

Method

A Java method is a collection of statements that are grouped together to perform an operation. When you call the `System.out.println()` method, for example, the system actually executes several statements in order to display a message on the console.

A method is consisted by

- access modifier
 - private
 - public
 - package
 - default
- non-access modifier, optional
 - static
 - final
 - etc...
- return type
- method name
- parameters

e.g.

```
public String getName(String firstname, int number) { // code block }  
private void doSomething(String a, long b) { // code block }
```

Recursion

Recursion is a method of solving a problem where the solution depends on solutions to smaller instances of the same problem. The approach can be applied to many types of problems, and recursion is one of the central ideas of computer science.

For guess number problem, once a number is guessed in a range, and we know the position of guessed number vs target number, we can ignore half of the numbers in the range, so the problem become the same again.

https://github.com/JasonWang19/cacc_java/blob/master/week5/GuessNumberLogicRecursive.java

Once recursion happens, the status of the method will be stored in a stack. We can manually save the status and implement the same by loop

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