

Object Oriented Programming

Assignment # 2

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Imagine you are on a trip around Europe and have collected currencies from the different countries that you have travelled.

You are to write a simple money counting program. Your program will be able to deal in the following three currencies

- a) Pakistani Rupee
 - b) Turkish Lira
 - c) Pound Sterling
- You must make a class called Currency. Create its data members and any member functions you require. Your class should be written such that you are able to execute statements like these in your main function:

$C_Sum = 100 C1 + 11 (C2) + 56 (C3)$

where C1, C2 and C3 represent **different currency bank notes**.

C1%3 - displays C1 amount in all three currencies.

C1 ["pkr"]– displays the C1 amount in PKR along with the date and current exchange rate of the input currency with pkr.

C1 ["gbp"]– displays the C1 amount in Pound Sterling along with the date and current exchange rate between the input currency and pounds.

A few guidelines:

- This question involves **operator overloading** and needs to be accomplished using classes.
- Your main function must be as small as possible. This implies you must use class constructors and class functions to accomplish everything in this assignment.

- Make a separate class called `Conversion_Rate`. Use constructors to take inputs for the exchange rate for the day. Display them every time you display the total sum.
- Every time you perform a money conversion, your program must contact the `Conversion_Rate` class to provide the exchange rates for the given day. You are to apply the concept of **friend functions/ friend classes** (as you need) to allow this class to share its information.

You may include any other functionality to improve your code if you want to. Any improvements or extra features will get you bonus marks.

As always, **DO NOT COPY OR DISTRIBUTE** your assignment to others.