

Common Methods and Definitions

- From the `Math` class:
 - `double random()`
Returns a `double` value greater than or equal to 0.0 and less than 1.0
 - `int round(float a)`
Returns the closest `int` value to `a`, with ties rounding up
 - `double pow(double a, double b)`
Returns the value of `a` raised to the power of `b`
 - `double exp(double a)`
Returns Euler's number e raised to the power of `a`
 - `double sqrt(double a)`
Returns the correctly rounded positive square root of `a`
- From the `Character` class:
 - `boolean isDigit(char ch)`
Returns true if `ch` is a digit, and false otherwise
 - `boolean isLetter(char ch)`
Returns true if `ch` is a letter, and false otherwise
 - `boolean isLetterOrDigit(char ch)`
Returns true if `ch` is a letter or a digit, and false otherwise
 - `boolean isLowerCase(char ch)`
Returns true if `ch` is a lowercase letter, and false otherwise
 - `boolean isUpperCase(char ch)`
Returns true if `ch` is an uppercase letter, and false otherwise
- From the `String` class:
 - `char charAt(int index)`
Returns the character at position `index` of the string
 - `int indexOf(int ch)`
Returns the index position within the string of the first occurrence of `ch`
 - `int lastIndexOf(int ch)`
Returns the index position within the string of the last occurrence of `ch`
 - `int length()`
Returns the number of characters in the string
 - `boolean startsWith(String prefix)`
Returns true if the string starts with `prefix`, and false otherwise
 - `boolean endsWith(String suffix)`
Returns true if the string ends with `suffix`, and false otherwise
 - `boolean contains(String str)`
Returns true if the string contains `str`, and false otherwise
 - `int compareTo(String str)`
Returns an integer result for comparing two strings lexicographically
 - `int compareToIgnoreCase(String str)`
Returns an integer result for comparing two strings lexicographically while ignoring case differences
 - `boolean equals(Object stringObject)`
Returns true if the string is the same as `stringObject`, and false otherwise
 - `boolean equalsIgnoreCase(String str)`
Returns true if the string has the same characters as `str` regardless of case, and false otherwise
 - `String substring(int beginIndex)`
Returns a new string that is a substring starting at position `beginIndex` of this string
 - `String substring(int beginIndex, endIndex)`
Returns a new string that is a substring starting at position `beginIndex` and up to `endIndex` of this string

- `String toLowerCase()`
Converts all the characters in this string to lower case
- `String toUpperCase()`
Converts all the characters in this string to upper case
- From the `Scanner` class:
 - `Scanner Scanner(InputStream source)`
Creates a new `Scanner` object from the specified `source`
 - `int nextInt()`
Scans the next token of the input as an `int`
 - `double nextDouble()`
Scans the next token of the input as a `double`
 - `String next()`
Returns the next complete token as a `String`
 - `String nextLine()`
Returns everything in the current line as a `String`
- From the `Random` class:
 - `Random Random()`
Creates a new `Random` object
 - `int nextInt()`
Returns a randomly generated integer
 - `int nextInt(int n)`
Returns a randomly generated integer between 0 and n-1 inclusive
 - `double nextDouble()`
Returns a randomly generated decimal number between 0 and 1 inclusive