

Java program to check prime number

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The number which is only divisible by itself and 1 is known as **prime number**, for example 7 is a prime number because it is only divisible by itself and 1. This program takes the number (entered by user) and then checks whether the input number is prime or not. The program then displays the result. If you are looking for a program that displays the prime number between two intervals then see: [Java program to display prime numbers between 1 to n](#).

Example: Program to check whether input number is prime or not

To understand this program you should have the knowledge of [for loop](#), [if-else statements](#) and [break statement](#).

```
import java.util.Scanner;
class PrimeCheck
{
    public static void main(String args[])
    {
        int temp;
        boolean isPrime=true;
        Scanner scan= new Scanner(System.in);
        System.out.println("Enter any number:");
        //capture the input in an integer
        int num=scan.nextInt();
        scan.close();
        for(int i=2;i<=num/2;i++)
        {
            temp=num%i;
            if(temp==0)
            {
                isPrime=false;
                break;
            }
        }
        //If isPrime is true then the number is prime else not
        if(isPrime)
            System.out.println(num + " is a Prime Number");
        else
            System.out.println(num + " is not a Prime Number");
    }
}
```

Output:

```
Enter any number:
19
19 is a Prime Number
```

Output 2:

Enter any number:

6

6 is not a Prime Number

You can also use while loop to check the prime number:

Just replace this part of the code in above program:

```
for(int i=2;i<=num/2;i++)
{
    temp=num%i;
    if(temp==0)
    {
        isPrime=false;
        break;
    }
}
```

with this:

```
int i=2;
while(i<= num/2)
{
    if(num % i == 0)
    {
        isPrime = false;
        break;
    }
    i++;
}
```