

16.216: ECE Application Programming

Fall 2011

Lecture 12: Key Questions; PE2

September 30, 2011

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

```
void 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;
    }
}
```

What does the program print if the user inputs:

- | | |
|-------|------|
| a. A | c. c |
| b. B+ | d. X |

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

Today's exercise involves the following code:

```
/* 16.216: ECE Application Programming, University of Massachusetts Lowell
 * Instructor: Dr. Michael Geiger
 * 9/30/11: Programming Exercise 2
 * Program is intended to give students practice with if and switch statements
 *
 * Given: a (fictional) schedule of classes for each day of the week, as
 * well as a list of holidays during the semester, prompt the user to enter
 * a day and date, and then print the appropriate schedule for that day. */

// Daily class schedules
#define MonSchedule "Monday Schedule: 16.201, 92.231\n"
#define WedFriSchedule "Wednesday/Friday Schedule: 16.201, 92.231, 16.216\n"
#define TueSchedule "Tuesday Schedule: 16.207, 99.999\n"
#define ThuSchedule "Thursday Schedule: 99.999\n"

// Day of week
#define Monday 'M'
#define Tuesday 'T'
#define Wednesday 'W'
#define Thursday 'R'
#define Friday 'F'

// Month number
#define Sep 9
#define Oct 10
#define Nov 11
#define Dec 12

// Holidays
#define Labor Day 5
#define LaborSchedule "Labor Day -- no classes\n"
#define Columbus Day 10
#define ColumbusSchedule "Columbus Day -- no classes\n"
#define Veterans Day 11
#define VeteransSchedule "Veterans Day -- no classes\n"
#define ThanksgivingDay 24
#define ThanksgivingSchedule "Thanksgiving Recess -- no classes\n"

/* EACH COMMENT IN THE MAIN PROGRAM BELOW DESCRIBES A CODE SNIPPET THAT
STUDENTS MUST WRITE IN ORDER TO COMPLETE THE PROGRAM BELOW. */
int main() {
    /* VARIABLE DECLARATIONS */

    /* PROMPT USER TO ENTER THE FOLLOWING:
    --A SINGLE CHARACTER REPRESENTING THE DAY OF THE WEEK
    --AN INTEGER REPRESENTING THE MONTH
    --AN INTEGER REPRESENTING THE DAY OF THE MONTH */

    /* PRINT THE APPROPRIATE SCHEDULE FOR THE DAY ENTERED,
    INCLUDING EACH HOLIDAY'S SCHEDULE WHEN APPROPRIATE */

    return 0;
}
```

Use this space to answer the following questions:

- ➔ What variables are necessary?
- ➔ How should you determine what to print:
 - For most days?
 - For the holidays?

Use the following space to hand-write your code (if necessary); fill in the appropriate code below each comment:

```
/* VARIABLE DECLARATIONS */
```

```
/* PROMPT USER TO ENTER THE FOLLOWING:  
  --A SINGLE CHARACTER REPRESENTING THE DAY OF THE WEEK  
  --AN INTEGER REPRESENTING THE MONTH  
  --AN INTEGER REPRESENTING THE DAY OF THE MONTH */
```

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Use the following space to hand-write your code (if necessary); fill in the appropriate code below each comment:

```
/* PRINT THE APPROPRIATE SCHEDULE FOR THE DAY ENTERED,  
   INCLUDING EACH HOLIDAY'S SCHEDULE WHEN APPROPRIATE */
```