GAD (22034) Question Bank

1. Write a program to read data from database and display it in DataGrid view on button click?

ANS:

2. Write a program to insert data into database and display it in DataGrid view on button click?

ANS:

3. Write a program to delete data from database and display it in DataGrid view on button click?

ANS:

4. Write a program to update data from database and display it in DataGrid view on button click ?
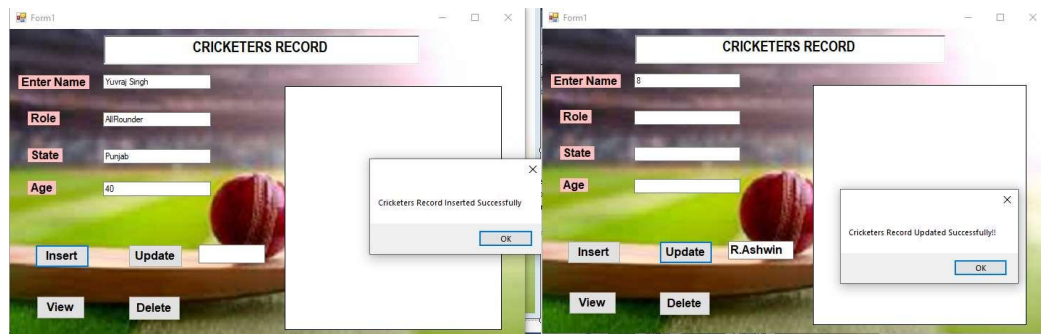
ANS:

```vb
Imports System.Data.OleDb
Public Class Form1
Dim cn As OleDbConnection
Dim cmd As OleDbCommand
Dim dr As OleDbDataReader
Dim cnt As Integer
Private Sub Button1_Click(sender As Object, e As EventArgs)
Handles
Button1.Click
cn = New
OleDbConnection("Provider=Microsoft.ACE.OLEDB.12.0;Data
Source=C:\Users\student2\Documents\Cricketers.accdb")
cmd = New OleDbCommand
cn.Open()
cmd.Connection = cn
cmd.CommandText = "INSERT INTO
Cricketers(Name,Role,State,Age)values('"
& TextBox1.Text & "','" & TextBox2.Text & "','" &
TextBox3.Text & "','" &
TextBox4.Text & "')"
cmd.ExecuteNonQuery()
cn.Close()
MessageBox.Show("Cricketers Record Inserted Successfully")
End Sub
```
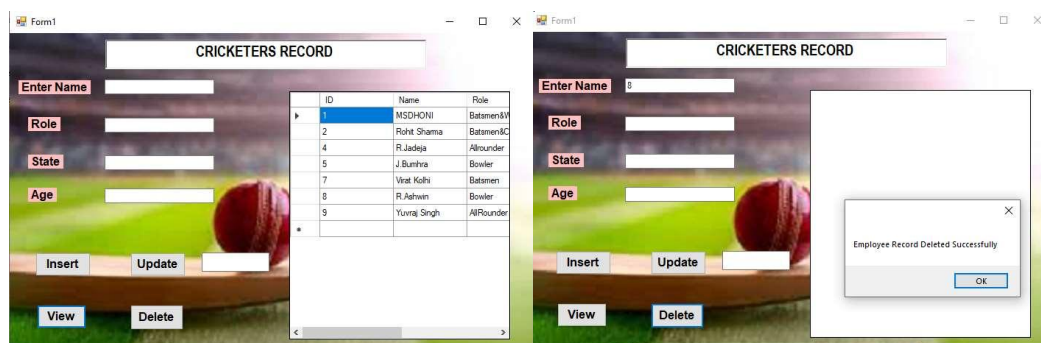
```vb
Private Sub Button2_Click(sender As Object, e As EventArgs)
Handles
Button2.Click cn = New
OleDbConnection("Provider=Microsoft.ACE.OLEDB.12.0;Data
Source=C:\Users\student2\Documents\Cricketers.accdb")
cmd = New OleDbCommand
cn.Open()
cmd.Connection = cn
cmd = New OleDbCommand("UPDATE Cricketers set Name='" &
TextBox5.Text &
"' where id=" & TextBox1.Text, cn)
cmd.ExecuteNonQuery()
MessageBox.Show("Cricketers Record Updated Successfully!!")
cn.Close()
End Sub
Private Sub Button3_Click(sender As Object, e As EventArgs)
Handles
Button3.Click
Dim ad1 As OleDbDataAdapter
Dim ds As New DataSet()
cn = New
OleDbConnection("Provider=Microsoft.ACE.OLEDB.12.0;Data
Source=C:\Users\student2\Documents\Cricketers.accdb")
ad1 = New OleDbDataAdapter("select *from Cricketers", cn)
ad1.Fill(ds, "Cricketers")
DataGridView1.DataSource = ds
DataGridView1.DataMember = "Cricketers"
End Sub
Private Sub Button4_Click(sender As Object, e As EventArgs)
Handles
Button4.Click
cn = New
OleDbConnection("Provider=Microsoft.ACE.OLEDB.12.0;Data
Source=C:\Users\student2\Documents\Cricketers.accdb")
cn.Open()
cmd = New OleDbCommand("Delete from Cricketers where id= " &
TextBox1.Text, cn)
cmd.ExecuteNonQuery()
MessageBox.Show("Employee Record Deleted Successfully")
cn.Close()
End Sub
End Class
```

INSERT,UPDATE:

VIEW, DELETE:

FINAL:

5. Write program for find whether number is Armstrong number ?

ANS:

```
Imports System
Module Module1
    Sub Main()
        Dim number, originalNumber, remainder, result As Integer
        Dim numberOfDigits As Integer = 0
```

```
            Console.Write("Enter a number: ")
            number = Convert.ToInt32(Console.ReadLine())

            ' Store the original number for comparison later
            originalNumber = number

            ' Count the number of digits in the number
            While originalNumber <> 0
                originalNumber \= 10
                numberOfDigits += 1
            End While

            ' Reset originalNumber to the actual number
            originalNumber = number

            ' Calculate the sum of the nth power of each digit
            While originalNumber <> 0
                remainder = originalNumber Mod 10
                result += Math.Pow(remainder, numberOfDigits)
                originalNumber \= 10
            End While

            ' Check if the result is equal to the original number
            If result = number Then
                Console.WriteLine(number & " is an Armstrong number.")
            Else
                Console.WriteLine(number & " is not an Armstrong number.")
            End If

            Console.ReadLine() ' Keep the console window open
        End Sub
    End Module
```

6. Write program for finding greatest among three numbers?

ANS:

```
    Imports System
    Module Module1
        Sub Main()
            Console.Write("ENTER THREEE NUMBERS: ")

            Dim N1 As Integer = Integer.Parse(Console.ReadLine())
            Dim N2 As Integer = Integer.Parse(Console.ReadLine())
            Dim N3 As Integer = Integer.Parse(Console.ReadLine())
            Dim gretest As Integer = 0


            If (N1 > N2) Then
                If (N1 > N3) Then
                    gretest = N1
                Else
                    gretest = N3
                End If
            Else
                If (N2 > N3) Then
                    gretest = N2
                Else
                    gretest = N3
                End If
            End If
```

```
        Console.WriteLine("THE GREATEST NUMBER IS: " & gretest)
        Console.ReadLine()
    End Sub
    End Module
```

7. Write program for find reverse of a given number using Form ?

ANS:

```
Private Sub Button12_Click(sender As Object, e As EventArgs) Handles
Button12.Click
    Dim rev As Integer
    Dim d As Integer
    Dim no As Integer
    rev = 0
    no = Val(TextBox4.Text)
    While (no > 0)
        d = no Mod 10
        rev = (rev * 10) + d
        no = no / 10
    End While
    TextBox5.Text = rev
End Sub
```

8. Write program for find even numbers from 1 to 100?

ANS:

```
Imports System
Module Module1
    Sub Main()
        Dim a As Integer = 1
        Dim num As Integer = 2
        While (a <= 100)
            If (a Mod num = 0) Then
                Console.WriteLine(a)
            End If

            a = a + 1
        End While
        Console.ReadLine()
    End Sub
End Module
```
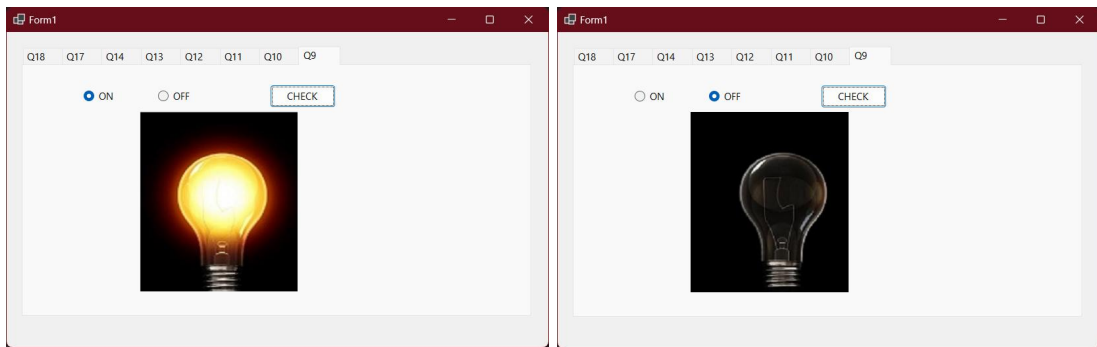
9. Write the program using Radio Button to change the bulb state ON/OFF?

ANS:

```
Private Sub Button11_Click(sender As Object, e As EventArgs) Handles
Button11.Click
    If (RadioButton1.Checked = True) Then
        PictureBox4.Show()
        PictureBox5.Hide()
    End If
    If (RadioButton2.Checked = True) Then
        PictureBox4.Hide()
        PictureBox5.Show()
    End If
 End Sub
```

10. Write the program using Combo box and list box ?

ANS:

```vb
Private Sub Form1_Load(sender As Object, e As EventArgs) Handles
MyBase.Load

    'question 10
    ComboBox1.Items.Add("c")
    ComboBox1.Items.Add("c++")
    ComboBox1.Items.Add("JAVA")
    ComboBox1.Items.Add("PYTHON")
    ComboBox1.Items.Add("NEXT JS")
    ComboBox1.Items.Add("JAVASCRIPT")

End Sub


Private Sub Button9_Click_1(sender As Object, e As EventArgs) Handles
Button9.Click
    ListBox1.Items.Add(ComboBox1.Text)
    ComboBox1.Text = ""
    ComboBox1.Focus()
 End Sub

 Private Sub Button10_Click_1(sender As Object, e As EventArgs) Handles
Button10.Click
    ListBox1.Items.Remove(ListBox1.SelectedItem)
 End Sub
```

11. Write the program to validate Email Address using Regular Expression?

ANS:

```vb
Private Sub Button8_Click(sender As Object, e As EventArgs) Handles
Button8.Click
    Dim REGX As New Regex("^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-
Z]{2,}$")
    If (REGX.IsMatch(TextBox9.Text)) Then
        MsgBox("EMAIL VERIFIED")
    Else
        MsgBox("INVALID EMAIL")
    End If
End Sub
```

12. Write the program to validate PAN no. using Regular Expression ?

ANS:

```
Private Sub Button7_Click(sender As Object, e As EventArgs) Handles
  Button7.Click
     Dim REGX As New Regex("^[A-Z]{5}[0-9]{4}[A-Z]{1}$")
     If (REGX.IsMatch(TextBox8.Text)) Then
         MsgBox("PAN NUMBER VERIFIED")
     Else
         MsgBox("INVALID PAN NUMBER")
     End If
  End Sub
```


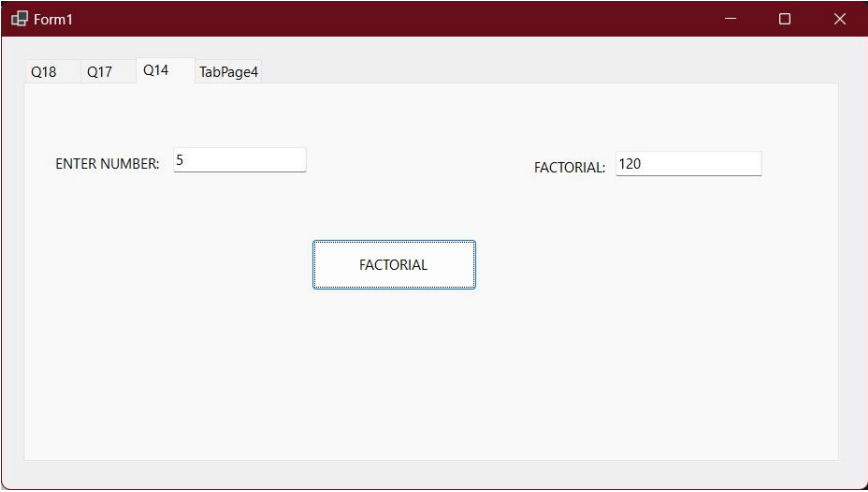## 13. Write the program to validate Aadhar no. and Mobile no. using Regular Expression?

ANS:

```
Private Sub Button6_Click(sender As Object, e As EventArgs) Handles
Button6.Click
     Dim REGX1 As New Regex("\d{10}")
     Dim REGX2 As New Regex("^\d{4}-\d{4}-\d{4}$")
     If ((REGX1.IsMatch(TextBox6.Text)) And (REGX2.IsMatch(TextBox7.Text)))
Then
         MsgBox("PHONE NUMBER, AADHAR VERIFIED")
     ElseIf (Not (REGX1.IsMatch(TextBox6.Text))) Then
         MsgBox("PHONE NUMBER INVALID")
     ElseIf (Not (REGX2.IsMatch(TextBox7.Text))) Then
         MsgBox("AADHAR NUMBER INVALID")
     Else
         MsgBox("AADHAR NUMBER, PHONE NUMBER BOTH INVALID")
     End If
End Sub
```

14. Write program for find Factorial of a given number using Form?

ANS:

```
        Private Sub Button5_Click(sender As Object, e As EventArgs)
Handles Button5.Click
        Dim i As Integer
        Dim fact As Integer
        Dim num As Integer
        fact = 1
        num = Val(TextBox4.Text)
        For i = 1 To num
            fact = fact * i
        Next
        TextBox5.Text = fact
    End Sub
```


15. Write program for find reverse of a given number using Sub Procedure?

ANS:

```
Module MainModule

Sub Main()
    Dim number As Integer
    Console.Write("Enter a number: ")
    number = Convert.ToInt32(Console.ReadLine())

    ' Call the Sub procedure to calculate the reverse of the number
    Dim reversedNumber As Integer
    ReverseNumber(number, reversedNumber)

    Console.WriteLine("Reverse of the number: " & reversedNumber)
    Console.ReadLine() ' Keep the console window open
End Sub

Sub ReverseNumber(ByVal num As Integer, ByRef result As Integer)
    Dim reversed As Integer = 0
    Dim remainder As Integer

    While num > 0
        remainder = num Mod 10
        reversed = (reversed * 10) + remainder
```

```
            num \= 10
        End While

        result = reversed
    End Sub

End Module
```

```
Enter a number: 91
Reverse of the number: 19
S
```

16. Write program for find volume of a cube using Function?

ANS:

```
Imports System

Module Module1

    Sub Main()
        Dim sideLength As Double
        Console.Write("Enter the side length of the cube: ")
        sideLength = Convert.ToDouble(Console.ReadLine())

        ' Call the function to calculate volume and print the result
        Dim volume As Double = CalculateVolumeOfCube(sideLength)
        Console.WriteLine("Volume of the cube: " & volume)

        Console.ReadLine() ' Keep the console window open
    End Sub

    Function CalculateVolumeOfCube(ByVal sideLength As Double) As Double
        ' Volume of a cube formula: sideLength^3
        Dim volume As Double = Math.Pow(sideLength, 3)
        Return volume
    End Function
End Module
```

```
Enter the side length of the cube: 10
Volume of the cube: 1000
```

17. Write a program to display the traffic signal using timer control.

ANS:

```
Private Sub Form1_Load(sender As Object, e As EventArgs) Handles MyBase.Load
```
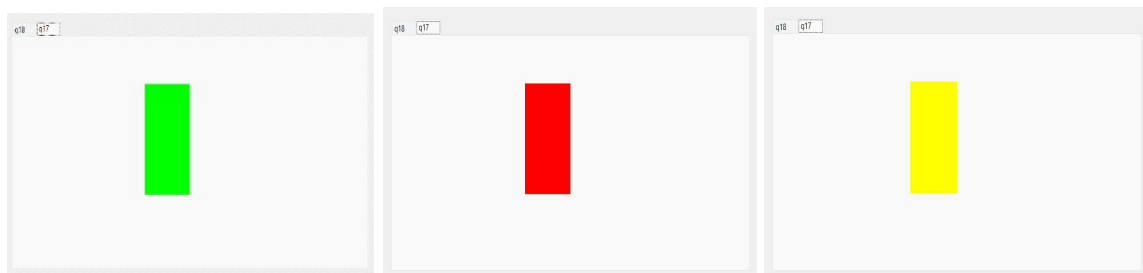
```
        Timer1.Enabled = True
        Timer1.Interval = 1600
        PictureBox1.Visible = True
        PictureBox2.Visible = False
        PictureBox3.Visible = False
End Sub

Private Sub Timer1_Tick(sender As Object, e As EventArgs) Handles Timer1.Tick
    If PictureBox1.Visible Then
        PictureBox1.Visible = False
        PictureBox2.Visible = True
        PictureBox3.Visible = False
    ElseIf PictureBox2.Visible Then
        PictureBox1.Visible = False
        PictureBox2.Visible = False
        PictureBox3.Visible = True
    ElseIf PictureBox3.Visible Then
        PictureBox1.Visible = True
        PictureBox2.Visible = False
        PictureBox3.Visible = False
    End If
    End Sub
```


18. Write program for perform arithmetic operations using Form (Calculator)

Ans:

```
    Public Class Form1

        'question 18 Write program for perform arithmetic operations using
    Form
        Private Sub Button1_Click(sender As Object, e As EventArgs) Handles
    Button1.Click
            TextBox3.Text = Int(TextBox1.Text) + Int(TextBox2.Text)
        End Sub

        Private Sub Button2_Click(sender As Object, e As EventArgs) Handles
    Button2.Click
            TextBox3.Text = Int(TextBox1.Text) - Int(TextBox2.Text)
        End Sub

        Private Sub Button3_Click(sender As Object, e As EventArgs) Handles
    Button3.Click
            TextBox3.Text = Int(TextBox1.Text) * Int(TextBox2.Text)
        End Sub
```

```vb
    Private Sub Button4_Click(sender As Object, e As EventArgs) Handles
Button4.Click
        TextBox3.Text = Int(TextBox1.Text) / Int(TextBox2.Text)
    End Sub


End Class
```