LAB-5

Q1

```
/*
Develop a calculator for two numbers(user defined using console for input)
using Scala Anonymous(Inline) function with following capability :
a. Divide
b. Multiply
c. Subtract
d. Addition
*/

object Lab_5_1 {
def main(args : Array[String])
{
    println("|-----------CALCULATOR-----------|")
    println("1 -> Division")
    println("2 -> Multiplication")
    println("3 -> Subtraction")
    println("4 -> Addition")
    print("Enter your choice : ")
    var x = scala.io.StdIn.readInt()
    x match{
```

```
      case 1 => Divide()
      case 2=> Multiply()
      case 3 => Subtract()
      case 4=> Addition()
    }
}
def Divide()
{
   println("Enter the Number to Divide: ")
   var a=scala.io.StdIn.readInt()
   var b=scala.io.StdIn.readInt()
   var c=0
   c=a/b
   println("Result: "+c)
}
def Multiply()
{
   println("Enter Number to Multiply: ")
   var a=scala.io.StdIn.readInt()
   var b=scala.io.StdIn.readInt()
```

```
    var c=0
    c=a*b
    println("Result: "+c)
  }
  def Subtract()
  {
    println("Enter Number to Subtract: ")
    var a=scala.io.StdIn.readInt()
    var b=scala.io.StdIn.readInt()
    var c=0
    c=a-b
    println("Result: "+c)
  }
  def Addition()
  {
    println("Enter Number to Add: ")
    var a=scala.io.StdIn.readInt()
    var b=scala.io.StdIn.readInt()
    var c=0
    c=a+b
```

```
    println("Result: "+c)
  }
  }
```

Console

<terminated> Lab_5_1$ [Scala Application] C:\Program Files\Java\jre1.8.0_301\bin\javaw.exe (13-Aug-2021, 2:00:54 PM)

```
|----------CALCULATOR----------|
1 -> Division
2 -> Multiplication
3 -> Subtraction
4 -> Addition
Enter your choice : 1
Enter the Number to Divide:
63
7
Result: 9
```

```
|-----------CALCULATOR-----------|
1 -> Division
2 -> Multiplication
3 -> Subtraction
4 -> Addition
Enter your choice : 2
Enter Number to Multiply:
10
56
Result: 560
```

```
|-----------CALCULATOR-----------|
1 -> Division
2 -> Multiplication
3 -> Subtraction
4 -> Addition
Enter your choice : 3
Enter Number to Subtract:
100
56
Result: 44
```

```
|----------CALCULATOR----------|
1 -> Division
2 -> Multiplication
3 -> Subtraction
4 -> Addition
Enter your choice : 4
Enter Number to Add:
16
84
Result: 100
```

Q2.

```scala
/*
Write a scala program to check the given number is a prime number or not.
*/
import scala.util.control.Breaks
object Lab_5_2 {
def main(args: Array[String])
{
  val l = new Breaks
  println("Enter the number: ")
  var a = scala.io.StdIn.readInt()
  var b,i,flag = 0
  b=a/2
  for(i <- 2 to b)
  {
    if(a%i==0)
    {
      println("Number is not prime")
      flag=1
      l.break
    }
```

```
    }
    if(flag==0)
    println("Number is prime");
  }
  }
```

Console

<terminated> Lab_5_2$ [Scala Application] C:\Program Files\Java\jre1.8.0_301\bin\javaw.exe (13-Aug-2021, 2:00:20 PM)

```
Enter the number:
5
Number is prime
```

```
Enter the number:
6
Number is not prime
Exception in thread "main" scala.util.control.BreakControl
```

Q3.

```
/*
Write a scala program to convert :
a. temperature from Fahrenheit to Celsius degree.
b. a number in inches to meters.
c. Year to number of days.
*/

object Lab_5_3 {
def main(args: Array[String])
{
  Temp()
  Inch_Meter()
  Year_Days()
 }
def Temp()
{
   print("Enter the Temp. in Fahrenheit: ")
   var f = scala.io.StdIn.readFloat
   var c =  ((f-32)*5)/9
   println("The Temperature in Celsius: "+c+" °C")
```

```
}
def Inch_Meter()
{
   print("Enter number in Inches: ")
   var i = scala.io.StdIn.readFloat
   println("The Distance in Meter: "+(i*0.0254)+" m")
}
def Year_Days()
{
   printf("Input no. of days: ");
   var d = scala.io.StdIn.readInt()
   var y = d/365;
   d = d - (365*y);
   var m = d/30;
   var nd = d-(m*30);
  printf(" %d Year \n %d Month \n %d Day", y, m, nd);
}
}
```

```
Enter the Temp. in Fahrenheit: 100
The Temperature in Celsius: 37.77778 °C
Enter number in Inches: 10
The Distance in Meter: 0.254 m
Input no. of days: 780
 2 Year
 1 Month
 20 Day
```

```
Enter the Temp. in Fahrenheit: 32
The Temperature in Celsius: 0.0 °C
Enter number in Inches: 40
The Distance in Meter: 1.016 m
Input no. of days: 365
 1 Year
 0 Month
 0 Day
```

Q4.

```
/*
Write a scala program that reads a number and display its square, cube, and fourth
power.
*/

object Lab_5_4 {
def main(args: Array[String])
{
  print("Enter a number: ")
  var a = scala.io.StdIn.readDouble()
  println("Square of Number: "+(a*a))
  println("Cube of Number: "+(a*a*a))
  println("Fourth Power of Number: "+(a*a*a*a))
}
}
```

```
Enter a number: 5
Square of Number: 25.0
Cube of Number: 125.0
Fourth Power of Number: 625.0
```

```
Enter a number: 7
Square of Number: 49.0
Cube of Number: 343.0
Fourth Power of Number: 2401.0
```