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ICS 4U1
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Homework - Section 5.1 (#1-4) & 5.2 (#1-3)

Section 5.1:

- 1 Method invocation is simply calling the method header in the main method(single line of code), whereas the method definition is all the instructions for that method and what it will do when it is called(can have multiple lines of code).
- 2 $4 > 5(1, 2, 3) > 6 > 7(1, 2, 3).$
- 3

```
public static void printRoot ()
{
    System.out.println("Please give a non-negative value");
    double x = In.getDouble();
    if (x >= 0)
        System.out.println("Square root is " + Math.sqrt(x));
}
```
- 4

```
public static void main(String[] args)
{
    twoDiceRolls();
}
public static void twoDiceRolls()
{
    int roll1 = (int)(6 * Math.random()) + 1;
    int roll2 = (int)(6 * Math.random()) + 1;
    int sum = roll1 + roll2;
    System.out.println(roll1 + " and " + roll2 + " - a total of " + sum);
}
```

Section 5.2:

- 1 `i = 7 and j = 3 // method does not change original value`

- 2 doThis(int n, double x) // first int value then double
- a) Invalid // put a double value in the int slot
 - b) Valid // you can put a single integer in the double slot
 - c) Invalid // put a double value in the int slot
 - d) Valid // you can have a negative int value
 - e) Invalid // cannot have a char in an int
 - f) Invalid // cannot have a letter

3 a)

```
1  /**
2   * Exercise 5.2 Question 3a)
3   * @author Dev Patel
4   * Date Last Modified: Dec. 8th 2020
5   */
6  import java.util.*;
7  class Exercise
8  {
9      public static void main(String[] args)
10     {
11         Scanner kbReader = new Scanner(System.in);
12
13         System.out.println("Enter Symbol: ");
14         String symbol = kbReader.nextLine();
15         char c = symbol.charAt(0);
16
17         System.out.println("Enter Width: ");
18         int width = kbReader.nextInt();
19
20         System.out.println("Enter Height: ");
21         int height = kbReader.nextInt();
22
23         printRect(c, width, height);
24     }
25
26     public static void printRect(char c, int width, int height)
27     {
28         for(int i = 0; i < height; i++){
29             for(int j = 0; j < width; j++){
30                 System.out.print(c);
31             }
32
33             System.out.println();
34         }
35     }
36 }
```

b)

```
1  /**
2  * Exercise 5.2 Question 3b)
3  * @author Dev Patel
4  * Date Last Modified: Dec. 8th 2020
5  */
6  import java.util.*;
7  class Exercise
8  {
9      public static void main(String[] args)
10     {
11         Scanner kbReader = new Scanner(System.in);
12
13         System.out.println("Enter Symbol: ");
14         String symbol = kbReader.nextLine();
15         char c = symbol.charAt(0);
16
17         System.out.println("Enter Width: ");
18         int width = kbReader.nextInt();
19
20         System.out.println("Enter Height: ");
21         int height = kbReader.nextInt();
22
23         printRect(c, width, height);
24     }
25
26     public static void printRect(char c, int width, int height)
27     {
28         for(int i = 0; i < height; i++){
29             for(int j = 0; j < width; j++){
30                 if(i == 0 || i == height - 1){
31                     System.out.print(c);
32                 }
33                 else{
34                     if(j == 0 || j == width - 1){
35                         System.out.print(c);
36                     }
37                     else{
38                         System.out.print(" ");
39                     }
40                 }
41             }
42             System.out.println();
43         }
44     }
45 }
46 }
```