Java – Method/function format

- Method/function must be part of a class
- Method/function must have a return type
  - Return type is “void” if no return type (method)
  - DO not use the name of the class or method for any variable
- Method/function has list and type of parameters
- Declare types of all local variables first
  - Exception: loop variables

More on indexOf

String class = “CPS 4 and CPS 6 and CPS 4G”;  
System.out.println(class.indexOf(“CPS”));  
System.out.println(class.indexOf(“CPS”, 6));  
System.out.println(class.indexOf(“CPS”, 14));

- IndexOf with a string and number argument finds the position of the first occurrence starting from that number position on
Problem

• Given a Phrase and a word, return true if the word occurs at least twice in the phrase.

Java Code - Note

• How many variables are there and what are there types?
• How many times is a variable declared (given its type)?
• Where is the return value?
• How many parameters and what are their types?

Adding a helper method to a class

public class NameOfClass

    public String someMethod(String[] str)  
    {  
        // code here
    }

    public int helperMethod(String str, int n)  
    {  
        // code here
    }

}
Adding a helper class

• Note the following
  – Names of methods and how many
  – Location of methods
  – Return types
  – Parameters
  – Where do return statements go?

Classwork today

• Create Java Project: CPS4Sec1Nov25 or Sec2
• Classwork today – 3 APTs
  – AccessLevel – Non-DNA problem
    • Given access levels and a minimum permission level, determine who has access to a resource.
  – Protein Counter – number of strings that have at least 3 copies of given amino acid
    • Consider a helper function to count number of amino acids in one string
  – DNAHeavyMax – most frequent occurring nucleotide
    • Consider a helper function

Extra Credit

• ProteinFinder – finding a protein
  • Use indexOf to find codons
  • Search for stop codon past the start codon, not from beginning of string