**Group Activity 8; CS 3060**

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Points: 10

**Task 1 (4 points)**: Write a function/method *getLastWord* that takes a string t as input and splits t to get the words present in t, and finally returns the last word in t. A template of the method is given below. You need to fill in the blank.

def getLastWord (t : String): String =

{

val list= t.split("\\s+" )

//(a) Get the size of list

        val num = list.length;

        // (b) from list get the last item (i.e. the last word of t )

        val returnVal = list(num -1)

        //(c) return the last word of t

        return(returnVal)

}

An example code showing how to work with List:

val list = List(3,7,5)

list(2) // gives us the last item i.e. 5

How to run/ test your code:

(a) Save your above code in a file myProgram1.scala.

(b) At the end of the code, call *getLastWord* method with parameter t = "123 qbdf rtyu 34".

You may run it like this: *scala myProgram1.scala* . Report the result.

Now on the same scala file add another function *getLastChar* that takes a string *a* as input and returns the last character. Use the following skeleton.

def getLastChar (*a*:String):Char =

{

//(a) Get the size of the string a

        val size = a.length;

        //(b) from string a get the last char by String library function c

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        val last = a.charAt(size-1)

        //(c) return the last char of s

        return(last)

}

val s = "abc 123 sd 34"

println(getLastChar(s))

**Task 2 (6 points)**: Create a text file named data.txt, which contains information about different items, such as computer, chair, table, pen, and so on. The content of the file is as follows. Do not include the first line (i.e., the header line in green) below in your text file to make the processing easier.

Item does price($)

Computer calculates 400

Table holds 50

Pen writes 1

Chair supports 50

Mouse moves 10

Phone talks 100

Printer writes 200

Box holds 50

Bag holds 40

ipad shows 300

Write a Scala program, which will read the whole file and will report the following: (a) the number of items, (b) price of “Pen”, and (c) name of the costliest item. A template of the method is given below. You need fill in the blank. Note: You cannot manually read the file to know the content beforehand to hack the program logic.

import scala.io.Source

object Task2 {

    def main (args:Array[String])

    {

        var price = 0

        var maxPrice = 0

        var costliestitem : String = ""

        var lineCount = -1

        var penCost = 0

        //Below we get a file-handler for the file “data.txt”

        val fileHandler  =  Source.fromFile("data.txt")

        val lineIterator = fileHandler.getLines

        //Iterate over all lines

        for(line <- lineIterator){

            //(a) Increment the lineCount

            lineCount += 1

            //(b) Process the current line

            val item = line.split("\\s+")(0)

            //(c) you may need to change the price item in the third column from String to Int.

                //If s is a string, then s.toInt gives the corresponding Int

            val price = (line.split("\\s+")(2)).toInt

            if (item == "Pen")

            {

                penCost = price

            }

            if (price > maxPrice) {

                costliestitem = item

                maxPrice = price

            }

        }

        // Print all the outputs

        println(lineCount)

        println(penCost)

        println(costliestitem)

        fileHandler.close()

    }

}

How to run/ test.

Save your above code in a file myProgram2.scala. You may run it like: *scala myProgram2.scala* .

Report the result.

**Submission**: Submit one copy (per group) via to Canvas.