

# CS2400 - practice problems I

The following questions are indicative of what you might see on an exam. They are not required exercises, but you might use them for practice and preparation. These practice problems were written by Jeffrey Jones. They may not exactly match what was covered in Dr. Chelberg's section, but are useful practice. If you've been reading the book, you should be able to answer all of these.

- 1 What program is used to enter your source code into your computer?
- 2 What program is used to translate your source code into machine language?
- 3 What is a variable (hint: a variable is 2 things)?
- 4 What are the two most common ways to initialize a variable?
- 5 What are the three steps needed to use a variable in a program?
- 6 What is **"hello world"**?
- 7 What is **47369**?
- 8 What is **'a'**?
- 9 One common programming process is to ask the user to enter a value from the keyboard, and then store this value in a variable. What do we call this process?
- 10 Do the following return the same value?  
  

```
x = 47/2*9+3;  
and  
x = (47/2)*(9+3);
```
- 11 What C++ programming constructs are used to select between alternative paths of execution? That is, what statements select different sections of code to execute?
- 12 What programming constructs provide iteration of code blocks? (a "block" of code is one or more statements surrounded by curly braces)
- 13 What is the difference between a definite and an indefinite loop?
- 14 Write an **"if"** statement that prints the word "yes" if **x** is greater than 10, and "no" otherwise.
- 15 Write a C++ statement(s) that given variable **x**, if it is between 1 and 10 inclusive, print it's value followed by it's value in english; print nothing if **x** is not between 1 and 10.
- 16 Write a for loop that will print all even values between 50 and 100 inclusive.
- 17 Write a for loop that will sum all the numbers between 1 and 100 inclusive which are divisible by 7.
- 18 Is the following legal C++ code? Will it compile? What will it do?

```
if ( x = y )  
{  
    y == x;  
}
```

19 The following is an example of what?

```
x = 0;
cout << "\nThe even numbers less than 100 are: ";
while ( x < 100 )
{
    if ( (x%2) == 0 ) cout << "\t" << x << "\t";
}
```

20 Does the following result in the same value for y and z?

```
cin >> x;
y = ++x;
z = x++;
```