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Big Data System Engineering with Scala

Fall 2022

Assignment No. 04



-List of Tasks Implemented

Implement RandomState.scala functions

-Code

```
39 // Hint: Think of the input and output, find the appropriate method that achieve this.  
40 // 10 points  
41 def flatMap[U](f: T => RandomState[U]): RandomState[U] = f(get) // TO BE IMPLEMENTED  
42
```

```
46 // Hint: This a recursively method and it concatenate current element with following elements.  
47 // 12 points  
48 def toStream: LazyList[T] = get #:: next.toStream // TO BE IMPLEMENTED  
49 }
```

```
59 // Hint: Remember to use the "seed" to generate next RandomState.  
60 // 7 points  
61 def next: RandomState[T] = JavaRandomState(new Random(n).nextLong, g) // TO BE IMPLEMENTED
```

```
62 // Hint: Think of the input and output.  
63 // 5 points  
64 def get: T = g(n) // TO BE IMPLEMENTED
```

```
65 // Hint: This one need function composition.  
66 // 13 points  
67 def map[U](f: T => U): RandomState[U] = JavaRandomState(n, g andThen f) // TO BE IMPLEMENTED  
68 }
```

```
95 // Hint: This is a easy one, remember that it not only convert a Long to a Double but also scale down the number to -1  
96 // 4 points  
97 val longToDouble: Long => Double = x => x.toDouble/Long.MaxValue // TO BE IMPLEMENTED
```

-Unit tests

