Module Module1

Sub Main()

Dim opt As Integer

Console.Write("Enter the number corresponding to the problem: ")

opt = Integer.Parse(Console.ReadLine())

Select Case opt

Case 1

Dim x, y, temp As Integer

Console.Write("Enter the first positive integer number: ")

x = Integer.Parse(Console.ReadLine())

While x < 0

Console.WriteLine("You must enter a positive integer number!")

Console.Write("Enter the first positive integer number: ")

x = Console.ReadLine()

End While

Console.Write("Enter the second positive integer number: ")

y = Integer.Parse(Console.ReadLine())

While y < 0

Console.WriteLine("You must enter a positive integer number!")

Console.Write("Enter the second positive integer number: ")

y = Console.ReadLine()

End While

temp = 0

For n = 1 To y Step 1

temp += x

Next

Console.WriteLine("{0} x {1} = {2}", x, y, temp)

Case 2

Dim x, y, n, a, b, temp As Integer

Console.Write("Enter the first integer number: ")

x = Integer.Parse(Console.ReadLine())

Console.Write("Enter the second integer number: ")

y = Integer.Parse(Console.ReadLine())

temp = 0

a = x

b = y

If x < 0 And y > 0 Or x > 0 And y < 0 Then

x = Math.Abs(x)

y = Math.Abs(y)

For n = 1 To y Step 1

temp += x

Next

temp \*= -1

ElseIf x < 0 And y < 0

x = Math.Abs(x)

y = Math.Abs(y)

For n = 1 To y Step 1

temp += x

Next

Else

For n = 1 To y Step 1

temp += x

Next

End If

Console.WriteLine("{0} x {1} = {2}", a, b, temp)

Case 3

Dim x, y, a, b, c, temp As Integer

Console.Write("Enter the first positive integer number: ")

x = Integer.Parse(Console.ReadLine())

While x < 0

Console.WriteLine("You must enter a positive integer number!")

Console.Write("Enter the first positive integer number: ")

x = Console.ReadLine()

End While

Console.Write("Enter the second positive integer number: ")

y = Integer.Parse(Console.ReadLine())

While y < 0

Console.WriteLine("You must enter a positive integer number!")

Console.Write("Enter the second positive integer number: ")

y = Console.ReadLine()

End While

a = 0

temp = y + 1

c = x

If y = 0 Then

Console.WriteLine("{0} / {1} = undetermined ", c, y)

ElseIf x = 0 Then

Console.WriteLine("{0} / {1} = 0 r. 0 ", c, y)

ElseIf y > x Then

Console.WriteLine("{0} / {1} = 0 r. {2}", c, y, y)

Else

While temp >= y

temp = x - y

a += 1

x = temp

If temp = 0 Then

b = 0

Else

b = temp

End If

End While

Console.WriteLine("{0} / {1} = {2} r. {3}", c, y, a, b)

End If

Case 4

Dim start, final, counter, a, b As Integer

Dim primeChecker As Boolean

Console.WriteLine("Enter the range of the numbers to process (start - end):")

Console.Write("Enter the start number of the range: ")

start = Integer.Parse(Console.ReadLine())

Console.Write("Enter the end number of the range: ")

final = Integer.Parse(Console.ReadLine())

counter = 0

primeChecker = True

For a = start To final Step 1

For b = start To final Step 1

If a <> b And a Mod b = 0 Then

primeChecker = False

End If

Next

If primeChecker Then

Console.WriteLine(a)

End If

primeChecker = True

Next

Case 5

Dim input, past, present, future, temp As Integer

Console.Write("Enter a positive integer number: ")

input = Integer.Parse(Console.ReadLine())

past = 1

present = 1

Console.Write("1 1 ")

For temp = 1 To input - 2 Step 1

future = past + present

past = future

present = past

Console.Write("{0} ", future)

Next

Case 6

Dim input, total As Integer

total = 1

Console.Write("Enter a positive integer number: ")

input = Integer.Parse(Console.ReadLine())

For start = 1 To input Step 1

total \*= start

Next

Console.Write("{0}! = {1}", input, total)

Console.ReadKey()

Case 7

Dim input, count As Integer

Console.Write("Enter a number: ")

input = Integer.Parse(Console.ReadLine())

For a = 1 To input - 1 Step 1

If input Mod a = 0 Then

count += a

End If

Next

If count = input Or input = 1 Then

Console.WriteLine("{0} is perfect", input)

Else

Console.WriteLine("{0} is not perfect", input)

End If

Case 8

Dim input, total As Integer

Console.WriteLine("Enter a number: ")

input = Integer.Parse(Console.ReadLine())

For start = 1 To input Step 1

total += start

If start < input Then

Console.Write(" {0} + ", start)

Else

Console.Write(" {0} ", start)

End If

Next

Console.WriteLine(" = {0}", total)

Case 9

Dim input, total As Integer

Console.Write("Enter a number: ")

input = Integer.Parse(Console.ReadLine())

For start = 1 To input Step 1

total += start \* start

If start < input Then

Console.Write(" {0}^2 + ", start)

Else

Console.Write(" {0}^2 ", start)

End If

Next

Console.Write(" = {0}", total)

Case 10

Dim input, total As Integer

Console.Write("Enter a number: ")

input = Integer.Parse(Console.ReadLine())

For start = 1 To input Step 1

total += Math.Pow(start, start)

If start < input Then

Console.Write("{0}^{0} + ", start)

Else

Console.Write("{0}^{0} = ", start)

End If

Next

Console.Write("{0}", total)

Case 11

Case 12

Case 13

Case 14

Case 15

Case 16

Case 17

Case 18

Case 19

Case 20

End Select

Console.ReadKey()

End Sub

End Module