

Institute of Engineering & Technology
Devi Ahilya Vishwavidyalaya, Indore
Department of Computer Science & Engineering



Object Oriented Programming (CER3C2)
Assignment-2
(Command Line Argument)

Submitted To:

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Submitted By:

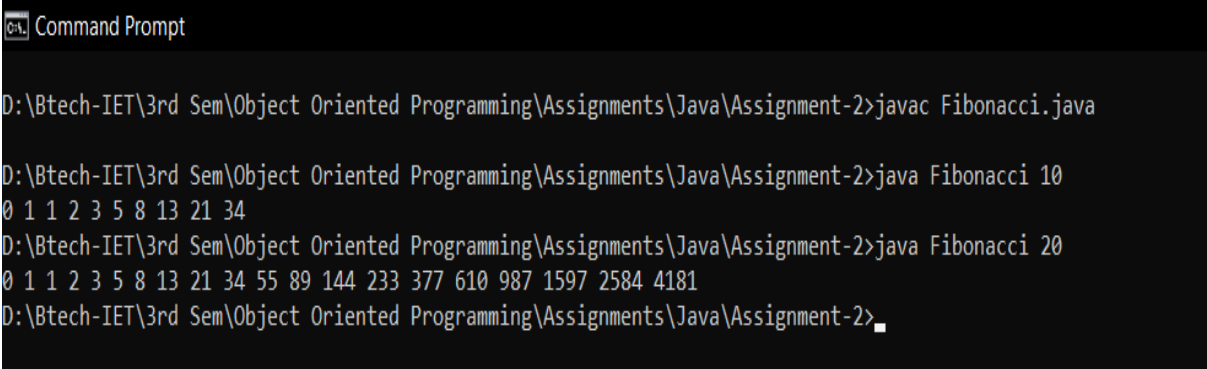
Tanishq Chauhan (21C3184)
CS "B" 2nd Year

Assignment-2

1. Write a java program to calculate Fibonacci Series.

```
public class Fibonacci {  
    public static void main(String[] args) {  
        int n1=0, n2=1, n3=0;  
        int n=Integer.parseInt(args[0]);  
        System.out.print(n1 + " " + n2);  
        for(int i=1; i<n-1; i++)  
        {  
            n3=n1+n2;  
            System.out.print(" "+ n3);  
            n1=n2;  
            n2=n3;  
        }  
    }  
}
```

Output

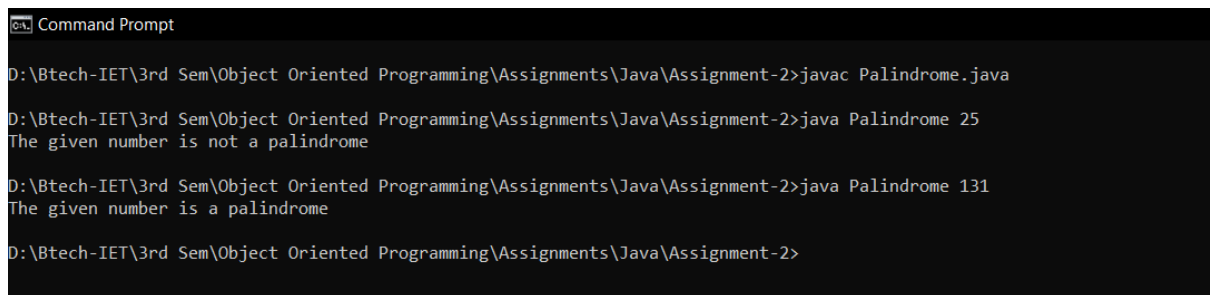


```
Command Prompt  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>javac Fibonacci.java  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Fibonacci 10  
0 1 1 2 3 5 8 13 21 34  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Fibonacci 20  
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>.
```

2. Write a java program to check whether the number is palindrome or not.

```
public class Palindrome {
    public static void main(String[] args)
    {
        int n=Integer.parseInt(args[0]);
        int t=n, rev=0;
        while(t>0)
        {
            rev=rev*10 + t%10;
            t/=10;
        }
        if(rev==n)
        {
            System.out.println("The given number is a
palindrome");
        }
        else
        {
            System.out.println("The given number is not a
palindrome");
        }
    }
}
```

Output

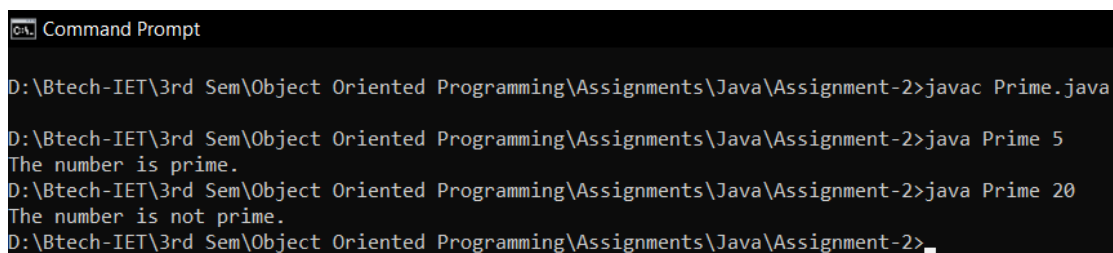


```
Command Prompt
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>javac Palindrome.java
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Palindrome 25
The given number is not a palindrome
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Palindrome 131
The given number is a palindrome
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>
```

3. Write a java program to check whether the number is prime or not.

```
public class Prime {  
    public static void main(String[] args)  
    {  
        int n=Integer.parseInt(args[0]);  
        int count=0;  
        for(int i=2; i<n; i++)  
        {  
            if(n%i==0)  
            {  
                count++;  
            }  
        }  
        if(count==0)  
        {  
            System.out.print("The number is prime.");  
        }  
        else  
        {  
            System.out.print("The number is not prime.");  
        }  
    }  
}
```

Output

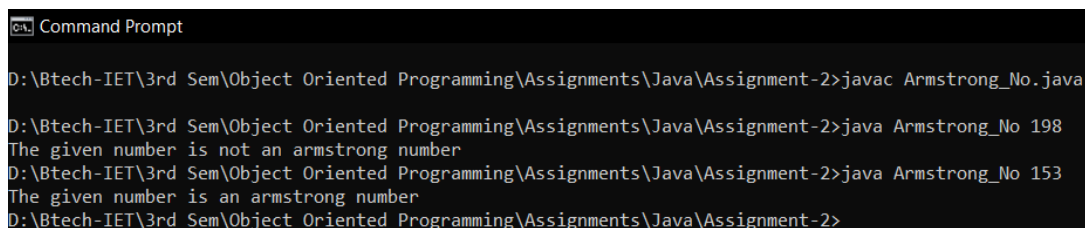


```
Command Prompt  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>javac Prime.java  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Prime 5  
The number is prime.  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Prime 20  
The number is not prime.  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>_
```

4. Write a java program to check whether the number is Armstrong Number.

```
public class Armstrong_No {
    public static void main(String[] args) {
        int n=Integer.parseInt(args[0]);
        int temp=n, arm=0;
        while(temp>0)
        {
            int k=(temp%10)*(temp%10)*(temp%10);
            arm+=k;
            temp/=10;
        }
        if(arm==n)
        {
            System.out.print("The given number is an
armstrong number");
        }
        else
        {
            System.out.print("The given number is not an
armstrong number");
        }
    }
}
```

Output



```
Command Prompt
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>javac Armstrong_No.java
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Armstrong_No 198
The given number is not an armstrong number
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Armstrong_No 153
The given number is an armstrong number
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>
```

5. Write a java program to display a message according to marks obtained by student.

```
public class Student_Marks {  
    public static void main(String[] args) {  
        int num = Integer.parseInt(args[0]);  
        if(num>90 && num<=100){  
            System.out.println("Outstanding");  
        }  
        else if(num>80 && num<=90){  
            System.out.println("Excellent");  
        }  
        else if(num>70 && num<=80){  
            System.out.println("Very Good");  
        }  
        else if(num>60 && num<=70){  
            System.out.println("Good");  
        }  
        else if(num>50 && num<=60){  
            System.out.println("Average");  
        }  
        else if(num>40 && num<=50){  
            System.out.println("Satisfactory");  
        }  
        else if(num==40){  
            System.out.println("Marginal");  
        }  
        else if(num<40){  
            System.out.println("Fail");  
        }  
        else{  
            System.out.println("Enter Valid Marks");  
        }  
    }  
}
```

Output

```
Command Prompt

D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>javac Student_Marks.java

D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Student_Marks 95
Outstanding

D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Student_Marks 39
Fail

D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Student_Marks 123
Enter Valid Marks

D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>
```

6. Write a java program that will read a float type value from the keyboard and print the following output:

- Small integer not less than the number.
- Given number.
- Largest integer not greater than number.

```
public class Gfsili {  
    public static void main(String[] args) {  
        float num=Float.parseFloat(args[0]);  
        int li=(int)num;  
        int si=(int)num+1;  
        System.out.println("The smallest integer not lesser  
than the number is " + si);  
        System.out.println("The givem number is " + num);  
        System.out.println("The largest integer not greater  
than the number is " + li);  
    }  
}
```

Output

```
Command Prompt  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>javac Gfsili.java  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Gfsili 78.56  
The smallest integer not lesser than the number is 79  
The givem number is 78.56  
The largest integer not greater than the number is 78  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Gfsili 34.890  
The smallest integer not lesser than the number is 35  
The givem number is 34.89  
The largest integer not greater than the number is 34  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>
```


7. Write a Java program to sort a numeric array and a string array.

```
import java.util.*;
public class SortArray {
    public static void main(String[] args)
    {
        int num=Integer.parseInt(args[0]);

        int[] arrayI;
        arrayI= new int[num];
        for(int i=0; i<num; i++)
        {
            int term=Integer.parseInt(args[i+1]);
            arrayI[i]=term;
        }
        Arrays.sort(arrayI);
        System.out.print("The sorted numeric array is: ");
        for(int i=0; i<num; i++)
        {
            System.out.print(arrayI[i] + " ");
        }
        System.out.println();

        String[] arrayS;
        arrayS= new String[num];
        for(int i=0; i<num; i++)
        {
            String term= args[num+i+1];
            arrayS[i]=term;
        }
        Arrays.sort(arrayS);
        System.out.print("The sorted string array is: ");
        for(int i=0; i<num; i++)
        {
            System.out.print(arrayS[i] + " ");
        }
    }
}
```

```
    }  
}  
}
```

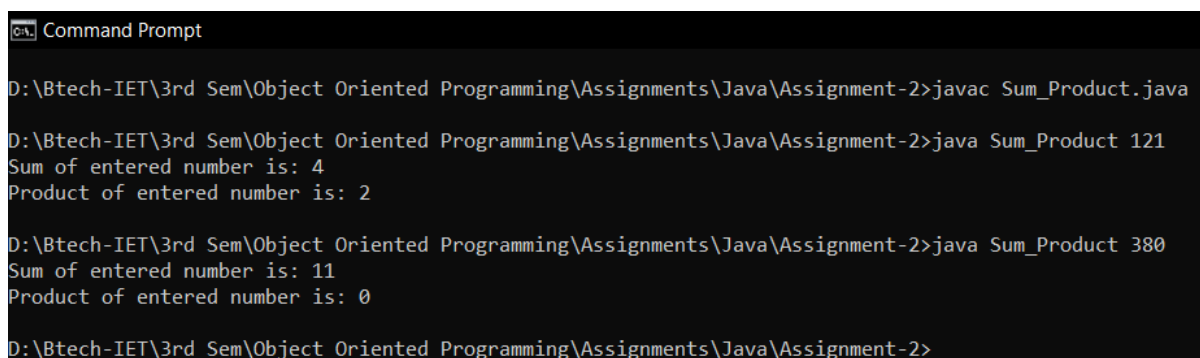
Output

```
C:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java SortArray 5 123 90 34 08 67 Tanishq Yash Mercedes IET DAVV  
the sorted numeric array is: 8 34 67 90 123  
the sorted string array is: DAVV IET Mercedes Tanishq Yash  
C:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java SortArray 4 45 23 90 78 Audi Anum Naruto Akira  
the sorted numeric array is: 23 45 78 90  
the sorted string array is: Akira Anum Audi Naruto  
C:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>.
```

8. Write a java program to find the sum and product of an entered number.

```
public class Sum_Product {  
    public static void main(String[] args)  
    {  
        int num=Integer.parseInt(args[0]);  
        int sum=0, product=1;  
        while(num>0)  
        {  
            sum+=num%10;  
            product*=num%10;  
            num/=10;  
        }  
        System.out.println("Sum of entered number is: " +  
sum);  
        System.out.println("Product of entered number is: "  
+ product);  
    }  
}
```

Output



```
Command Prompt  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>javac Sum_Product.java  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Sum_Product 121  
Sum of entered number is: 4  
Product of entered number is: 2  
  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Sum_Product 380  
Sum of entered number is: 11  
Product of entered number is: 0  
  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>
```

9. Write a Java program to find the common elements between two arrays (string values).

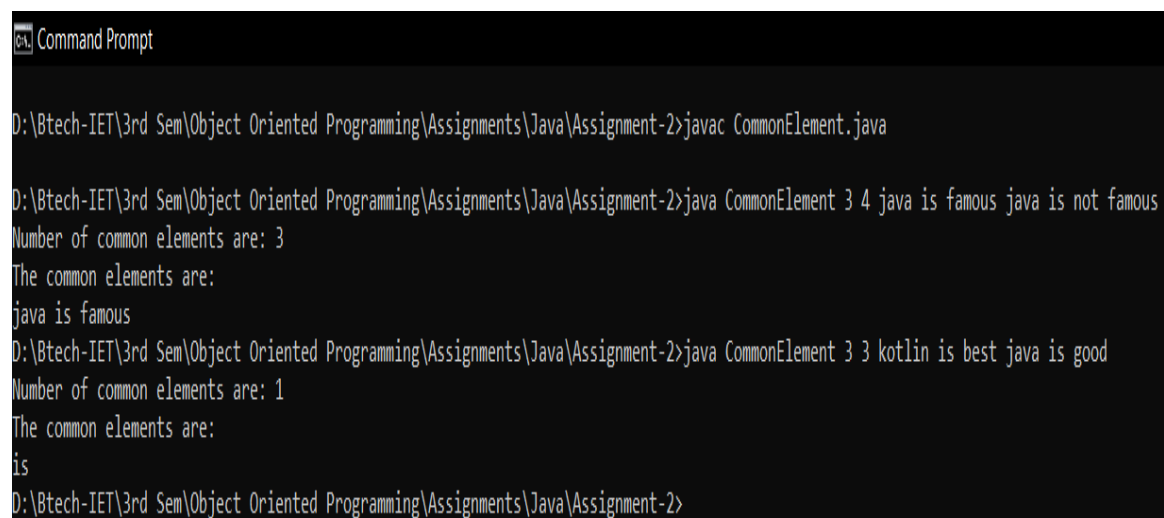
```
public class CommonElement {
    public static void main(String[] args)
    {
        int num1=Integer.parseInt(args[0]);
        int num2=Integer.parseInt(args[1]);
        int common, count=0;
        if(num1>num2)
        {
            common=num2;
        }
        else
        {
            common=num1;
        }
        String[] s1=new String[num1];
        String[] s2=new String[num2];
        String[] s3=new String[common];
        for(int i=0; i<num1; i++)
        {
            String term= args[i+2];
            s1[i]=term;
        }
        for(int i=0; i<num2; i++)
        {
            String term= args[num1+i+2];
            s2[i]=term;
        }
        for(int i=0; i<num1; i++)
        {
            for(int j=0; j<num2; j++)
            {
                if(s1[i].equals(s2[j])==true)
                {
```

```

        s3[count]=s1[i];
        count++;
    }
}
}
System.out.println("Number of common elements are: "
+ count);
System.out.println("The common elements are: ");
for(int i=0; i<count; i++)
{
    System.out.print(s3[i]+ " ");
}
}
}

```

Output



```

Command Prompt

D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>javac CommonElement.java

D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java CommonElement 3 4 java is famous java is not famous
Number of common elements are: 3
The common elements are:
java is famous

D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java CommonElement 3 3 kotlin is best java is good
Number of common elements are: 1
The common elements are:
is

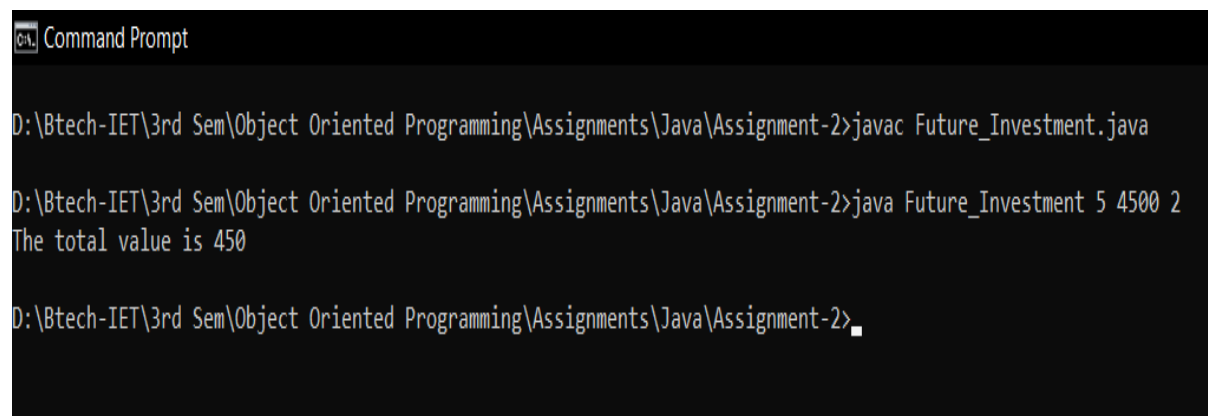
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>

```

10. Write a Java method to compute the future investment value at a given interest rate for a specified number of years.

```
public class Future_Investment {  
    public static void main(String[] args) {  
        int rate=Integer.parseInt(args[0]);  
        int principle=Integer.parseInt(args[1]);  
        int time=Integer.parseInt(args[2]);  
        int si= (rate*principle*time)/100;  
        System.out.println("The total value is " + si);  
    }  
}
```

Output



```
Command Prompt  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>javac Future_Investment.java  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>java Future_Investment 5 4500 2  
The total value is 450  
D:\Btech-IET\3rd Sem\Object Oriented Programming\Assignments\Java\Assignment-2>
```