

COSC 102 - Lab D

Fall 2016 Lab D and Debug D

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Debug D

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Lab D

Problem

You will be designing a program that allows a customer to contact customer support based on an error code and the number of days they have been experiencing a problem with their universal remote control device. Your program will then allow the user to add another error code should they desire to continue or to exit your program completely.

Inputs

You must first get the error code and number of days that the user has been experiencing the problems using the following prompts:

"Enter code: "

"Enter problem duration: "

***Notice the space after the colon (:)

***All inputs will be integers

Process

You must declare two strings: one to store the problem description and one to store the urgency.

The problem description is determined by the code:

- If the code is **1, 2, or 3**: The problem is an **"IR malfunction"**
- If the code is **4**: The problem is a **"receiver malfunction"**
- If the code is **5, 6, 7, or 8**: The problem is a **"low battery"**
- Otherwise, the problem is an **"unknown malfunction"**

The urgency is determined by the number of days the problem persists:

- If the duration is 7 or fewer days:
 - If the error code is 1 or 3: urgency is **"very low"**
 - Otherwise: urgency is **"low"**
- If the duration is more than 7 but fewer than or equal to 14 days:
 - If the error code is 6 or 7: urgency is **"high"**

- Otherwise: urgency is **"medium"**
- If the duration is more than 14 days:
 - The urgency is **"high"**

Outputs

You will output a result back to customer service documenting the problem and the urgency of the situation.

Your output will look like:

"New UUU urgency request for PPP."

***Replace **UUU** with the urgency (very low, low, medium, or high).

***Replace **PPP** with the problem (IR malfunction, receiver malfunction, low battery, or unknown malfunction).

You will then ask the user if they want to document another problem:

"Enter another code? "

If the user types anything but 'n' or 'N', repeat the program. Otherwise, end the program.

Additional Requirements

1. You must use a **switch statement** to convert the integer problem code into a problem string. Do not duplicate any code (i.e., use breaks only when needed)
2. You must use a **do/while loop** with a compound condition (using either && or ||) to check whether or not you should repeat the program.
3. You must use a **compound condition if statement or nested if statements** to convert the urgency into the urgency string.

C++ Topics Covered

Switch statements
If statements with compound conditions
Nested if statements
Do/while loops with compound condition
String-type variables

Textbook Chapters Covered

Chapter 3.1 (Boolean expressions)
Chapter 3.2 (Multiway branches/switch statements)
Chapter 3.4

Relevant Reading

Do/While loop
If conditionals
More Ifs

