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 is the same as `str`, 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()`
    Creates a new `Scanner` object
  - `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