

This project is to review important topics relating to programming. You will not turn this in, it will be your study guide for future exams. We will go over these topics in class, so fill them out as we go.

### **Programming Fundamentals**

The process of converting source code into an executable file that can be run is known as:

A code block is:

A syntax error is:

A logic error is:

A run-time error is:

### **Data Types**

Which data type can store whole numbers, including positive, negative, and zero, but nothing with a decimal or fraction portion?

Which data type can store whole numbers or numbers with decimals, including positive, negative, and zero?

Which data type only stores true or false?

Which data type can store anything within it, but the contents must be contained within double quotes “”?

## Operators

Label the following operators:

+	-	*	/	%
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
++	--	==	!=	>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
>=	&&		!	=
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
+=	-=	*=	/=	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	

## Variables

The scope of a variable refers to:

To declare a variable, you must at least specify these two things about the variable:

A local variable is:

A method parameter variable is:

An instance (aka member) variable is:

A class (aka static) variable is:

## Boolean Expressions

If A is true and B is true, then the result of **A && B** is:

If A is true and B is false, then the result of **A && B** is:

If A is true and B is false, then the result of **A || B** is:

If A is false and B is false, then the result of **A || B** is:

A symbolizes:  $n > 10$

B symbolizes:  $n < 100$

If n is 0, what is the result of **A && B**?

A symbolizes:  $n > 10$

B symbolizes:  $n < 100$

If n is 20, what is the result of **A && B**?

A symbolizes:  $n > 10$

B symbolizes:  $n < 100$

If n is 20, what is the result of **A || B**?

## If Statements

Within an if statement's parenthesis ( ), a question is being asked. The term for this "question" is:

For the following code, which statement will get PRINTed?

```
boolean quit = true;
if ( !quit )
    PRINT( "Hello" );
else
    PRINT( "GoodBye" );
```

For the following code, which statement will get PRINTed?

```
int x = 10;
if ( x < 10 || x > 20 )
    PRINT( "Result A" );
else
    PRINT( "Result B" );
```

## Methods

Label each portion of the method declaration:

public

int

sum

(int a, int b)

Which of these correspond to the method's **input**?

Which of these correspond to the method's **output**?

Write a line of code that will call this method, pass in the numbers 2 and 4 as input, and store the result in a new integer variable called **result**.

What is the return-type of a method that does not return any information?

## Classes and Objects

A class is a declaration of a new \_\_\_\_:

A class can have its own \_\_\_\_s and \_\_\_\_s:

When you declare a variable whose type is some class, it is known as a \_\_\_\_\_ of that class.

A subclass (aka a child class) is:

A superclass (aka a parent class) is:

To create a child class, it must: