

EECE.2160: ECE Application Programming

Fall 2017

Lecture 9: Key Questions

September 25, 2017

1. 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.
2. Describe a situation in which you might not want to use a `break` statement at the end of a given case.

3. **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
4. How could we easily change each case to recognize both upper and lowercase inputs?

5. Explain the usage and basic structure of a `while` loop.

6. **Example:** What does each of the following short programs print?

a. `x = 7;`
 `while (x < 10)`
 `{`
 `printf("%d ", x);`
 `x = x + 1;`
 `}`

b. `x = 7;`
 `while (x < 3)`
 `{`
 `printf("%d ", x);`
 `x = x + 1;`
 `}`

```
int main() {
    int i;                // Number to square
    int iSquared;         // Square of the number
    printf(" i          i^2\n"); // Column headings

    // Compute and display the squares of numbers 0 to 10
    // Use a field width of 2 to print i and 10 to print i^2
    //   with no extra space between the fields

    return 0;
}
```