

Q Define a class triangle as follows:

double semiperi(int a, int b, int c): to calculate semiperimeter of a Δ and return it.

double area(int a, int b, int c): to find the area of a Δ & return it.

$$\text{Area of a } \Delta = \sqrt{s(s-a)(s-b)(s-c)}$$

$s = \text{semiperimeter.}$

$$s = \frac{a+b+c}{2}$$

Also write main method to input 3 sides of 10 different Δ and using above functions, find and print their area.

```
import java.util.Scanner;
```

```
class triangle
```

```
{
    double semiperi(int a, int b, int c)
```

```
{
    double s = (a+b+c)/2.0;
    return s;
}
```

```
    double area(int a, int b, int c)
{
    triangle obj = new triangle();
```

```
double s = obj.semiperi(a, b, c);
```

```
double ar = Math.sqrt(s*(s-a)*(s-b)*
(s-c));
```

```
return ar;
```

```
}
```

```
public static void main(String args[])
{ Scanner ob = new Scanner(System.in);
  triangle obj = new triangle();
```

```
  sopln("Enter 3 sides of 10 triangles");
```

```
  int x, y, z;
```

```
  for (int i = 1; i <= 10; i++)
  {
```

```
    x = ob.nextInt();
```

```
    y = ob.nextInt();
```

```
    z = ob.nextInt();
```

```
    sopln(obj.area(x, y, z));
```

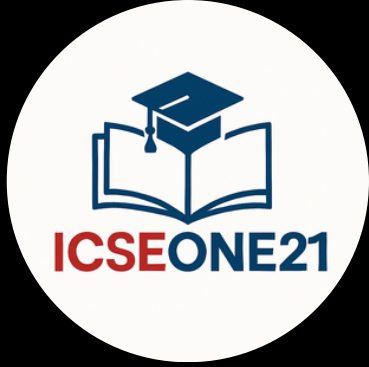
```
  }
```

```
} }
```

Design a class Prime as follows:

int factors (int a) : To accept a number through parameter and return it's number of factors.

main() : Using above function, print all the 2 digit prime numbers.



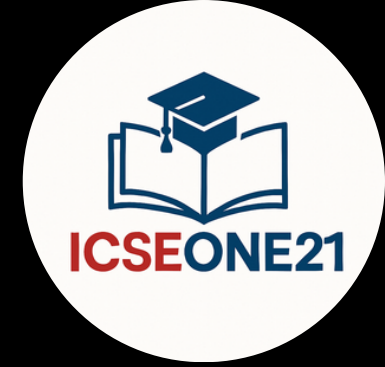
```
class prime
{
    int factors (int a)
    {
        int f = 0;
        for (int i = 1; i <= a; i++)
        {
            if (a % i == 0)
                f++;
        }
        return f;
    }
}
```

```
public static void main (String args[])
{
    Prime ob = new Prime();
    for (int i = 10; i <= 99; i++)
    {
        if (ob.factors(i) == 2)
            System.out.println(i);
    }
}
```

HW

W.A.P with the help of the given function to calculate and print the value of s where $s = 1/1! + 2/2! + \dots + 10/10!$

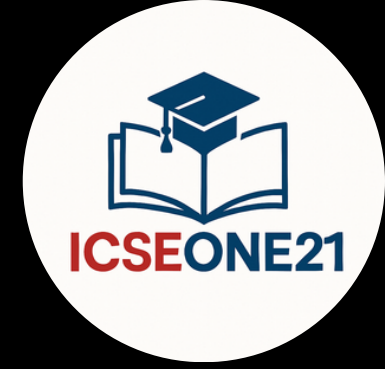
long fact (int x) : The function accepts an integer value and returns it's factorial



Class

W.A.P with the help of a given function to check if a pair of numbers are twin prime or not.
A pair of number is said to be twin prime if both of them are prime and their difference is 2.
E.g. 11 and 13

int prime (int x): accepts an integer value and returns 1 if the no. is prime else 0.

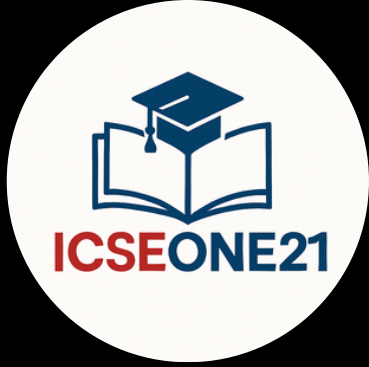


Class W.A.P to accept a number and check if the no. is Emrip no. or not. A number is called Emrip if the original and the reverse of the number both are prime. Eg: 13, etc..

int rev (int x): returns the reverse of a number

boolean prime (int x): returns true for the prime and false for composite number.

Also write the main method to input a number and check if it is Emrip or not using above functions.



Homework \Rightarrow

Do the question
which has been marked
as H/W

Thankyou