21000123
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Tutorial 1

1.

1area.scala

```scala
import scala.math.Pi

object area {
  def main(args: Array[String]): Unit = {

    def calculateDiskArea(radius: Double): Double = Pi * radius * radius

    val radius = 5.0
    val area = calculateDiskArea(radius)
    println("area of a disk with radius 5 = " + area)
  }
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

```
geethikap geethika-inspiron5570 ../1/Lab Session 1 scalac 1area.scala

geethikap geethika-inspiron5570 ../1/Lab Session 1 scala area
area of a disk with radius 5 = 78.53981633974483
```

2.

2temp.scala

```scala
object tempconv{
    def main(args: Array[String]): Unit = {
        def celsiusToFahrenheit(celsius: Double): Double = {
            celsius * 1.8 + 32.0
        }

        val fahrenheit = celsiusToFahrenheit(35.0)
        print("The temperature 35°C is " + fahrenheit + "°F in fahrenheit")
    }
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

```
geethikap geethika-inspiron5570 ../1/Lab Session 1 scalac 2temp.scala

geethikap geethika-inspiron5570 ../1/Lab Session 1 scala tempconv
The temperature 35°C is 95.0°F in fahrenheit
```

3.

3vol.scala

```scala
import scala.math.Pi

object calcvol{
    def main(args: Array[String]): Unit = {

        def calcVolume(radius: Double): Double = {
            (4.0 / 3.0) * Pi * radius * radius * radius
        }

        val volume = calcVolume(5.0)
        println("The volume of a sphere with radius 5 is " + volume)
    }
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

```
geethikap geethika-inspiron5570 ../1/Lab Session 1 scalac 3vol.scala

geethikap geethika-inspiron5570 ../1/Lab Session 1 scala calcvol
The volume of a sphere with radius 5 is 523.5987755982989
```

4.

4book.scala

```scala
object calcwholesale{
    def main(args: Array[String]): Unit = {

        def calculateShippingCost(num: Double): Double = {
            if (num <= 50) {
                num * 3.0
            } else {
                50 * 3.0 + (num - 50) * 0.75
            }
        }

       def calculateWholesaleCost(num: Double): Double = {
            ((24.95 * num) + calculateShippingCost(num)) * (1 - 0.4)
        }

        val num = 60
        val totalCost = calculateWholesaleCost(60.0)
        print("The total wholesale cost for 60 copies is Rs." + totalCost)
    }
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

```
geethikap geethika-inspiron5570 ../1/Lab Session 1 scalac 4book.scala

geethikap geethika-inspiron5570 ../1/Lab Session 1 scala calcwholesale
The total wholesale cost for 60 copies is Rs.992.6999999999999
```

5.

5runtime.scala

```scala
object calcruntime{
    def main(args: Array[String]): Unit = {

        def calculateRunningTime(easyPace: Double, tempoPace: Double, easyDistance: Double, tempoDistance: Double): Double = {
            val easyTime = easyPace * easyDistance
            val tempoTime = tempoPace * tempoDistance
            2*easyTime + tempoTime
        }


        val easyPace = 8.0
        val tempoPace = 7.0
        val easyDistance = 2.0
        val tempoDistance = 3.0

        val totalTime = calculateRunningTime(easyPace, tempoPace, easyDistance, tempoDistance)
        println("The total running time is " + totalTime + " minutes")

    }
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS bash

```
geethikap geethika-inspiron5570 ../1/Lab Session 1 scalac 5runtime.scala

geethikap geethika-inspiron5570 ../1/Lab Session 1 scala calcruntime
The total running time is 53.0 minutes
```