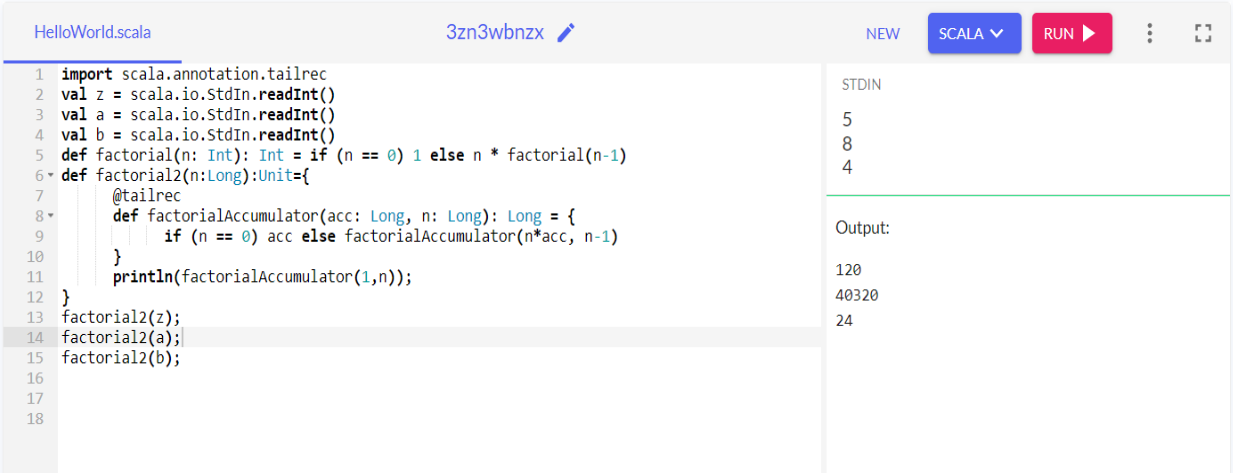
NAME – TAPABRATA BANERJEE

USN- 22BTRAD030

SCALA PROGRAMMING

Q. Tail Recursion:



```
import scala.annotation.tailrec
val z = scala.io.StdIn.readInt()
val a = scala.io.StdIn.readInt()
val b = scala.io.StdIn.readInt()
def factorial(n: Int): Int = if (n == 0) 1 else n * factorial(n-1)
def factorial2(n:Long):Unit={
      @tailrec
      def factorialAccumulator(acc: Long, n: Long): Long = {
            if (n == 0) acc else factorialAccumulator(n*acc, n-1)
      }
      println(factorialAccumulator(1,n));
}
factorial2(z);
factorial2(a);
factorial2(b);
```

STDIN

```
5
8
4
```

Output:

```
120
40320
24
```