

Assignment 5

21 February 2011

due Thursday 17 February at 01:00 AM

Description

Write a program that will:

1. Ask the user for a month (input as an integer 1–12).
2. Ask the user for a day of the month.
3. Give an error message if month is out of range.
4. Give an error message if day is out of range for that month (such as April 31st).
5. IF there are no errors, then print out the date using the full name of the month, such as “March 25th”.

Here are a few sample runs of the program, but it should work for other numbers as well.

```
Enter month (1-12): 3
Enter day of month: 25
March 25th
```

```
Enter month (1-12): 0
ERROR: invalid month
```

```
Enter month (1-12): 4
Enter day of month: 31
ERROR: invalid day
```

```
Enter month (1-12): 12
Enter day of month: 0
ERROR: invalid day
```

```
Enter month (1-12): 11
Enter day of month: 23
November 23rd
```

Tips

Some tips, for getting full credit:

- Make sure you use appropriate indentation and alignment of braces.
- Include a comment at the top with your name and the date.

Some code fragments from class, that may be useful:

```
switch(month)
{
    case 1:
        printf("January");
        break;
    case 2:
        printf("February");
        break;
}
```

```
switch(month)
{
    case 2:
        num_days = 28;
        break;
    case 4:
    case 6:
    case 9:
    case 11:
        num_days = 30;
        break;
    default:
        num_days = 31;
}
```

Solution

Here is a complete solution that we explored in class on 17 February.

```
#include <stdio.h>
int main()
{
    int month, day, num_days;
    printf("Enter month (1-12): ");
    scanf("%d", &month);

    if(month > 12 || month < 1)
    {
        printf("ERROR: Invalid month\n");
        return 0;
    }

    switch(month)
    {
```

```
    case 2:
        num_days = 28;
        break;
    case 4: case 11: case 6: case 9:
        num_days = 30;
        break;
    default:
        num_days = 31;
}

printf("Enter day (1-%d): ", num_days);
scanf("%d", &day);

if(day < 1 || day > num_days)
{
    printf("ERROR: Invalid day\n");
    return 0;
}

switch(month)
{
    case 1: printf("January "); break;
    case 2: printf("February "); break;
    case 3: printf("March "); break;
    case 4: printf("April "); break;
    case 5: printf("May "); break;
    case 6: printf("June "); break;
    case 7: printf("July "); break;
    case 8: printf("August "); break;
    case 9: printf("September "); break;
    case 10: printf("October "); break;
    case 11: printf("November "); break;
    case 12: printf("December "); break;
}

printf("%d", day);
switch(day)
{
    case 1: case 21: case 31: printf("st\n"); break;
    case 2: case 22: printf("nd\n"); break;
    case 3: case 23: printf("rd\n"); break;
    default: printf("th\n");
}

return 0;
}
```