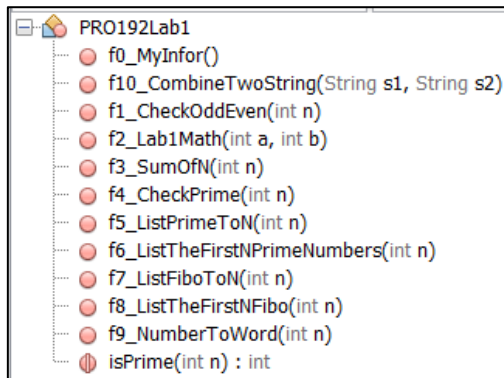


PRO192 LAB 1

You have *main()* method already in *Main.class* which is provided in PROLAB1 project. Create a class named **PRO192Lab1.java** and appropriate methods to perform the requirements as follows:



```
public class PRO192Lab1 {

    public void f0_MyInfor() { ...3 lines }
    public void f1_CheckOddEven(int n) { ...11 lines }
    public void f2_Lab1Math(int a, int b) { ...6 lines }
    public void f3_SumOfN(int n) { ...25 lines }
    public static int isPrime(int n) { ...14 lines }
    public void f4_CheckPrime(int n) { ...7 lines }
    public void f5_ListPrimeToN(int n) { ...12 lines }
    public void f6_ListTheFirstNPrimeNumbers(int n) { ...15 lines }
    public void f7_ListFiboToN(int n) { ...16 lines }
    public void f8_ListTheFirstNFibo(int n) { ...17 lines }
    public void f9_NumberToWord(int n) { ...36 lines }
    public void f10_CombineTwoString(String s1, String s2) { ... }
}
```

1. Create a method *f1_CheckOddEven(int n)*: Displaying the number as even or odd. Ex: 3 -> Odd; 10 -> Even; 25 -> Odd
2. Create a method *f2_Lab1Math(int a, int b)*: Display the **sum, difference, product and quotient** (Format the floating-point number to two decimal digits) of the two.

*Ex: Input: 10 3; Output: 10 + 3 = 13; 10 - 3 = 7; 10 * 3 = 30; 10/3 = 3.33.*

3. Create a method *f3_SumOfN(int n)*:

- S1= sum of odd natural numbers not greater than or equal to n,
- S2= sum of even natural numbers not greater than or equal to n.
- S3= sum of natural numbers not greater than n and divisible by 3.
- S4= sum of natural numbers not greater than n and not divisible by 3.
- S5 = sums of all number not greater than or equal to n.

```
====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 1
Input integer number n: 3
odd
BUILD SUCCESSFUL (total time: 42 seconds)

====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 2
Input integer number a: 10
Input integer number b: 3
10 + 3 = 13
10 - 3 = 7
10 * 3 = 30
10 / 3 = 3.33
BUILD SUCCESSFUL (total time: 7 seconds)

====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 3
Input integer number n: 10
Sum of odd natural numbers not greater than or equal to 10
S1 = 25
Sum of even natural numbers not greater than or equal to 10
S2 = 30
Sum of natural numbers not greater than 10, divisible by 3
S3 = 18
Sum of natural numbers not greater than 10, not divisible by 3
S4 = 37
Sum of natural numbers not greater than 10
S5 = 55
BUILD SUCCESSFUL (total time: 32 seconds)
```

4. Create two methods: *isPrime(int n):int* – Return 1 if n is a prime number, return 0 if n is not a prime number; and *f4_CheckPrime(int n)* - Display n is (is not) a prime number:

Ex: Input: 13, Output: 13 is a prime number; Input: 10, Output: 10 is not a prime number.

```

=====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 4
Input integer number n: 13
13 is a prime number.
BUILD SUCCESSFUL (total time: 12 seconds)

```

```

=====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 4
Input integer number n: 10
10 is not a prime number.
BUILD SUCCESSFUL (total time: 3 seconds)

```

5. Create a method `f5_ListPrimeToN(int n)`: Display the list of prime numbers from 2 to n.

Ex: Input: 20; Output: 2 3 5 7 11 13 17 19.

6. Create a method `f6_ListTheFirstNPrimeNumbers(int n)`: Display the first n prime numbers.

Ex: Input: 10; Output: 2 3 5 7 11 13 17 19 23 29

```

=====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 5
Input integer number a: 20
List prime number from 2 to 20:
2 3 5 7 11 13 17 19 BUILD SUCCESSFUL (tot

```

```

=====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 6
Input integer number a: 10
The first 10 prime numbers:
2 3 5 7 11 13 17 19 23 29 BUILD SUCCESSFUL

```

7. Create a method `f7_ListFiboToN(int n)`: Display the Fibonacci numbers from 1 to N.

Ex: Input: 20; output: 1 1 2 3 5 8 13

8. Create a method `f8_ListTheFirstNFibo(int n)`: Display n first Fibonacci numbers from 1.

Ex: Input: 20; output: 1 1 2 3 5 8 13 21 34 55

```

=====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 7
Input integer number a: 20
The Fibonacci numbers from 1 to 20 are:
1 1 2 3 5 8 13 BUILD SUCCESSFUL (total time:

```

```

=====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 8
Input integer number a: 10
1 1 2 3 5 8 13 21 34 55 BUILD SUCCESSFUL

```

9. Create a method `f9_NumberToWord(int n)`: input number from 0 to 9 then display in word of that number.

Ex: *Input: 6, Output: Six; Input: 2, Output: Two;*

Input: 12, Output: The number is out of the range of 0 to 9.

```

=====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 9
Input integer number a: 6
Six
BUILD SUCCESSFUL (total time: 4 seconds)

```

```

=====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 9
Input integer number a: 12
The number is out of the range of 0 to 9.
BUILD SUCCESSFUL (total time: 5 seconds)

```

10. Create a method `f10_CombineTwoString(String s1, String s2)`: Display the compination of the two string, within that, the second one is in capital letters.

Ex: *Input: string 1: "Hi", string 2: "mr Huy"; Output: "Hi MR HUY"..*

```

=====MUNU=====
1. F1_Check Odd Even
2. F2_Math(a,b)
3. F3_Sum of N
4. F4_Check prime number
5. F5_Display prime numbers to N
6. F6_List the first N prime numbers.
7. F7_Fibo
8. F8_List the first N Fibonacci numbers
9. F9_Print number to text
10. Combine two string
11. Quit
Select Test case (1-11): 10
Input string 1: Hi
Input string 2: mr huy
Hi MR HUY
BUILD SUCCESSFUL (total time: 18 seconds)

```

11. Create a method `f0_MyInfor()`: Display your information including your student ID and your name:

```
run:  
My student ID: He180001;  
My name is: Vu Van Huy
```

Note:

To test your solution, you perform **right click** to the project then select “**Run**”



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