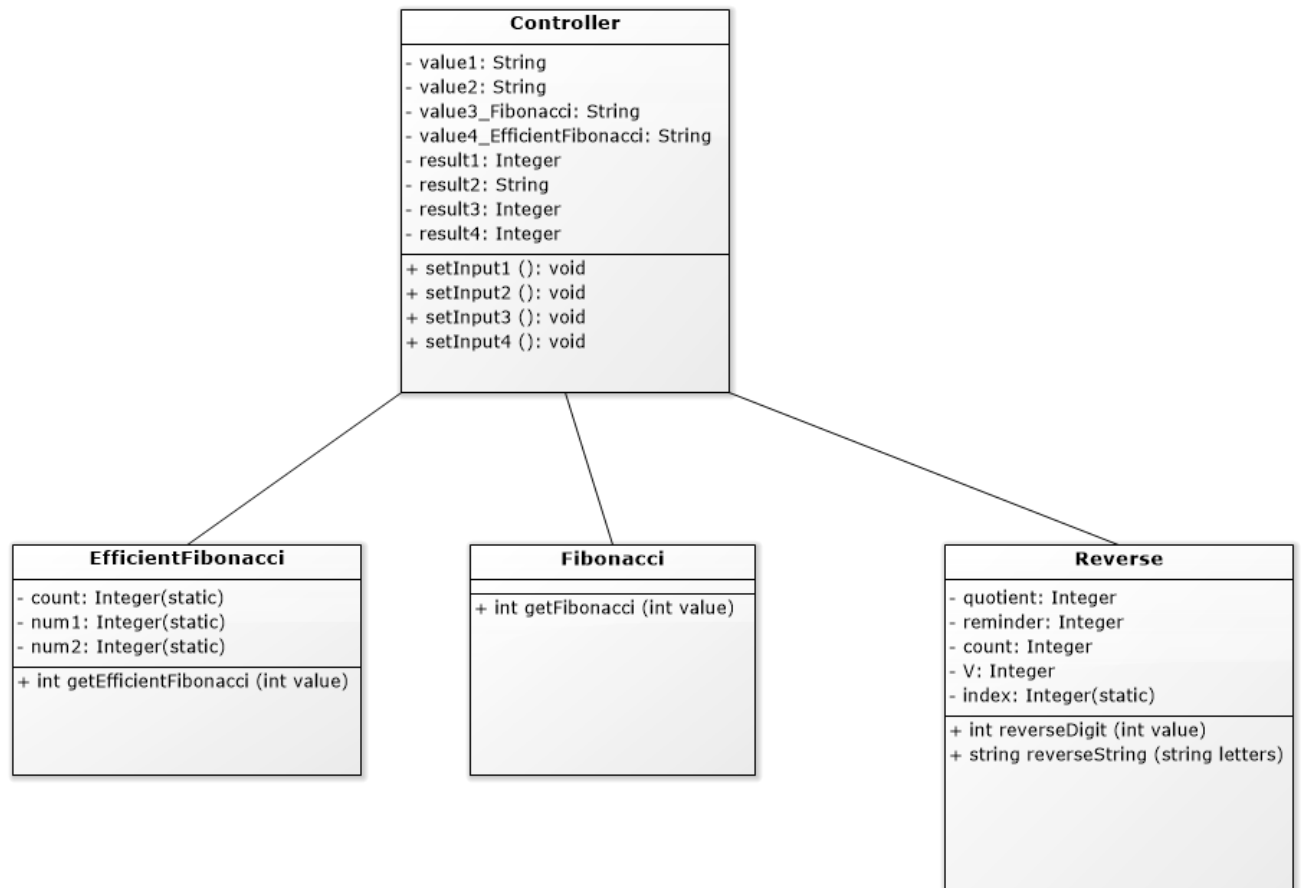


# Assignment4

## Class diagram



## Explanation

### Controller

Attribute:

- Value1 //this is for the first input
- Value2//this is for the second input
- Value3//this is for the third input
- Value4//this is for the forth input
- Result1//this is for the first outcome
- Result2//this is for the second outcome
- Result3//this is for the third outcome
- Result4//this is for the forth outcome

Behaviour

- SetInput1() // get the outcome from the reverseDigit()
- SetInput2() // get the outcome from the reverseString()
- setInput3() // get the outcome from the getFibonacci()
- setInput4() // get the outcome from the getEfficientFibonacci ();

## Reverse

Attribute:

- int quotient;
- int remainder;
- int count;
- int V;
- static int index;

Behavior:

- int reverseDigit(int value); //get the value from value1 and return the reverse digit
- std::string reverseString(std::string letters); // get the value from value2 and return the reverse letters

## Fibonacci:

Behaviour:

- int getFibonacci(int value); //get index and return the value of the index

## EfficientFibonacci

Attribute:

- static int count;
- static int num1;
- static int num2;

Behavior:

- int getEfficientFibonacci(int value); //put the value into the function and return the Fibonacci number without repeating calculating the existing value

## Testing

| Input         | Description  | Output              |
|---------------|--|---------------------|
| 123 asd 9 9   | Input a normal data and will return the correct answer | 321 dsa 34 34       |
| A ds 9 9      | Input a A in to the first input<br>Error will occur    | ERROR sd 34 34      |
| 123 asd as 9  | Input non integer<br>ERROR will occur                  | 321 dsa ERROR 34    |
| -12 asdsa 9 9 | Input a negative number<br>Print put ERROR             | ERROR asdsa 34 34   |
| 123 asd -1 -1 | Input to negative number<br>Get two ERROR              | 321 dsa ERROR ERROR |

