

Assignment - 4

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Find the factorial of n?

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

Q. 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(), k = 1;
        for (int i = 1; i <= n; i++) {
            for (int j = 1; j <= i; j++) {
                System.out.print(k + " ");

```

```
                k++;

```

```
            System.out.println();
        }
    }
}
```


Q write a program to find the number of composite numbers in an array of elements.

```
import java.util.*;
import java.util.Scanner;
public class composite {
    public static void main (String[] args) {
        int[] arr = {16, 18, 27, 16, 25, 21, 19};
        int count = 0;
        for (int num: arr) {
            if (isComposite(num)) {
                count++;
            }
        }
    }
}
```

```
system.out.println (count);
```

```
public static boolean isComposite (int num) {
```

```
    if (num <= 1) return false;
```

```
    for (int i = 2; i <= Math.sqrt(num); i++) {
```

```
        if (num % i == 0) {
```

```
            return true;
```

```
        }
    }
}
```

```
}
```

```
}
```

Q) find the nth odd num after n odd numbers.

```
- import java.util.Scanner;
public class findnth {
    public static void main (String args[]) {
        Scanner input = new Scanner (System.in);
        int n = input.nextInt();
        int result = n * 4 - 1;
        System.out.println ("nth odd: " + result);
    }
}
```

3

3

Q) write a program to find whether given char is in string or not.

```
= import java.util.Scanner;
public class findchar {
    public static void main (String args[]) {
        Scanner input = new Scanner (System.in);
        String str = input.nextLine();
        char c = input.next().charAt(0);
        int index = -1;
        for (int i = 0; i < str.length; i++) {

```

16 (continued)

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1

2

16 (continued)

system.out.println("found value");

3

use

system.out.println("not found");

3

3

2

Q6) 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 i=1; i<= 2 * n - 1; i++) {
```

```
            int num = i <= n ? i : 2 * n - i;
```

```
            for (int j=1; j<=num; j++) {
```

```
                System.out.println (num + " ");
```

```
            }  
            System.out.println();
```

```
        }  
    }
```

```
}
```

5.5 program to find given num is Armstrong or not.

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

```
public class Armstrong {
```

```
    public static void main (String args[]) {
```

```
        Scanner input = new Scanner (System.in);
```

```
        int n = input.nextInt();
```

```
        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 number");
```

```
    }
```

38) write a program to arrange the letters of words alphabetically in reverse order.

```
import java.util.Scanner;  
import java.util.Arrays;  
public class main {  
    public static void main (String args[]) {  
        Scanner input = new Scanner (System.in);  
        char[] arr = input.next().toCharArray();  
        Arrays.sort (arr);  
        for (int i = arr.length - 1 ; i >= 0 ; i--) {  
            System.out.println (arr[i] + " ");  
        }  
    }  
}
```


39) write a program to remove the vowels?

```
import java.util.Scanner;
public class RemoveVowels {
    public static void main (String args[]) {
        Scanner Input = new Scanner (System.in);
        String result = Input.next().replaceAll("[aeiouAEIOU]", "");
        System.out.println (result);
    }
}
```

40) write a program to print hollow square pattern?

```
import java.util.Scanner;
public class Hollow {
    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 : " "));
            }
        }
    }
}
```