Java Exercises

COMP 110
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Exercise 1

• Write three overloaded functions that take one integer, two integers, or a string as arguments and prints them out and also what type they are.
Solution

public static void printStuff(String s)
{
    System.out.println("String: "+s);
}

...etc.

Exercise 2

• Write a function to take as input a string and return true if the string contains the sequence of letters “cat” and false if it doesn’t.
• We will rule out using indexOf and similar
First Steps

How can we tell if the string contains the word “cat”?

Say that the “c” is found at position i. Then the “a” must be found at position i+1 and the “t” at position i+2.

Pseudocode

if(string[i] == c AND string[i+1] == a AND string[i+2] == t)
{
    return true
}
Pseudocode: test at all locations

for(i = 0; i < length; i++)
    if(string[i] == c AND string[i+1] == a AND string[i+2] == t)
        { return true }

Get our indices correct

for(i = 0; i < length - 2; i++)
    if(string[i] == c AND string[i+1] == a AND string[i+2] == t)
        { return true }

Translate to Java

• We cannot access elements in a string with the [] operator. Instead we use the charAt function.
• Also, when manipulating individual characters we use single (not double) quotes.