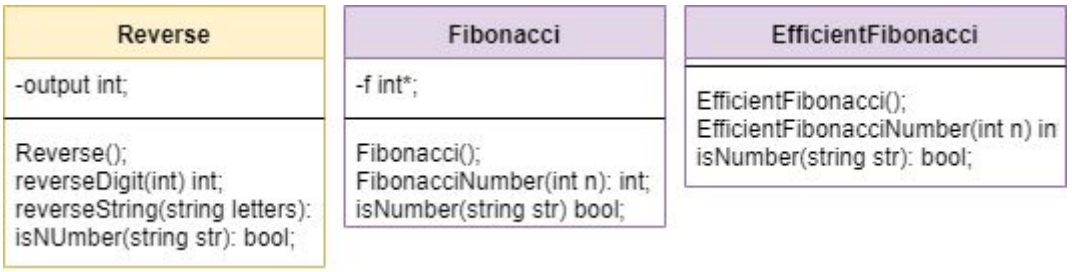
Prac4 Design

UML



Description

Reverse Class:

reverseDigit(int): int input a integer, output the integer in the reverse format;
reverseString(string): string input a string, output the string in the reverse format;
isNumber(string str): bool the function which check if the input is string or integer;

Fibonacci Class:

F int*: create dinamic array to store the number of Fibonacci series;
Fibonacci(); default constructor;\
FibonacciNumber(int n): int take input n as index, and return the nth number of Fibonacci series using recursion.
isNumber(string str): bool the function which check if the input is string or integer;

EfficientFibonacci Class:

EfficientFibonacci(): default constructor;
EfficienctFibonacciNumber(int n)int; take input n as index, and return the nth number of Fibonacci series using a more efficient way：storing computed numbers without computing them twice.
isNumber(string str): bool the function which check if the input is string or integer;

Main Function:

Take 4 string-type input, convert them to integer if needed, and return “ERROR” if they are not integer. Finally output the result in the console.

Test:

Input: 123 123 1 1
Expected output:321 321 0 0

Input: efwef wfw 2 2
Expected output:ERROR wfw 1 1

Input: 12345 good 10 10
Expected output:54321 doog 55 55