**Introduction**

This document will cover the following topics:

- Build in functions and methods

  This document will give quick explanations on each topic and some worked solutions.

Enjoy and good luck!

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**Built in Functions and Methods**

There are various built in functions within java that we are required to learn. They will be bullet pointed and explained in this section:

- **Rounding functions**
  - String ceil = String.valueOf(Math.ceil(x)); - rounds up
  - String floor = String.valueOf(Math.floor(x)); - rounds down
  - String round = String.valueOf(Math.round(x)); - rounds naturally

- **Displaying a number to a certain number of decimal places**
  The syntax is as follows:
  - DecimalFormat number_format = new DecimalFormat("0.00");
  - System.out.println(number);
  - String formatted_string = number_format.format(number);
  - System.out.println(formatted_string);

**Comments:** The first line is making an instance of the DecimalFormat class and it’s called number_format the 0.00 specifies it to 2 decimal places. The third line then formats the variable ‘number’ to the format specified.

- **Displaying the number of digits before a decimal point:**

  ```java
  String x_String = String.valueOf(x);
  String x_beforePoint = x_String.substring(0, x_String.indexOf("")."));
  Return x_beforePoint.length();
  ```

- **Replacing characters with other characters in a string:**
String c_replaced = c.replace("ll", "ppp");

For writing data, reading data, directory examples and random number gen, look at LAB 6

https://www.tutorialspoint.com/javascript/javascript_builtin_functions.htm

the link above provides all the built in functions with explanations BUT REMEMBER!, all the content you need to get 100% is IN THE LABS!