

Assessment -5

1. Write a program to swap two numbers in Java.

Code: <https://codeshare.io/xv4okR>

```
1 package swaapp;
2 import java.util.Scanner;
3 public class swapp {
4     public static void main(String args[])
5     {
6         Scanner scan = new Scanner(System.in);
7         int a=scan.nextInt();
8         int b=scan.nextInt();
9         scan.close();
10        System.out.println("a="+a+" b="+b);
11        a=a^b;
12        b=a^b;
13        a=a^b;
14
15        System.out.println("swap:a="+a+" b="+b);
16    }
17 }
18
```

Problems Javadoc Declaration Console ×

<terminated> swapp [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 3:48:05 PM – 3:48:11 PM) [pid: 15532]

6
7
a=6 b=7
swap:a=7 b=6

2. Write a program to print all the elements of the Fibonacci series.

Code: <https://codeshare.io/3AbBvz>

```
1 package fib;
2 import java.util.*;
3 public class fibonacci {
4
5     public static void main(String[] args)
6     {
7         Scanner s= new Scanner(System.in);
8         System.out.print("Enter the number of terms to generate in the Fibonacci series: ");
9         int n = s.nextInt();
10        int prev = 0, next = 1, sum = 0;
11        System.out.print("Fibonacci series up to " + n + " terms: ");
12        for (int i = 1; i <= n; i++) {
13            System.out.print(prev + " ");
14            sum = prev + next; prev = next; next = sum;
15        }
16    }
17 }
18
```

Problems Javadoc Declaration Console ×

<terminated> fibonacci [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 3:50:11 PM – 3:50:16 PM) [pid: 20496]

Enter the number of terms to generate in the Fibonacci series: 10
Fibonacci series up to 10 terms: 0 1 1 2 3 5 8 13 21 34

3. Check if a given number is palindrome or not.

Code: <https://codeshare.io/WdEJAy>

```
4
5 public class plindrome {
6     public static void main(String args[])
7     {
8         Scanner scan = new Scanner(System.in);
9         int n=scan.nextInt();
10        scan.close();
11        int temp=0;
12        int temp1=n;
13        while(n>0)
14        {
15            temp=temp*10+n%10;
16            n=n/10;
17        }
18        if(temp1==temp)
19            System.out.println("yes");
20        else
21            System.out.println("no");
22    }
23 }
24
```

Problems Javadoc Declaration Console ×

<terminated> plindrome [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 3:54:00 PM – 3:54:05 PM) [pid: 10964]

77
yes

4. Write a program to find whether a number is an Armstrong number or not.

<https://codeshare.io/oQ3qwL>

```
15 while (number > 0) {
16     int digit = number % 10;
17     sum += Math.pow(digit, digits);
18     number /= 10;
19 }
20
21 if (originalNumber == sum) {
22     System.out.println(originalNumber + " is an Armstrong number.");
23 } else {
24     System.out.println(originalNumber + " is not an Armstrong number.");
25 }
26
27 sc.close();
28 }
29
30
31 }
32
33
34
35
```

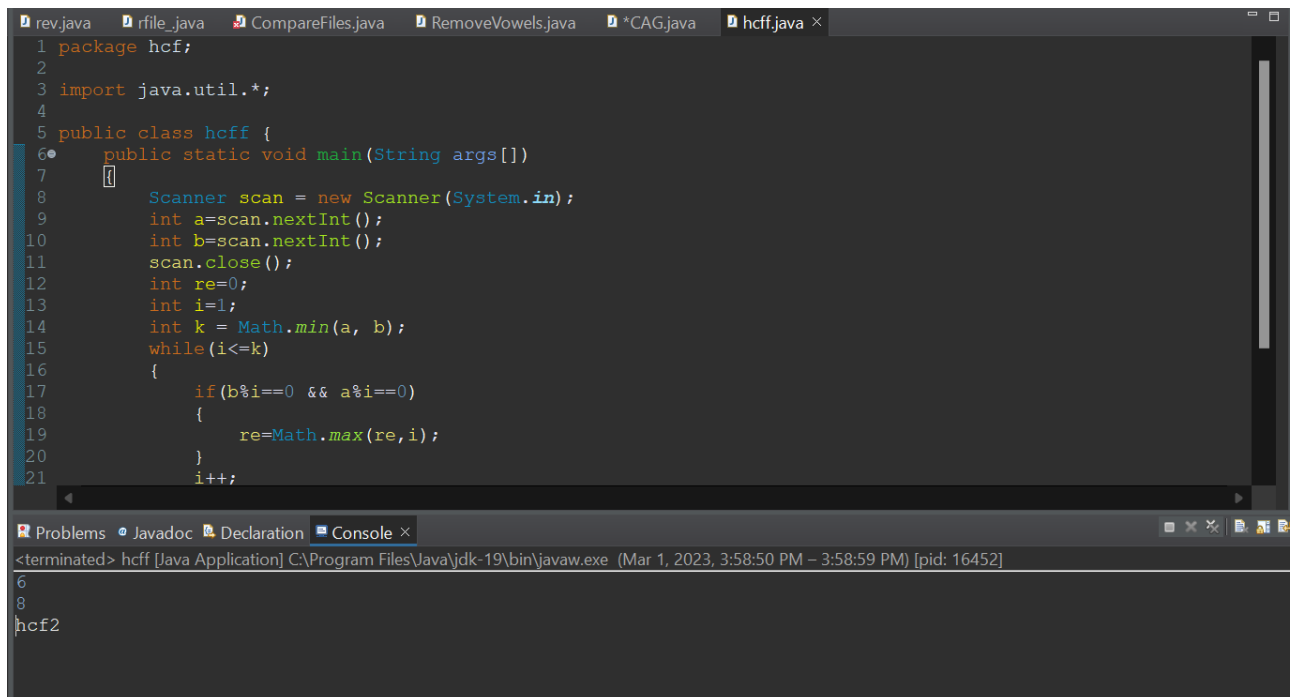
Problems Javadoc Declaration Console ×

<terminated> armstrong [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 3:56:46 PM – 3:56:48 PM) [pid: 17056]

Enter a number: 77
77 is not an Armstrong number.

5. Find the GCD of two numbers.

<https://codeshare.io/j0dJog>



The screenshot shows an IDE with a Java file named `hcff.java`. The code implements a method to find the GCD of two numbers `a` and `b` by iterating from 1 to the minimum of `a` and `b`. The console output shows the input `6` and `8`, and the result `hcf2`.

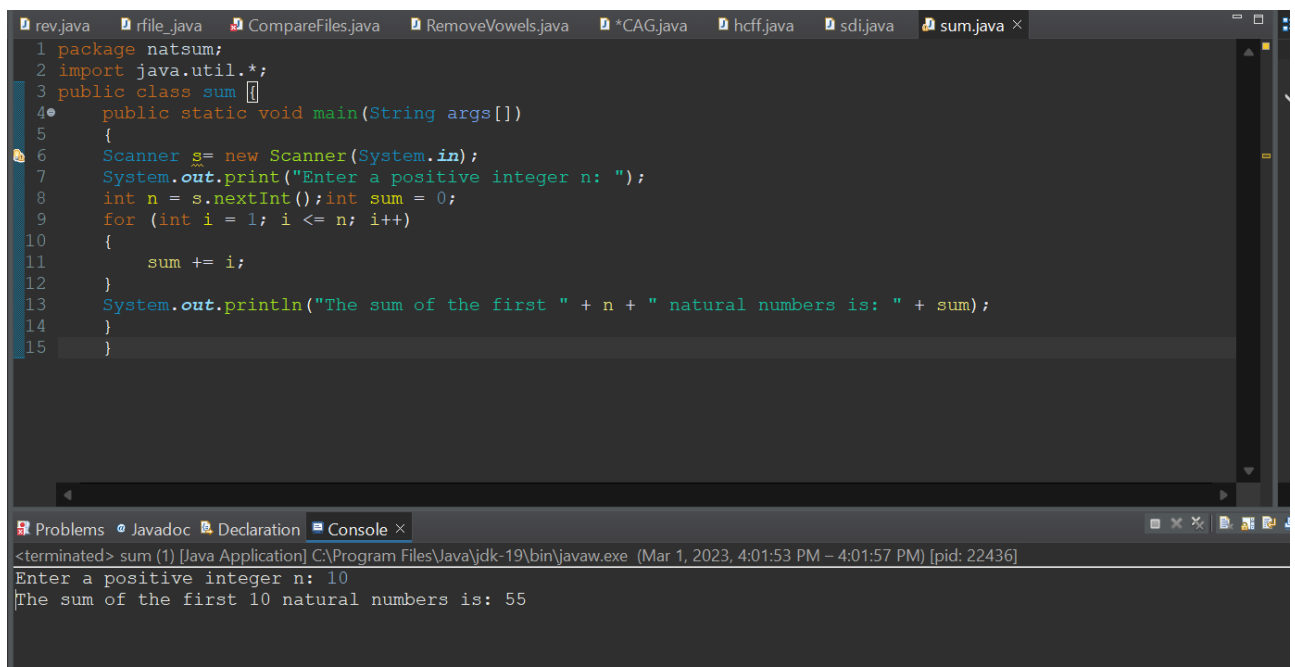
```
1 package hcff;
2
3 import java.util.*;
4
5 public class hcff {
6     public static void main(String args[])
7     {
8         Scanner scan = new Scanner(System.in);
9         int a=scan.nextInt();
10        int b=scan.nextInt();
11        scan.close();
12        int re=0;
13        int i=1;
14        int k = Math.min(a, b);
15        while(i<=k)
16        {
17            if(b%i==0 && a%i==0)
18            {
19                re=Math.max(re,i);
20            }
21            i++;
22        }
23    }
24 }
```

Console output:

```
<terminated> hcff [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 3:58:50 PM – 3:58:59 PM) [pid: 16452]
6
8
hcf2
```

6. Write a program to find the sum of n natural numbers.

<https://codeshare.io/BA7BDm>



The screenshot shows an IDE with a Java file named `sum.java`. The code prompts the user to enter a positive integer `n` and calculates the sum of the first `n` natural numbers using a for loop. The console output shows the input `10` and the result `The sum of the first 10 natural numbers is: 55`.

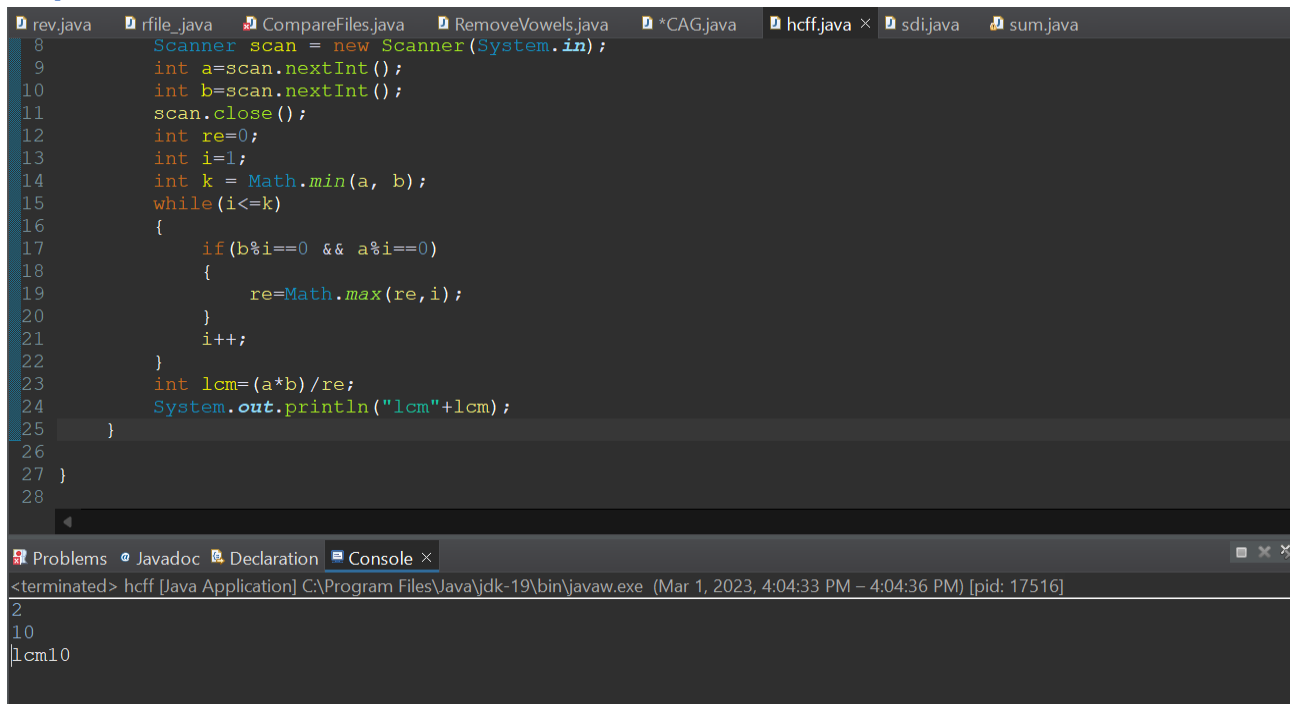
```
1 package natsum;
2 import java.util.*;
3 public class sum {
4     public static void main(String args[])
5     {
6         Scanner s= new Scanner(System.in);
7         System.out.print("Enter a positive integer n: ");
8         int n = s.nextInt(); int sum = 0;
9         for (int i = 1; i <= n; i++)
10        {
11            sum += i;
12        }
13        System.out.println("The sum of the first " + n + " natural numbers is: " + sum);
14    }
15 }
```

Console output:

```
<terminated> sum (1) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 4:01:53 PM – 4:01:57 PM) [pid: 22436]
Enter a positive integer n: 10
The sum of the first 10 natural numbers is: 55
```

7. Write a program to find the lcm of two numbers.

<https://codeshare.io/X8EXnn>



```
8 Scanner scan = new Scanner(System.in);
9 int a=scan.nextInt();
10 int b=scan.nextInt();
11 scan.close();
12 int re=0;
13 int i=1;
14 int k = Math.min(a, b);
15 while(i<=k)
16 {
17     if(b%i==0 && a%i==0)
18     {
19         re=Math.max(re,i);
20     }
21     i++;
22 }
23 int lcm=(a*b)/re;
24 System.out.println("lcm"+lcm);
25 }
26
27 }
28
```

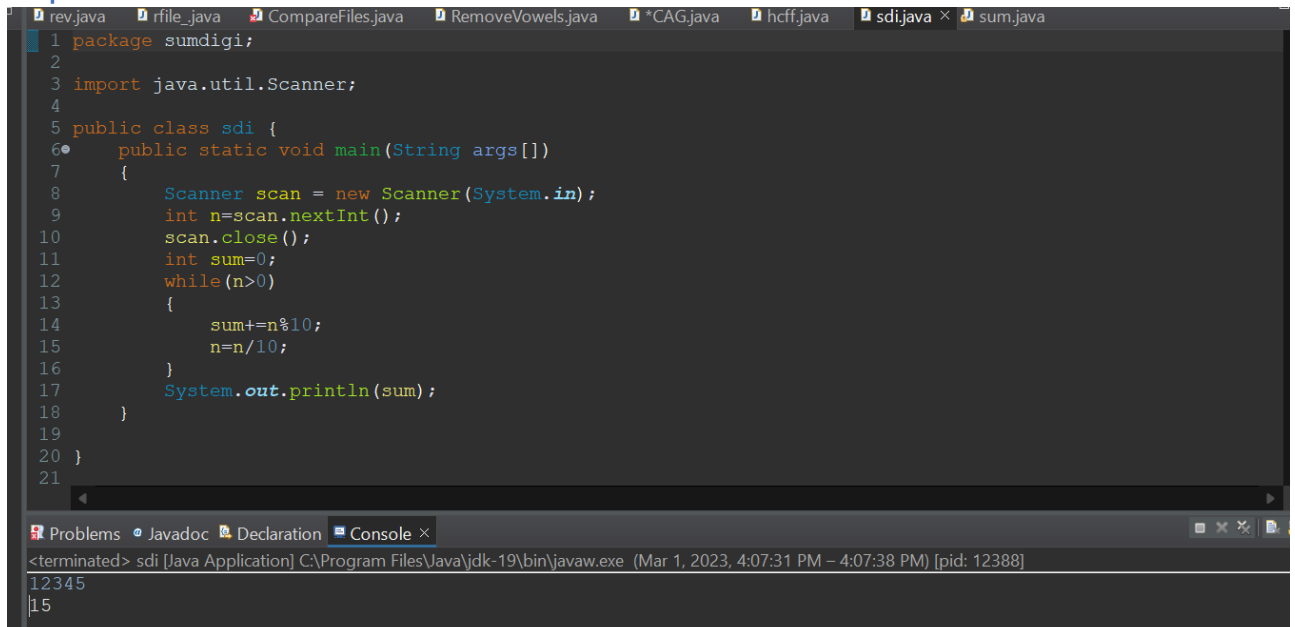
Problems Javadoc Declaration Console ×

<terminated> hcff [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 4:04:33 PM – 4:04:36 PM) [pid: 17516]

2
10
lcm10

8. Calculate the sum of digits of a given number.

<https://codeshare.io/lonO7Z>



```
1 package sumdigi;
2
3 import java.util.Scanner;
4
5 public class sdi {
6     public static void main(String args[])
7     {
8         Scanner scan = new Scanner(System.in);
9         int n=scan.nextInt();
10        scan.close();
11        int sum=0;
12        while(n>0)
13        {
14            sum+=n%10;
15            n=n/10;
16        }
17        System.out.println(sum);
18    }
19 }
20 }
21
```

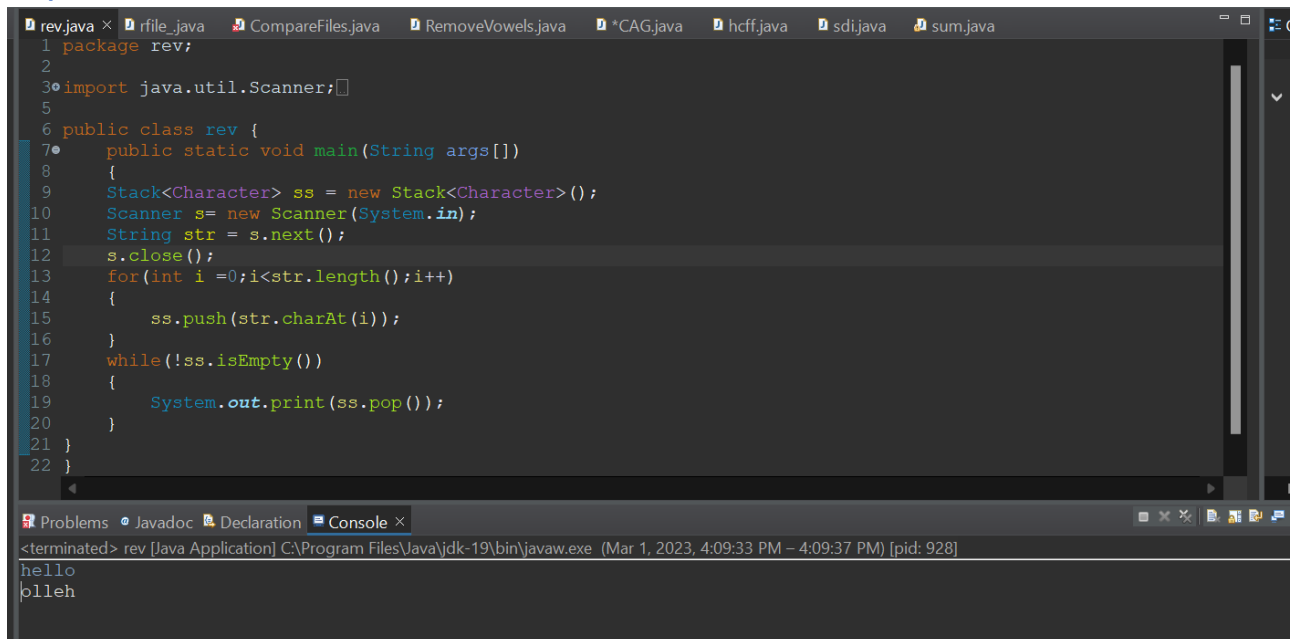
Problems Javadoc Declaration Console ×

<terminated> sdi [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 4:07:31 PM – 4:07:38 PM) [pid: 12388]

12345
15

9. Write a program to reverse a string.

<https://codeshare.io/DZEJ3W>



```
1 package rev;
2
3 import java.util.Scanner;
4
5
6 public class rev {
7     public static void main(String args[])
8     {
9         Stack<Character> ss = new Stack<Character>();
10        Scanner s= new Scanner(System.in);
11        String str = s.next();
12        s.close();
13        for(int i =0;i<str.length();i++)
14        {
15            ss.push(str.charAt(i));
16        }
17        while(!ss.isEmpty())
18        {
19            System.out.print(ss.pop());
20        }
21    }
22 }
```

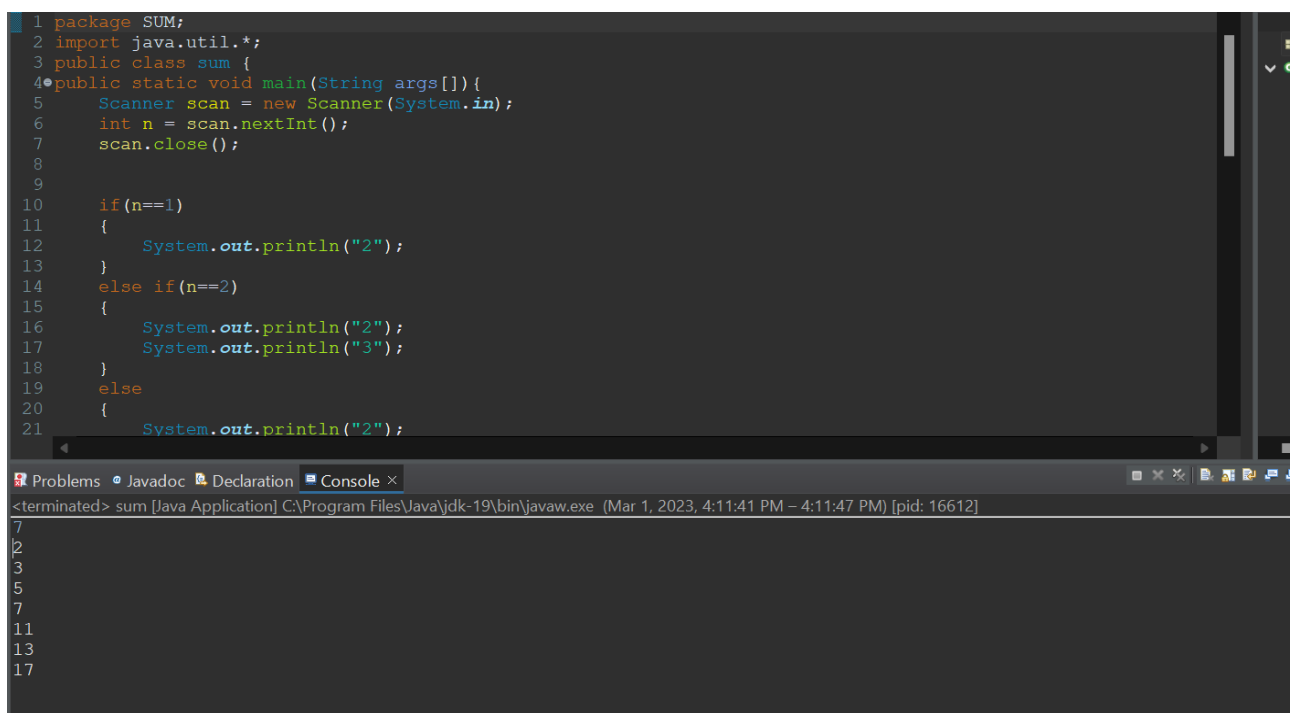
Problems Javadoc Declaration Console

<terminated> rev [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 4:09:33 PM – 4:09:37 PM) [pid: 928]

hello
olleh

10. Write a code to print all the first n prime numbers where n will be given as input.

<https://codeshare.io/Od77>



```
1 package SUM;
2 import java.util.*;
3 public class sum {
4     public static void main(String args[]){
5         Scanner scan = new Scanner(System.in);
6         int n = scan.nextInt();
7         scan.close();
8
9
10        if(n==1)
11        {
12            System.out.println("2");
13        }
14        else if(n==2)
15        {
16            System.out.println("2");
17            System.out.println("3");
18        }
19        else
20        {
21            System.out.println("2");
22        }
23    }
24 }
```

Problems Javadoc Declaration Console

<terminated> sum [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (Mar 1, 2023, 4:11:41 PM – 4:11:47 PM) [pid: 16612]

7
2
3
5
7
11
13
17