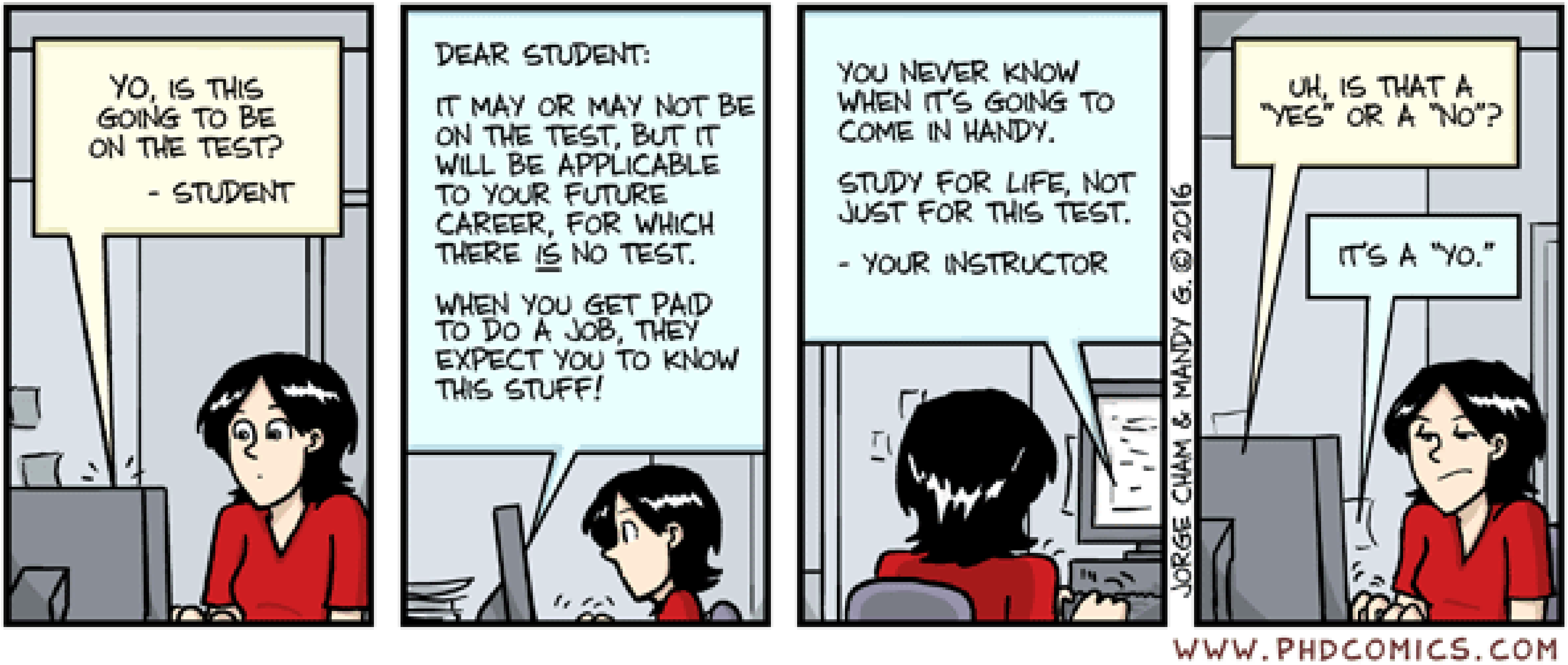
CS 161, Lecture 11: Exam 1 Review – 5 February 2018


YO, IS THIS GOING TO BE ON THE TEST?
- STUDENT
DEAR STUDENT:
IT MAY OR MAY NOT BE ON THE TEST, BUT IT WILL BE APPLICABLE TO YOUR FUTURE CAREER, FOR WHICH THERE IS NO TEST.
WHEN YOU GET PAID TO DO A JOB, THEY EXPECT YOU TO KNOW THIS STUFF!
YOU NEVER KNOW WHEN IT'S GOING TO COME IN HANDY.
STUDY FOR LIFE, NOT JUST FOR THIS TEST.
- YOUR INSTRUCTOR
JORGE CHAM & MANDY G. © 2016
UH, IS THAT A "YES" OR A "NO"?
IT'S A "YO."
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Study Sessions

- Monday, 6-7:30 pm, WNGR 116 (70 people out of 100 possible)
- Tuesday, 6-7:30 pm, WNGR 116 (80 people out of 100 possible)

Week 1: Variables and Basics

- A variable that can hold a whole number is called a(n) _____________.
- A digit that can hold a zero or a one is known as a ____________.
- Errors in a program can be classified into three types, list them

- A mistake that is a direct violation of the syntax rules will generate a compiler _________.
- int myValue; is called a __________________________.

Week 1 Continued

- A memory address is
  a) Where a variable is stored
  b) Where the computer is located
  c) A step in the program.
  d) Where the CPU is stored.
- What does the following line of code display to the screen?
  a) cout << “This is the computer\n programming book\n”;
  b) This is the computern programming book
  c) This is the computer
  d) Nothing
  e) This is the computer
  programming book

Week 1 Continued

- cout << “How many items would you want?\n”;
    a) is an output statement
    b) is an input statement
    c) is a variable declaration
    d) is a program
- #include <iostream>
    a) is a variable declaration
    b) an executable statement
    c) an include directive
    d) illegal code

Week 1 Continued

- What is wrong with the following statement?

  cout << “Hello to everyone\n”

  a) cout should be count
  b) missing a semicolon
  c) missing a “
  d) missing a (

- True or False: The compiler will catch all your programming mistakes.

Week 1 Continued

- What is the output of the following code?

```
float value;
value = 33.5;
cout << "value" << endl;
```

a) 33.5

b) 33

c) value

d) garbage

Week 1 Continued

- What is the value of x after the following statements?

```
float x;
x = 15/4;
```

a) 3.75
b) 4.0
c) 3.0
d) 60

Week 2: Conditionals

- if-else statements that are inside other if-else statements are said to be ________________.
- When must we use braces to define the body of a contitional expression? _______________
- In a compound logical and (&&) expression, the evaluation of the expression stops once one of the terms of the expression is false. This is known as _______________ evaluation.
- The code following the _________ case is executed if none of the other cases are matched in a switch statement.

Week 2 Continued

- Given the following code fragment and the input value of 4.0, what output is generated?

```
float tax;
float total;
cout << "enter the cost of the item\n";
cin >> total;
if ( total >= 3.0) {
        tax = 0.10;
        cout << total + (total * tax) << endl;
} else {
        cout << total << endl;
}
```

a) 3
b) 3.3
c) 4.0
d) 4.4

Week 2 Continued

- If x has the value of 3, y has the value of -2, and w is 10, is the following condition true or false?

  ```
  if( x < 2 && w < y)
  ```

  a) true

  b) false

- What is the correct way to write the condition y < x < z?

  a) (y < x < z)

  b) ((y < x) && z)

  c) ((y > x) | | (y < z))

  d) ((y < x) && (x < z))

Week 2 Continued

- Given the following code fragment, and an input value of 3, what is the output that is generated?

```
int x;
cout <<"Enter a value\n";
cin >> x;
if(x=0) {
        cout << "x is zero\n";
} else {
        cout << "x is not zero\n";
}
```

a) x is zero
b) x is not zero
c) unable to determine
d) x is 3

Week 2 Continued

- Given the following code fragment, what is the output?

```
int x=5;
if( x > 5)
    cout << "x is bigger than 5. ";
    cout <<"That is all. ";
cout << "Goodbye\n";
```

a) x is bigger than 5. That is all

b) x is bigger than 5

c) That is all. Goodbye

d) Goodbye

Week 2 Continued

- Which of the following are valid case statements in a switch?
  a) case 1:
  b) case x<4:
  c) case 'ab':
  d) case 1.5:

Week 3: Loops

- True or False: The body of a do-while loop always executes at least once.
- True or False: Loops are used when we need our program to make a choice between two or more things.
- Each repetition of a loop body is called _____________.
- A loop that iterates one too many or one too few times is said to be ________

Week 3 Continued

- Given the following code fragment, what is the final value of y?

```
int x, y;
x = -1;
y = 0;
while(x <= 3) {
        y += 2;
        x += 1;
}
```

a) 2
b) 10
c) 6
d) 8

Week 3 Continued

- What is the final value of x after the following fragment of code executes?

```
int x=0;
do {
        x++;
}while(x > 0);
```

a) 8
b) 9
c) 10
d) 11
e) infinite loop.

Week 3 Continued

- Given the following code, what is the final value of i?

```
int i;
for(i=0; i<=4;i++) {
        cout << i << endl;
}
```

a) 3
b) 4
c) 5
d) 0

Week 3 Continued

- Given the following code, what is the final value of i?

```
int i,j;
for(i=0;i<4;i++) {
        for(j=0;j<3;j++) {
                if(i==2)
                        break;
        }
}
```

a) 3
b) 4
c) 5
d) 0

Week 3 Continued

- Which of the following is not a good reason for choosing a certain loop control?
  a) What the loop does
  b) The minimum number of iterations of the loop
  c) The condition for ending the loop
  d) If the loop is in a function

Week 3 Continued

- What is wrong with the following for loop?

```
for(int i=0;i<10;i--) {
        cout << "Hello\n";
}
```

a) can not use a for-loop for this

b) i is not initialized

c) infinite loop

d) off-by-one error

Week 4: Functions

- Variables defined inside a set of braces are said to be _______ to that block of code.
- True or False: A function may return more than one item.
- True or False: Function naming rules follow variable naming rules.
- True or False: The types of parameters are optional in the function declaration.
- True or False: It is possible to have a function that has no parameters.
- True or False: The parameters listed in the function declaration are considered global variables.
- True or False: pow(2,3) is the same as pow(3,2).

Week 4 Continued

- In the following function declaration, the variable size is known as a ___________________.

  int myFunction (int size);
- The ________________ describes how the function will work.
- The __________ of a variable is where that variable can be used.

Week 4 Continued

- What is the value returned by the following function?

```
int function() {
        int value = 35;
        return value + 5;
        value += 10;
}
```

a) 35
b) 40
c) 50
d) 10

Week 4 Continued

- When overloading a function, what must be true?
  a) The names should be different with the same number and/or types of parameters.
  b) The names should be the same with different number and/or types of parameters.
  c) The names should be different with different number and/or types of parameters.
  d) The names should be the same with the same number and/or types of parameters.

Week 4 Continued

- Which of the following are valid function calls to the fabs function?
  a) fabs(3.5);
  b) cout << fabs(3.5);
  c) cin >> fabs(3.5);
  d) fabs(cin >> x);
  e) a,b and c
  f) a and b

Week 4 Continued

- Multiple arguments to a function are separated by
  a) comments
  b) semicolons
  c) colons
  d) commas
  e) periods

Week 4 Continued

- What is the value of i after the following function call?

```
int doSomething(int value) {
        value = 35;
        return value;
        value = 13
}
//fragment of main program
int i=0;
cout << doSomething(i);
```

a) 13
b) 35
c) 48
d) 0