

Q . Simulate a stmple calculator and show the add, subtract. multiply and divide options.

```
import java.util.Scanner;
public class Calculator{
public static void main(String a[])
{
int num1;
int num2;
Scanner sin=new Scanner(System.in);
System.out.println("enter first number:");
num1=sin.nextInt();
System.out.println("enter second number:");
num2=sin.nextInt();
int add=num1+num2;
System.out.println("addition of the two number:"+add);
int sub=num1-num2;
System.out.println("subraction of the two number:"+sub);
int mult=num1*num2;
System.out.println("multipication of the two number:"+mult);
int div=num1%num2;
System.out.println("division of the two number:"+div);
}
}
```



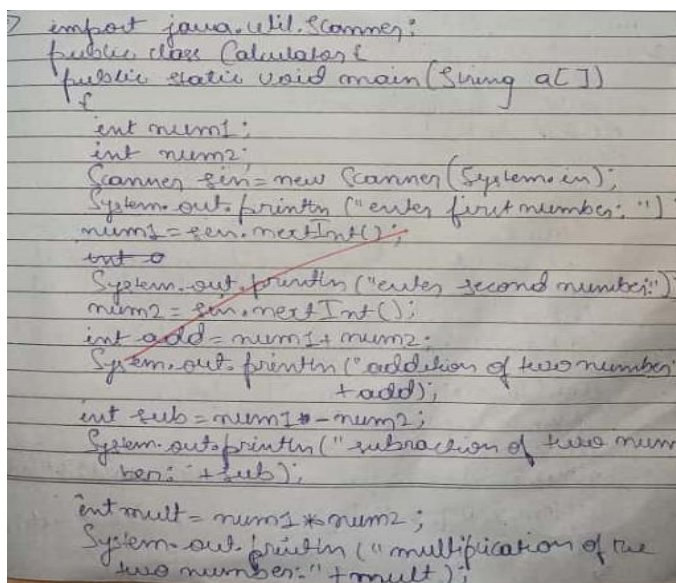
```
Microsoft Windows [Version 10.0.26100.6584]
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C:\Users\mahme>cd C:\Users\mahme\Desktop\java lab

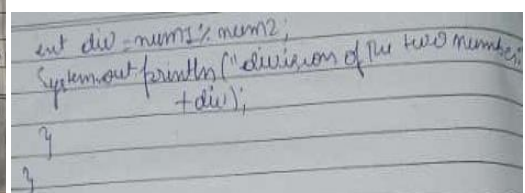
C:\Users\mahme\Desktop\java Lab>javac Calculator.java

C:\Users\mahme\Desktop\java Lab>java Calculator
enter first number:
5
enter second number:
8
addition of the two number:13
subraction of the two number:-3
multipication of the two number:40
division of the two number:5

C:\Users\mahme\Desktop\java Lab>
```



```
import java.util.Scanner;
public class Calculator{
public static void main(String a[])
{
int num1;
int num2;
Scanner sin=new Scanner(System.in);
System.out.println("enter first number:");
num1=sin.nextInt();
int 0
System.out.println("enter second number:");
num2=sin.nextInt();
int add=num1+num2;
System.out.println("addition of two numbers"
+add);
int sub=num1-num2;
System.out.println("subraction of two num
bers:"+sub);
int mult=num1*num2;
System.out.println("multipication of the
two numbers:"+mult);
}
```



```
int div=num1%num2;
System.out.println("division of the two numbers"
+div);
}
```

Q. Write a Java program to calculate simple interest.

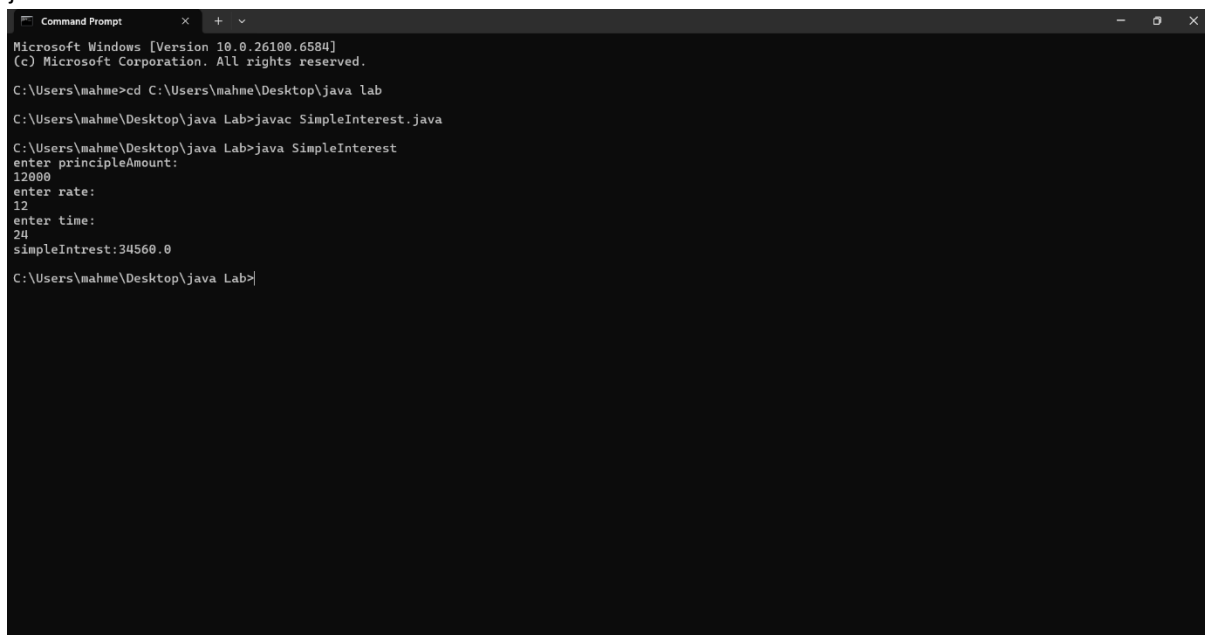
```
import java.util.Scanner;
public class SimpleInterest{
double principleAmount;
double rate;
double time;
public static void main(String a[])
{
Scanner sin=new Scanner(System.in);

System.out.println("enter principleAmount:");

double principleAmount=sin.nextDouble();

System.out.println("enter rate:");

double rate=sin.nextDouble();
System.out.println("enter time:");
double time=sin.nextDouble();
double interest=principleAmount*rate*time/100;
System.out.println("simpleIntrest:"+interest);
}
}
```



The screenshot shows a Windows Command Prompt window with the following text:

```
Microsoft Windows [Version 10.0.26100.6584]
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C:\Users\mahme>cd C:\Users\mahme\Desktop\java lab
C:\Users\mahme\Desktop\java Lab>javac SimpleInterest.java
C:\Users\mahme\Desktop\java Lab>java SimpleInterest
enter principleAmount:
12000
enter rate:
12
enter time:
24
simpleIntrest:34560.0
C:\Users\mahme\Desktop\java Lab>
```

```

2) import java.util.Scanner;
public class SimpleInterest {
    double principleAmount;
    double rate;
    double time;
    public static void main (String a[])
    {
        Scanner s = new Scanner(System.in);
        System.out.println("enter principleAmount:");
        double principleAmount = s.nextDouble();
        double
        System.out.println("enter rate");

        double rate = s.nextDouble();
        System.out.println("enter time:");
        double time = s.nextDouble();
        double interest = principleAmount * rate * time / 100;
        System.out.println("simple interest: " + interest);
    }
}

```

Q. Write a Java program to print multiplication table of 3 and 5

```

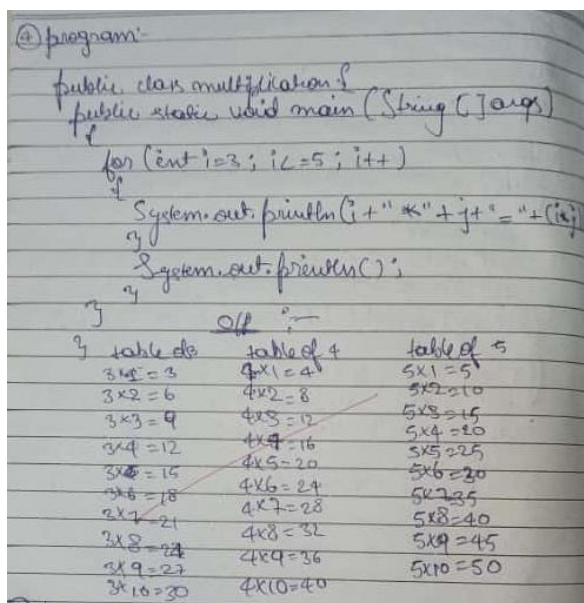
public class MultiplicationTables {
    public static void main(String[] args) {
        for (int i = 3; i <= 5; i++) {
            System.out.println("Table of " + i);

            for (int j = 1; j <= 10; j++) {
                System.out.println(i + " * " + j + " = " + (i * j));
            }

            System.out.println();
        }
    }
}

```

```
Command Prompt
C:\Users\mahme>cd C:\Users\mahme\Desktop\java Lab
C:\Users\mahme\Desktop\java Lab>javac MultiplicationTables.java
C:\Users\mahme\Desktop\java Lab>java MultiplicationTables
Table of 3
3 * 1 = 3
3 * 2 = 6
3 * 3 = 9
3 * 4 = 12
3 * 5 = 15
3 * 6 = 18
3 * 7 = 21
3 * 8 = 24
3 * 9 = 27
3 * 10 = 30
Table of 4
4 * 1 = 4
4 * 2 = 8
4 * 3 = 12
4 * 4 = 16
4 * 5 = 20
4 * 6 = 24
4 * 7 = 28
4 * 8 = 32
4 * 9 = 36
4 * 10 = 40
Table of 5
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
```



Q. Write a Java program to print factorial of a given number.

```
public class FactorialCalculator {
    public static void main(String[] args) {
        int number = 5;
        long factorial = 1;

        if (number < 0) {
            System.out.println("Factorial is not defined for negative numbers.");
        } else if (number == 0) {
            System.out.println("The factorial of 0 is 1.");
        } else {
            for (int i = 1; i <= number; i++) {
                factorial *= i;
            }
        }
    }
}
```

```

    }
    System.out.println("The factorial of " + number + " is " + factorial);
}
}
}

```

```

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C:\Users\mahme>cd C:\Users\mahme\Desktop\java lab
C:\Users\mahme\Desktop\java Lab>javac FactorialCalculator.java
C:\Users\mahme\Desktop\java Lab>java FactorialCalculator
The factorial of 5 is 120
C:\Users\mahme\Desktop\java Lab>

```

⑥ program factorial:-

```

public class Factorial {
    public static void main(String a[]) {
        int num=5;
        long fac=1;
        if (num<0) {
            System.out.println("The factorial is not defined for negative numbers.");
        }
        else if (num==0) {
            System.out.println("The factorial of 0 is 1");
        }

```

```

        else {
            for (int i=1; i<=num; i++) {
                fac*=i;
            }
            System.out.println("The factorial: "+fac);
        }
    }
}

```

Q. Write a Java program to generate Fibonacci series.

```

public class Fibonacci {
    public static void main(String a[]) {
        int n = 10;
        int prev1 = 0;
        int prev2 = 1;

        System.out.print("Fib series up to 10 terms: ");

        for (int i = 1; i <= n; i++) {
            int next = prev1 + prev2;
            System.out.print(next + " ");
            prev1 = prev2;
            prev2 = next;
        }
    }
}

```

```
}  
}  
}
```

```
Command Prompt  
Microsoft Windows [Version 10.0.26100.6584]  
(c) Microsoft Corporation. All rights reserved.  
  
C:\Users\mahme>cd C:\Users\mahme\Desktop\java lab  
  
C:\Users\mahme\Desktop\java Lab>javac Fibonacci.java  
  
C:\Users\mahme\Desktop\java Lab>java Fibonacci  
Fib series up to 10 terms: 1 2 3 5 8 13 21 34 55 89  
C:\Users\mahme\Desktop\java Lab>
```

③

```
public class fibonacci {  
    public static void main (String a[])  
    {  
        int n=90;  
        int prev1=0;  
        int prev2=1;  
        System.out.print("fib series upto 10 terms:");  
  
        for (int i=2; i<=n; i++) {  
            int next=prev1+prev2;  
            System.out.println(next+" ");  
            prev1=prev2;  
            prev2=next;  
        }  
    }  
}
```

output
fib series upto 10 terms 1 2 3 5 8 13 21 34

~~21/9/24~~

