

1 Exercise

Write a program that will simulate the rolling of a single die, use a method to do this. The program will roll the die until it encounters a run of ten 6's in a row. Each roll is to be stored in an ArrayList of integers, that is, one ArrayList will store the entire simulation. Once the run of ten 6's is encountered the simulation stops. The program will then go through the ArrayList and find the runs of 6's that are of length 1, length 2, length 3, and so on, up to length 10. Be careful not to over-count a run. That is, 366662 is a run of four 6's, not two runs of three, three runs of two, or four runs of one.

Program Run

```
Number of rolls needed = 91375101
```

```
Runs of length 1 = 10578617
```

```
Runs of length 2 = 1759344
```

```
Runs of length 3 = 294191
```

```
Runs of length 4 = 49061
```

```
Runs of length 5 = 8099
```

```
Runs of length 6 = 1388
```

```
Runs of length 7 = 230
```

```
Runs of length 8 = 35
```

```
Runs of length 9 = 8
```

```
Runs of length 10 = 1
```

2 Submitting Your Work

As usual, you will submit all your work through the MyClasses page for this class. Make sure you do the formatting Shift+Ctrl+F before you submit your work. I need to have,

1. The Java code file for the program.
2. A single Word, LibreOffice or text file with at least 5 runs of the program.