Assignment 1 - CT5102

Atomic Vectors (20 Marks)

With a seed of 1000, and the **sample()** function, roll *dice 1* 1000 times, and then roll *dice 2* 1000 times. The following summaries should be generated.

```
table(dice1)
```

```
## dice1
##   1   2   3   4   5   6
## 159 162 176 141 179 183
```

```
table(dice2)
```

```
## dice2
##   1   2   3   4   5   6
## 169 157 157 169 175 173
```

Add the outcomes from each dice throw, so as to model the throwing of two dice. The following data should be generated.

```
table(total)
```

```
## total
##   2   3   4   5   6   7   8   9  10  11  12
##  28  63  90  75 149 162 141  98  79  77  38
```

Write code to replicate the table function in R. It should involve a loop, and the output vector (**ans**) should be created outside of the loop.

The following results should be generated.

```
ans
```

```
##   2   3   4   5   6   7   8   9  10  11  12
##  28  63  90  75 149 162 141  98  79  77  38
```

```
names(ans)
```

```
##  [1] "2"  "3"  "4"  "5"  "6"  "7"  "8"  "9"  "10" "11" "12"
```

Next, use a recyling approach with logical vectors to display all the even number rolls.

```
evens
```

```
##   2   4   6   8  10  12
##  28  90 149 141  79  38
```

Finally, filter the vector based on the element names in order to show the values for the odd number rolls.

```
odds
```

```
##   3   5   7   9  11
##  63  75 162  98  77
```

Note: Create a source file $< Surname >< StudentID > .R$ and upload this to Blackboard.