Homework 9

November 8, 2018

1   Scala Functions

For this homework, you will use Scala to implement three sorting functions.

1. Write a function `merge_sort(lst: List[Int]): List[Int]` that takes a list, and return a sorted list in increasing order.

2. Write a function `selection_sort(lst: List[Int]): List[Int]` that takes a list and return a sorted list in increasing order.

3. Write a function `insertion_sort(lst: List[Int]): List[Int]` that takes a list and return a sorted list in increasing order.

You should place your methods inside an object and test them as follows.

```
Object Main{

    // your sorting methods are placed here

    def main(args: Array[String]) {
        val lst = List(5,4,11,2,3,1,0,9)
        println(merge_sort(lst))
        println(selection_sort(lst))
        println(insertion_sort(lst))
    }
}
```

2   Submission

Please write your solution in a text file by the name of `hwk9.scala` and submit it to the dropbox.