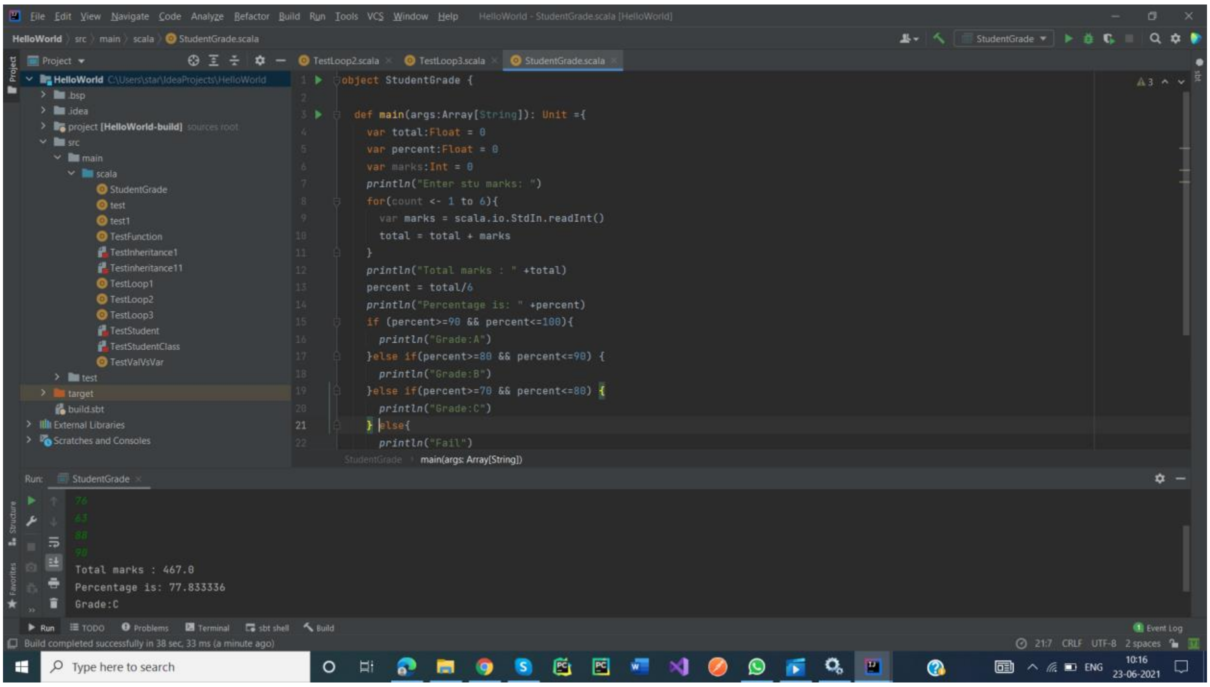
SCALA ASSIGNMENTS

1. WAP to calculate student grade based on below rules
   a. 90 to 100 -> Grade A
   b. 80 to 90 -> Grade B
   c. 70 to 80 -> Grade C
   d. Failure.



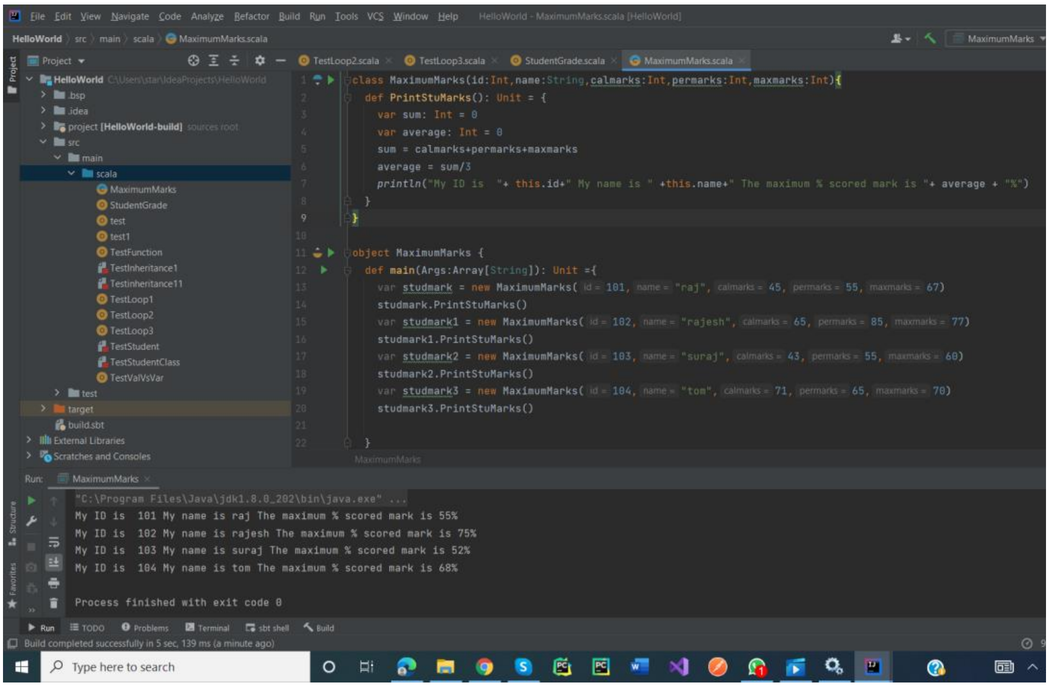
```scala
object StudentGrade {

  def main(args:Array[String]): Unit ={
    var total:Float = 0
    var percent:Float = 0
    var marks:Int = 0
    println("Enter stu marks: ")
    for(count <- 1 to 6){
      var marks = scala.io.StdIn.readInt()
      total = total + marks
    }
    println("Total marks : " +total)
    percent = total/6
    println("Percentage is: " +percent)
    if (percent>=90 && percent<=100){
      println("Grade:A")
    }else if(percent>=80 && percent<=90) {
      println("Grade:B")
    }else if(percent>=70 && percent<=80) {
      println("Grade:C")
    } else{
      println("Fail")
```

```
76
63
88
90
Total marks : 467.0
Percentage is: 77.833336
Grade:C
```

Build completed successfully in 38 sec, 33 ms (a minute ago)

2. WAP to calculate maximum % scored student report from below data.

```
{id:101,name:raj,cmarks:45,pmarks:55,mmarks:67}
{id:102,name:rajesh,cmarks:65,pmarks:85,mmarks:77}
{id:103,name:suraj,cmarks:43,pmarks:55,mmarks:60}
{id:104,name:tom,cmarks:71,pmarks:65,mmarks:70}
```



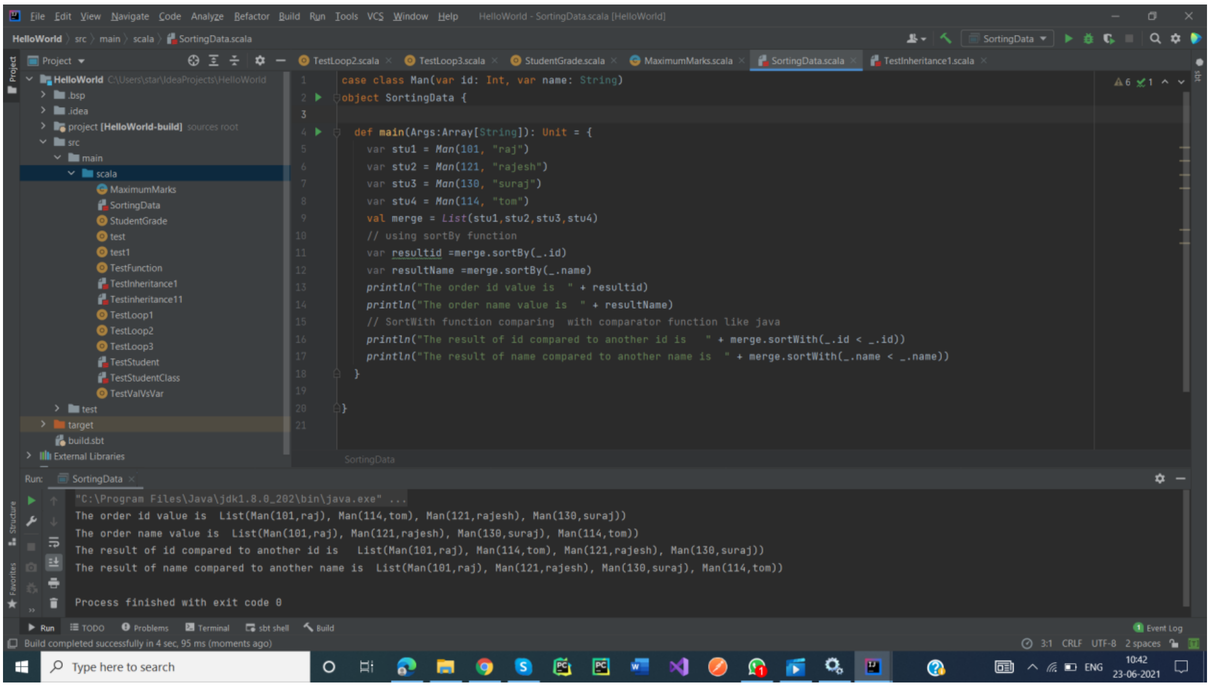
```
class MaximumMarks(id:Int,name:String,calmarks:Int,permarks:Int,maxmarks:Int){
  def PrintStuMarks(): Unit = {
    var sum: Int = 0
    var average: Int = 0
    sum = calmarks+permarks+maxmarks
    average = sum/3
    println("My ID is  "+ this.id+" My name is " +this.name+" The maximum % scored mark is "+ average + "%")
  }
}

object MaximumMarks {
  def main(Args:Array[String]): Unit ={
    var studmark = new MaximumMarks( id = 101, name = "raj", calmarks = 45, permarks = 55, maxmarks = 67)
    studmark.PrintStuMarks()
    var studmark1 = new MaximumMarks( id = 102, name = "rajesh", calmarks = 65, permarks = 85, maxmarks = 77)
    studmark1.PrintStuMarks()
    var studmark2 = new MaximumMarks( id = 103, name = "suraj", calmarks = 43, permarks = 55, maxmarks = 60)
    studmark2.PrintStuMarks()
    var studmark3 = new MaximumMarks( id = 104, name = "tom", calmarks = 71, permarks = 65, maxmarks = 70)
    studmark3.PrintStuMarks()

  }
```

```
"C:\Program Files\Java\jdk1.8.0_202\bin\java.exe" ...
My ID is  101 My name is raj The maximum % scored mark is 55%
My ID is  102 My name is rajesh The maximum % scored mark is 75%
My ID is  103 My name is suraj The maximum % scored mark is 52%
My ID is  104 My name is tom The maximum % scored mark is 68%

Process finished with exit code 0
```

Build completed successfully in 5 sec, 139 ms (a minute ago)

3. WAP to perform sorting of below data based on id and name(create class, object and a method for sorting in util class)

```
{id:101,name:raj}
{id:121,name:rajesh}
{id:130,name:suraj}
{id:114,name:tom}
```



```scala
case class Man(var id: Int, var name: String)
object SortingData {

  def main(Args:Array[String]): Unit = {
    var stu1 = Man(101, "raj")
    var stu2 = Man(121, "rajesh")
    var stu3 = Man(130, "suraj")
    var stu4 = Man(114, "tom")
    val merge = List(stu1,stu2,stu3,stu4)
    // using sortBy function
    var resultid =merge.sortBy(_.id)
    var resultName =merge.sortBy(_.name)
    println("The order id value is  " + resultid)
    println("The order name value is  " + resultName)
    // SortWith function comparing  with comparator function like java
    println("The result of id compared to another id is   " + merge.sortWith(_.id < _.id))
    println("The result of name compared to another name is  " + merge.sortWith(_.name < _.name))
  }

}
```

```
"C:\Program Files\Java\jdk1.8.0_202\bin\java.exe" ...
The order id value is  List(Man(101,raj), Man(114,tom), Man(121,rajesh), Man(130,suraj))
The order name value is  List(Man(101,raj), Man(121,rajesh), Man(130,suraj), Man(114,tom))
The result of id compared to another id is   List(Man(101,raj), Man(114,tom), Man(121,rajesh), Man(130,suraj))
The result of name compared to another name is  List(Man(101,raj), Man(121,rajesh), Man(130,suraj), Man(114,tom))

Process finished with exit code 0
```