CSE3120 – Big Data Frameworks
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Lab – 1

Experiment Name: Java Programs Experiment
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Aim: Six basic programs are given that are to be completed in java.

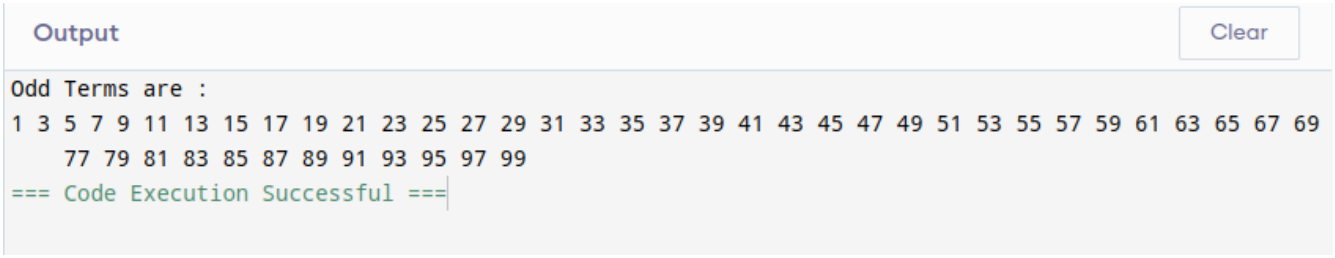
Programs, Outputs, Algorithm are given in the screenshot.

Q1. Display odd numbers between 1 -100

```java
// Q1. Display odd numbers between 1 -100

import java.util.Scanner;
class Main
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Odd Terms are : ");
        for(int i=1;i<=100;i++)
        {
            if(i%2!=0)
            {
                System.out.print(i+" ");
            }
        }
    }
}
```

Output:

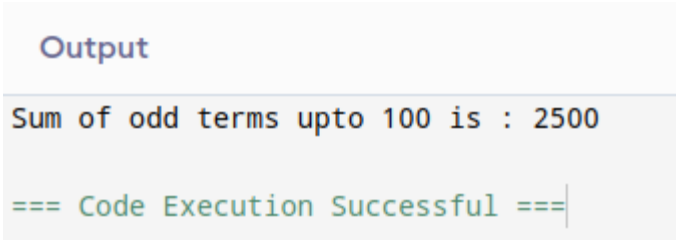


Q2. Sum of odd numbers between 1 -100

```java
// Q2. Sum of odd numbers between 1 -100

import java.util.Scanner;
class Main
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        int sum = 0;
        for(int i=1;i<=100;i++)
        {
            if(i%2!=0)
            {
                sum += i;
            }
        }
        System.out.println("Sum of odd terms upto 100 is : "+sum);
    }
}
```

Output:


Output
Sum of odd terms upto 100 is : 2500
=== Code Execution Successful ===

Q3. Program to check the given number is Palindrome or not

```java
// Q3. Program to check the given number is Palindrome or not

import java.util.Scanner;
class Main
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a number : ");
        int n = sc.nextInt();
        int num = n;
        int rev = 0;
        int rem;
        while(n!=0)
        {
            rem = n%10;
            rev = rev*10 + rem;
            n/=10;
        }
        if(num == rev)
        {
            System.out.println("Number is a Palindrome");
        }
        else
        {
            System.out.println("Not a Palindrome Number");
        }
    }
}
```

Output:

```
Output

Enter a number : 3553
Number is a Palindrome

=== Code Execution Successful ===
```

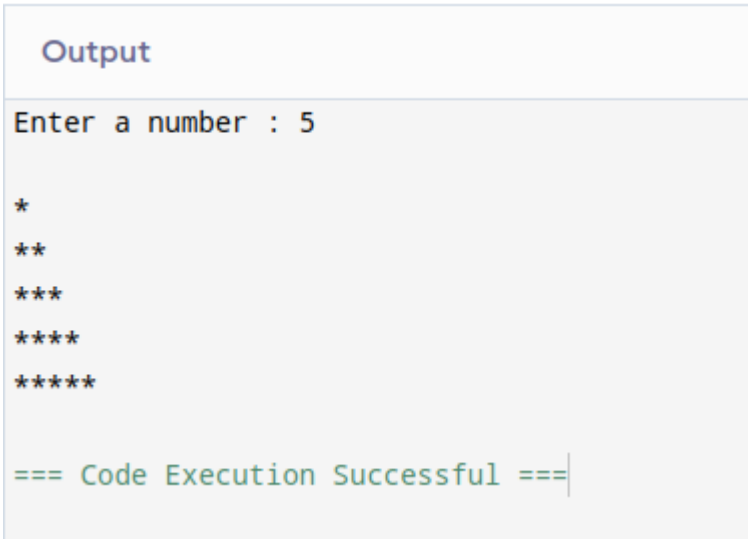
Q4. Program to print patterns of numbers and stars

```
*
* *
* * *
* * * *
```

```java
/* Q4. Program to print patterns of numbers and stars
  *
  * *
  * * *
  * * * *
*/

import java.util.Scanner;
class Main
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a number : ");
        int n = sc.nextInt();
        for(int i=0;i<=n;i++)
        {
            for(int j=0;j<i;j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}
```

Output:



Q5. Print numbers in triangle and pyramid vice

1
121
12321
1234321
123454321

```java
/* Q5. Print numbers in triangle and pyramid vice
1
121
12321
1234321
123454321
*/

import java.util.Scanner;
class Main
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a number : ");
        int n = sc.nextInt();
        for(int i=0;i<=n;i++)
        {
            for(int j=0;j<i;j++)
            {
                System.out.print(j+1);
            }
            for(int j=i-1;j>0;j--)
            {
                System.out.print(j);
            }
            System.out.println();
        }
    }
}
```

Output:


Output
Enter a number : 5
1
121
12321
1234321
123454321
=== Code Execution Successful ===

Q6. Find largest and smallest number in an array in java.

```java
// Q6. Find largest and smallest number in an array in java

import java.util.Scanner;
class Main
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter Size of the array : ");
        int size = sc.nextInt();
        int ar[] = new int[size];
        System.out.println("Enter " + size + " numbers:");
        for(int i=0;i<size;i++)
        {
            ar[i] = sc.nextInt();
        }
        int largest = ar[0];
        int smallest = ar[0];
        for (int number : ar)
        {
            if(number > largest)
            {
                largest = number;
            }
            if(number < smallest)
            {
                smallest = number;
            }
        }
        System.out.println("Largest number: " + largest);
        System.out.println("Smallest number: " + smallest);
    }
}
```

Output:

```
Output
Enter Size of the array : 5
Enter 5 numbers:
12
23
34
31
56
Largest number: 56
Smallest number: 12

=== Code Execution Successful ===
```

Result: Hence the programs are made and executed.