LAB ASSIGNMENT 2
PROBABILITY & STATISTICS (UCS410)
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1.

```r
1  mode <- function(m){
2      uniqv <- unique(m)
3      uniqv[which.max(tabulate(match(m, uniqv)))]
4  }
5  m <- c(3, 4, 7, 7, 9, 1)
6  result <- mode(m)
7  print(result)
8
```

8:1   (Top Level) ‡

R R 4.2.2 · ~/

```r
> mode <- function(m){
+     uniqv <- unique(m)
+     uniqv[which.max(tabulate(match(m, uniqv)))]
+ }
> m <- c(3, 4, 7, 7, 9, 1)
> result <- mode(m)
> print(result)
[1] 7
>
```

2.

```
1  Coins <- c(rep("Gold", 20), rep("Silver", 30), rep("Bronze", 50))
2  sample(Coins, 10)
```

2:18   (Top Level) ÷   R Script

R R 4.2.2 · ~/

```
> Coins <- c(rep("Gold", 20), rep("Silver", 30), rep("Bronze", 50))
> sample(Coins, 10)
 [1] "Gold"   "Silver" "Bronze" "Bronze" "Silver" "Bronze" "Silver" "Bronze" "Bronze"
[10] "Silver"
>
```

3.

```
1  Outcome <- sample(c("Success", "Failure"), size = 10, replace = TRUE, prob = c(0.9, 0.1))
2  print(Outcome)
3  # Tarushi 102103391
```

3:20   (Top Level) ⬍   R Script ⬍

R R 4.2.2 · ~/
```
> Outcome <- sample(c("Success", "Failure"), size = 10, replace = TRUE, prob = c(0.9, 0.1))
> print(Outcome)
 [1] "Success" "Success" "Success" "Success" "Success" "Success" "Success" "Success"
 [9] "Success" "Failure"
>
```

4.

```r
1  cond <- function(cloudy, rainy_given_cloudy, rainy){
2    (cloudy * rainy_given_cloudy) / rainy
3  }
4  cloudy <- 0.4
5  rainy_given_cloudy <- 0.85
6  rainy <- 0.2
7  cond(cloudy, rainy_given_cloudy, rainy)
8  # Tarushi 102103391
```

8:20   (Top Level) ⌄   R Script ⌄

® R 4.2.2 · ~/

```r
> cond <- function(cloudy, rainy_given_cloudy, rainy){
+   (cloudy * rainy_given_cloudy) / rainy
+ }
> cloudy <- 0.4
> rainy_given_cloudy <- 0.85
> rainy <- 0.2
> cond(cloudy, rainy_given_cloudy, rainy)
[1] 1.7
> # Tarushi 102103391
> |
```

5.

```
 7  Table_one <- 1/3
 8  Table_two <- 1/3
 9  Table_three <- 1/3
10  gold_first <- 1
11  gold_second <- 1/2
12  gold_third <- 0
13  numerator <- Table_one * gold_first * gold_third + Table_two * gold_second * 1/2 + Table_three * go
14  denominator <- Table_one * gold_first + Table_two * gold_second + Table_three * gold_third
15  drawer_two_gold <- numerator/denominator
16  print(drawer_two_gold)
17  # Tarushi 102103391
```

17:20   (Top Level) ⇕   R Script ⇕

R 4.2.2 · ~/

```
> Table_one <- 1/3
> Table_two <- 1/3
> Table_three <- 1/3
> gold_first <- 1
> gold_second <- 1/2
> gold_third <- 0
> numerator <- Table_one * gold_first * gold_third + Table_two * gold_second * 1/2 + Table_three * gold_t
hird * 0
> denominator <- Table_one * gold_first + Table_two * gold_second + Table_three * gold_third
> drawer_two_gold <- numerator/denominator
> print(drawer_two_gold)
[1] 0.1666667
> # Tarushi 102103391
> |
```