**Homework 12**

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1) MultiplyTwoNumbers myObject = new MultiplyTwoNumbers(1, 2);

2) System.out.println(myObject.number1);

3) System.out.println(myObject.number2);

4) int firstNumber = myObject.number1;

5) myObject.number2 += 1

6) System.out.println(myObject.getProduct());

// wouldn’t compile since getProduct method requires two arguments to be

// passed in.

7) int myProduct = myObjects.getProduct();

// wouldn’t compile since getProduct method requires two arguments to be

// passed in.

8)

if (myObject.number1 < 0) {

myObject.number1 = 0 – myObject.number1;

}

if (myObject.number2 < 0) {

myObject.number2 = 0 – myObject.number2;

}

int myProduct = myObject.getProduct();

9) A variable declaration is where you create a variable.

10) A variable definition is where you assign a value to a variable.

11) The name must contain only letters, underscores and numbers. Name can not begin with a number, and the name cannot be a reserved word.

12) A reserved word, or “keyword” is a term that has a “reserved” meaning to the compiler, it cannot be used for naming objects.

13)

1. byte: This is an 8-bit signed integer. It has a range of -128 to 127. The byte data type can be useful for saving memory in large arrays, where the memory savings actually matters. The limits of byte can also be used to clarify your code, byte’s limits serve as a form of documentation.

2. short: 16-bit size, it’s range is -32,768 to 32,767. Short is also useful in saving memory in large arrays.

3. int: The int data type is a 32-bit signed integer by default.

4. long: This type has twice the range of the int data type, with a 64-bit size.

14)

1. float: This is a single-precision 32-bite IEEE 754 floating point. If memory considerations are important, use this instead of a double.

2. double: This is a double-precision 64-bit IEEE 754 floating point.

15)

1. char: This is a 16-bbit Unicode character. It has a range of ‘\u0000’ or 0, to ‘\uffff’ or 65,535.

2. String object: Unlike the previous seven Primitives, the String variable is actually an object provided by the java.lang.String class, containing a string of characters.

16) Boolean: booleans have only two possible values: true and false. It’s size isn’t precisely defined, but it represents 1 bit of information.

17) String myString = “I” + “ “ + “like” + “ “ + “programming.”;

18) System.out.println(“My age is “ + age);

19) A block of code is all the statements and commands between a { and a }. It usually belongs to a function.

20) A method is the work performed by an object; a function defined in a class, also, constructor.

21) Parameters are data receivers. You pass in values as parameters for use in the function/method.

22) The return value is data that is to be returned when the function/method finishes. In the case of ‘public static void main(String[] args)’, “void” indicates that the main function will not return any values. If it were int main, it would return an integer at completion. In C, the main function returns 0 at completion to indicate the program completed successfully.

int main() {

//do stuff

return 0;

}

23) Invocation is the act of calling something. When the following is used:

Sprite cat = new Sprite(new ImageIcon(“cat.gif”).getImage(),267,167);

We are calling or invoking the Sprite constructor and using it to create a new object named cat, that has all the properties and methods of the Sprite construct.

24) area = computeAreaOfCircle(5.0);

25) numberOfInchesInOneFoot = getNumberOfInchesInOneFoot();

26) printInt(mystery);

27) The Top-Down control structure is used when program statements are executed in a series, from the first line of code(top), one at a time, to the last line of code(bottom).

28) a

b

c

29) abc

30)

import java.io.\*;

import java.util.\*;

public class homework12 {

public static void main(String args[]) {

Scanner userInput = new Scanner(System.in);

System.out.print("Please enter your favorite color: ");

String favoriteColor = userInput.next();

System.out.println(favoriteColor);

}

}

31)

import java.io.\*;

import java.util.\*;

public class homework12 {

public static void main(String args[]) {

Scanner userInput = new Scanner(System.in);

String numberIAmThinkingOf = "5";

System.out.print("Guess a number between 1-9: ");

String numberPlayerTyped = userInput.next();

if (Integer.valueOf(numberPlayerTyped) < Integer.valueOf(numberIAmThinkingOf)) {

System.out.println("Sorry. Your guess is too low.");

} else if (numberPlayerTyped.matches(numberIAmThinkingOf)) {

System.out.println("Good guess. You won the game.");

} else {

System.out.println("Sorry. Your guess is too high.");

}

}

}

32)

public static void main(String args[]) {

String size = "large";

if (size.contains("small")||size.contains("medium")||size.contains("large")) {

System.out.println("size is " + size);

} else {

System.out.println("size is neither small, medium, nor large");

}

}

33) A loop is a control structure that repeats the same code more than once.

34)

do {

System.out.println(“Welcome”);

} while (1 == 1);

35)

while (1 == 1) {

System.out.println(“Welcome”);

}

36)

int I = 0;

do {

System.out.println(I);

I += 10;

} while (I < 110);

37)

int I = 0;

while (I < 110) {

System.out.println(I);

I += 10;

}

38)

for (int I = 0; I < 100; I++) {

System.out.println(“hello”);

}

39)

for (int i = 0; i < 5; i++) {

System.out.println(i);

}