16.216: ECE Application Programming

Fall 2014

Lecture 8: Key Questions
September 19, 2014

1. **Example:** Write a short code sequence that does each of the following:

a. Given `int x`, check its value. If `x` is more than 5 and less than or equal to 10, print `x`

b. Prompt for and read temperature as input (type `double`). If temp is 90 or higher, print "It's too hot!" If temp is 32 or lower, print "It's freezing!" In all other cases, print "It's okay"

c. Read 3 `int` values and print error if input problem
   - If fewer than 3 values read, print error message with number of values
   - Example: `Error: only 2 inputs read correctly`

2. Describe the basic format of a `switch` statement, including its general usage, the use of `case` and `default`, and the use of the `break` statement.

3. Describe a situation in which you might not want to use a `break` statement at the end of a given `case`.

4. **Example:** Given the code below:

```
int main() {
	char grd;

	printf("Enter Letter Grade: ");
	scanf("%c",&grd);
	printf("You are ");

	switch (grd)	{
	case 'A' :
		printf("excellent\n");
		break;
	case 'B' :
		printf("good\n");
		break;
	case 'C' :
		printf("average\n");
		break;
	case 'D' :
		printf("poor\n");
		break;
	case 'F' :
		printf("failing\n");
		break;
	default :
		printf("incapable of reading directions\n");
		break;
	}
	return 0;
}
```

What does the program print if the user inputs:

a. A

b. B+

c. c

d. X

5. How could we easily change each case to recognize both upper and lowercase inputs?