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CSA0993
Programming in JAVA for Application Development.

ASSIGNMENT-4.

July 31st

① Find the factorial of n?

```
import java.util.scanner;
public class Factorial {
    public static void main(string[] args) {
        int n= new scanner(system.in).nextInt(), fact = 1;
        for (int i=1; i<=n; i++) fact* = i;
        System.out.print("Factorial of "+n+" is" +fact);
    }
}
```

② Write a program to print the below pattern:

```
import java.util.scanner;
public class Number pattern {
    public static void main(string[] args) {
        int n=new scanner (system.in) nextInt(), k=1;
        for (int j=1; j<i; j++) {
            System.out.print(k* k+" ");
            k++;
        }
        system.out.println();
    }
}
}
```

③ Write a program to find the number of composite numbers in an array of elements.

```
public c
public class composite numbers {
    public static void main (string [] args) {
        int [] args = {16, 18, 27, 16, 23, 21, 19);
        int count = 0;
        for (int num : arr) if (is composite (num)) count + 1;
        System.out.print ("Number of compo site numbers =
                                    " count);
    }
    public static boolean is composite (int num) {
        if (num <= 1) return false;
        for (int i = 2; i <= Math. sqt (num); i++)
            if (num % i = 0) return true;
        return false;
    }
}
```

④ Find the nth odd number after n odd number.

```
import java. util. scanner;
public class Find Nth odd Number {
    public static void main (string [] args) {
        int n = new scanner (system .in) next Int();
        int result = n * 4 - 1;
        system .out. println (n + "th odd num after" + n "
odd nums = " + result);
}
}
```

(5) write a program that finds whether a given charactor is present in a string or not. In case it is present it prints the index at which it is present. Do not use built-in find functions to search the character.

```
import java.util.scanner;
public class Find charactor in string {
    public static void main (string[] args) {
        Scanner input = new Scanner (System.in);
        System.out.print (" Enter string: ");
        String str = input.nextline();
        System.out.print (" Enter char to search:");
        char c = input.next().charAt(0);
        int index = -1;
        for (int i=0 ; i < str.length(); i++) {
            if (str.charAt(i) == c) {
                index = i;
                break
            }
        }
        if (index >=0) {
            System.out.println (c + " found in idex:" +index);
        } else {
            system.out.println (" char not found");
        }
    }
}
```

⑥ Write a program to print the below pattern:

```
import java.util.Scanner;
public class NumberPattern {
    public static void main(String[] args){
        Scanner input =new scanner(system.in);
        int n = input.nextInt();
        for (int p=1; p<=2*n-1; p++){
            int num = p<=n? p : 2*n-i;
            for (int j=1; j <=num; j++){
                int num.
                system.out.print(num + " ");
            }
            system.out.print(num +" ");
        }
    }
}
```

④ program to find whether the given number is Armstrong number or not.

```
import java.util.scanner;
public class Armstrong Number{
    public static void main(String[] args){
        Scanner input = new scanner(system.in);
        int n= input.next int();
        int arm =0, num =n;
        while (num >0) {
            int digit = num % 10;
            arm +=digit * digit * digit
            num /=10;
        }
```

```
        if (n== arm ) {
            System.out. println (" Armstrong number ");
        } else {
            System.out. println (" Not Armstrong ");
        }
    }
}
```

8) write a program to arrange the letters of word alphabetically in reverse order.

```
import java. util. scanner;
import java. util . Arrays;
public class Reverse Alphabetical order {
    public static void main (string [] args) {
        scanner input = new scanner (system.in );
        char[] arr = input. nextline (). to char Array ();
        Array . sort (arr);
        for (int i = arr. length -1; i >=0 ; i--) {
            system .out . print (arr (i) + "" );
        }
    }
}
```

(9) write a program that accepts a string from user and displays the same string after removing vowels from it.

```
import java.util scanner;
public class remove vowels{
  public static void main (string [] args) {
    scanner input = new scanner (system.in);
    string result = input.newline(), replace All(" aeiou AEIOU]", "")
    system.out.println(" string without vowels :" + result);
  }
}
```

(10) write a program to print hollow square dollar pattern?

```
import java.util.scanner;
public class Hollow square Pattern {
  public static void main (string [] args){
    scanner input = new scanner ( system.in );
    char c = input.next().charAt(0);
    for (int i=1; i<=5; i++){
      for (int j=1; j <=5; j++) {
        system.out.print ((i=1 || j ==1 || i==5 || j ==5?
                          c:" ') + " ");
      }
      system.out.println();
    }
  }
}
```