

CPP Problem Design

Subject: Design Month Class

Contributor: 陳俊儒, 林承達, 廖宣瑋

Main testing concept:

Basics

- ☒ C++ BASICS
- ☐ FLOW OF CONTROL
- ☒ FUNCTION BASICS
- ☐ PARAMETERS AND OVERLOADING
- ☐ ARRAYS
- ☒ STRUCTURES AND CLASSES
- ☒ CONSTRUCTORS AND OTHER TOOLS
- ☐ OPERATOR OVERLOADING, FRIENDS, AND REFERENCES
- ☐ STRINGS
- ☐ POINTERS AND DYNAMIC ARRAYS

Functions

- ☐ SEPARATE COMPILATION AND NAMESPACES
- ☐ STREAMS AND FILE I/O
- ☐ RECURSION
- ☐ INHERITANCE
- ☐ POLYMORPHISM AND VIRTUAL FUNCTIONS
- ☐ TEMPLATES
- ☐ LINKED DATA STRUCTURES
- ☐ EXCEPTION HANDLING
- ☐ STANDARD TEMPLATE LIBRARY
- ☐ PATTERNS AND UML

Description:

Define a class called Month that is an abstract data type for a month. Your class will have one member variable of type int to represent a month (1 for January, 2 for February, and so forth).

Include all the following member functions:

1. a constructor to set the month using the first three letters in the name of the month as three arguments, a constructor to set the month using an integer as an argument (1 for January, 2 for February, and so forth), a default constructor.
2. an input function name inputInt that reads the month as an integer.
3. an input function name inputFirstThreeLetters that reads the month as the first three letters in the name of the month.
4. an output function name outputInt that output the month as an integer.
5. an output function name outputFirstThreeLetters that outputs the month as the first three letters in the name of the month.
6. a member function name nextMonth that returns the next month as a value of type Month. Embed your class definition in a test program.

Note that if month out of range, set the month to January.

Input:

Replace the main from main.cpp and enter the test data in input.txt.

Output:

See the Sample Output.

Sample Input / Output :

Sample Input	Sample Output
main1.in	Month1 = 1 Jan
sample.in	Month2 = 2 Feb
	Month3 = 3 Mar
	Month4 = 4 Apr
	Month5 = 5 May
	Month6 = 6 Jun

☒ Easy, Only basic programming syntax and structure are required.

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| <input type="checkbox"/> Medium, Multiple programming grammars and structures are required. |
| <input type="checkbox"/> Hard, Need to use multiple program structures or more complex data types. |
| Expected solving time: |
| 30minutes |
| Other notes: |