

 counter += 1

 If counter = LineNumber Then

 Word = line.ToUpper()

 Dim UsedWords As System.IO.StreamReader = System.IO.File.OpenText("usedwords.txt")

 Dim usedline As String = "start"

 Do Until usedline = Nothing

 usedline = UsedWords.ReadLine()

 If usedline <> Nothing Then

 If usedline = Word Then

 CanBeUsed = False

 End If

 End If

 Loop

 UsedWords.Close()

 End If

 Loop

 wordfile.Close()

 Loop Until CanBeUsed = True

 MsgBox(Word)

 Dim file As System.IO.StreamWriter

 file = My.Computer.FileSystem.OpenTextFileWriter("usedwords.txt", True)

 file.WriteLine(Word)

 file.Close()

 End Sub

 Sub CreateSpaces()

 SpacesLabel.Size = New System.Drawing.Size(50 \* Len(Word), 40)

 SpacesLabel.Location = New System.Drawing.Point(500, 90)

 SpacesLabel.Font = New Font("Comic Sans MS", 20)

 SpacesLabel.BackColor = Color.White

 SpacesLabel.Text = spaces

 Me.Controls.Add(SpacesLabel)

 End Sub

 Sub letter\_click()

 Dim letterguessed As Char

 For i = 1 To 26

 If LetterButton(i).ContainsFocus Then

 letterguessed = Chr(i + 64)

 LetterButton(i).BackColor = Color.DarkGray

 If AlreadyGuessed(i) <> True Then

 guesses += 1

 Dim correct As Boolean = False

 For character = 1 To Len(Word)

 If Word(character - 1) = letterguessed Then

 correct = True

 spaces = spaces.Remove(2 \* (character - 1), 1)

 spaces = spaces.Insert(2 \* (character - 1), letterguessed)

 CreateSpaces()

 End If

 Next

 If correct = False Then

 GallowsCounter += 1

 Me.Invalidate()

 End If

 End If

 AlreadyGuessed(i) = True

 If GallowsCounter = 12 Then

 MsgBox("YOU LOSE")

 Dim username As String = InputBox("Enter your username")

 Dim file As System.IO.StreamWriter

 file = My.Computer.FileSystem.OpenTextFileWriter("scoreboard.txt", True)

 file.WriteLine(username & " lost to the word: " & Word & " with " & guesses & " guesses")

 file.Close()

 If InputBox("Do you want to play again? (Y/N)") = "Y" Then

 Application.Restart()

 Else

 System.IO.File.WriteAllText("usedwords.txt", "")

 Me.Close()

 End If

 End If

 If Word.ToUpper = spaces.Replace(" ", "") Then

 MsgBox("YOU WIN")

 Dim username As String = InputBox("Enter your username")

 Dim file As System.IO.StreamWriter

 file = My.Computer.FileSystem.OpenTextFileWriter("scoreboard.txt", True)

 file.WriteLine(username & " guessed the word: " & Word & " with " & guesses & " guesses")

 file.Close()

 If InputBox("Do you want to play again? (Y/N)") = "Y" Then

 Application.Restart()

 Else

 System.IO.File.WriteAllText("usedwords.txt", "")

 Me.Close()

 End If

 End If

 End If

 Next

 End Sub

 Sub UpdateGallows(g)

 Dim GallowFile As String = "gallows" & (Str(GallowsCounter)).TrimStart & ".png"

 Dim GallowPart As Bitmap = New Bitmap(GallowFile)

 If GallowsCounter = 1 Then

 g.DrawImage(GallowPart, 100, 500)

 Else

 g.DrawImage(GallowPart, 100, 265)

 End If

 End Sub

 Private Sub Form1\_Paint(sender As Object, e As PaintEventArgs) Handles Me.Paint

 Dim g As Graphics = e.Graphics

 g.Clear(Color.White)

 UpdateGallows(g)

 End Sub

 Private Sub Form1\_Load(sender As Object, e As EventArgs) Handles MyBase.Load

 play()

 End Sub

 Sub play()

 guesses = 0

 GallowsCounter = 0

 Me.Invalidate()

 For letter = 1 To 26

 AlreadyGuessed(letter) = False

 Next

 GenerateWord()

 For charcter = 1 To Len(Word)

 spaces += "\_ "

 Next

 CreateSpaces()

 CreateLetters\_Click()

 End Sub

End Class

**Testing:**

















**Files:**



Gallows6.txt **:**



Words.txt: Scoreboard.txt :

 