Date : 10/10/2022

Roll No. and Name : 22BCE538 Shah Kaivan

Course Code and Name : 2CS302 Object Oriented Programming

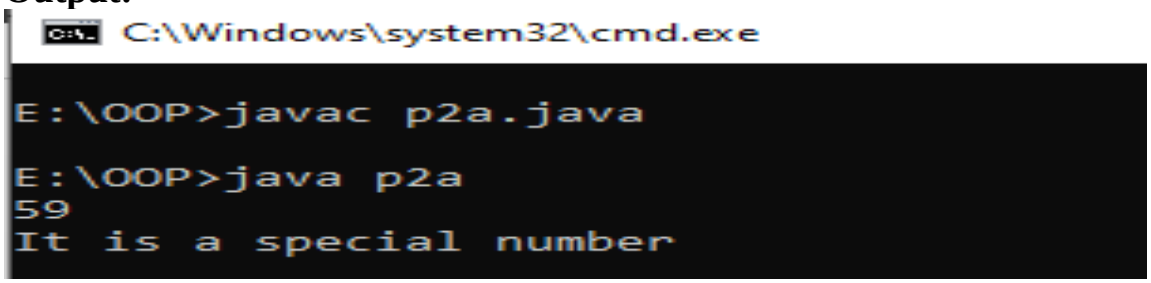
Practical No.: 2 (a)

AIM: Write a Java Program that check whether user entered number is special number or not.

Methodology followed:
Input:

```
public class p2a
{
	public static void main(String args[]) {
		int n=59;
		int f1=n/10;
		int l=n%10;
		int sum=f1+l;
		int mul=f1*l;
		int ans=sum+mul;
		System.out.println(ans);
		if(ans==n)
		{
			System.out.println("It is a special number");
		}
		else
		{
			System.out.println("It is not a special number");
		}
	}
}
```

Output:



Conclusion :

I learnt that how can we separate each digit of number and check whether it is Special number or not?.

Practical No.: 2 (b)

AIM: Write a Java program using class that prints the numbers 1 to N (N must be scan from the user). For all multiples of 3 print “Bizz” and for all multiples of 5 print “Fizz”. For multiples of both 3 and 5 print “BizzFizz”.

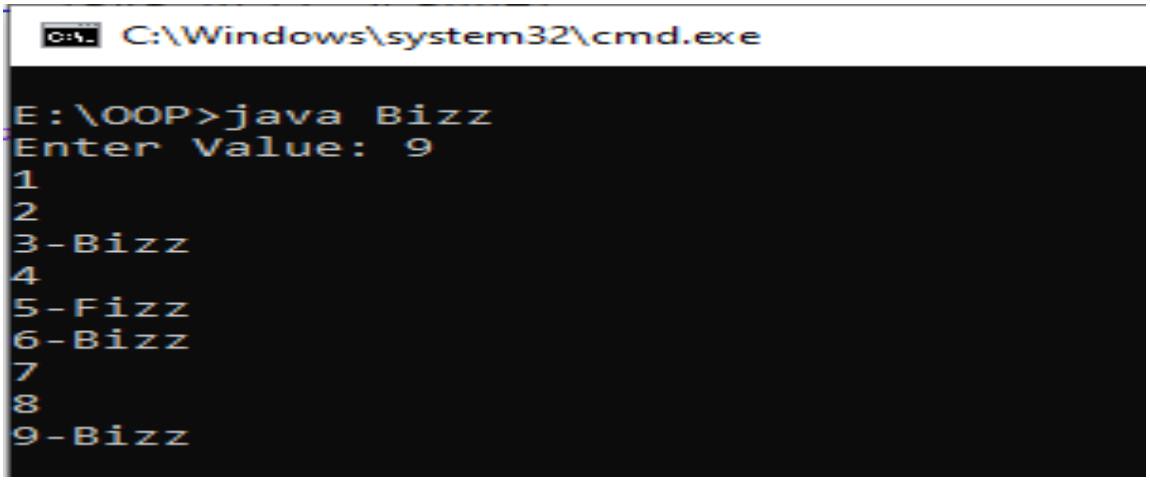
Methodology followed:

Input:

```
import java.util.Scanner;


class Bizz
{
	public static void main(String args[])
	{
		Scanner sc = new Scanner(System.in);
		int n;
		System.out.print("Enter Value: ");
		n=sc.nextInt();
		for(int i=1;i<=n;i++)
		{
			//System.out.println(i);
			if(i%3==0 && i%5==0)
			{
				System.out.println(i+"-BizzFizz");
			}
			else if(i%3==0)
			{
				System.out.println(i+"-Bizz");
			}
			else if(i%5==0)
```

```
                {
                        System.out.println(i+"-Fizz");
                }
                else
                {
                System.out.println(i);
                }
            }
        }
}
```

Output:



Conclusion :

I learnt how to use for loops and modulo operations with the conditional statement and get desirable results.

Practical No.: 2 (c)

AIM: Write a Java program that demonstrate the concepts of automatic and explicit type casting.

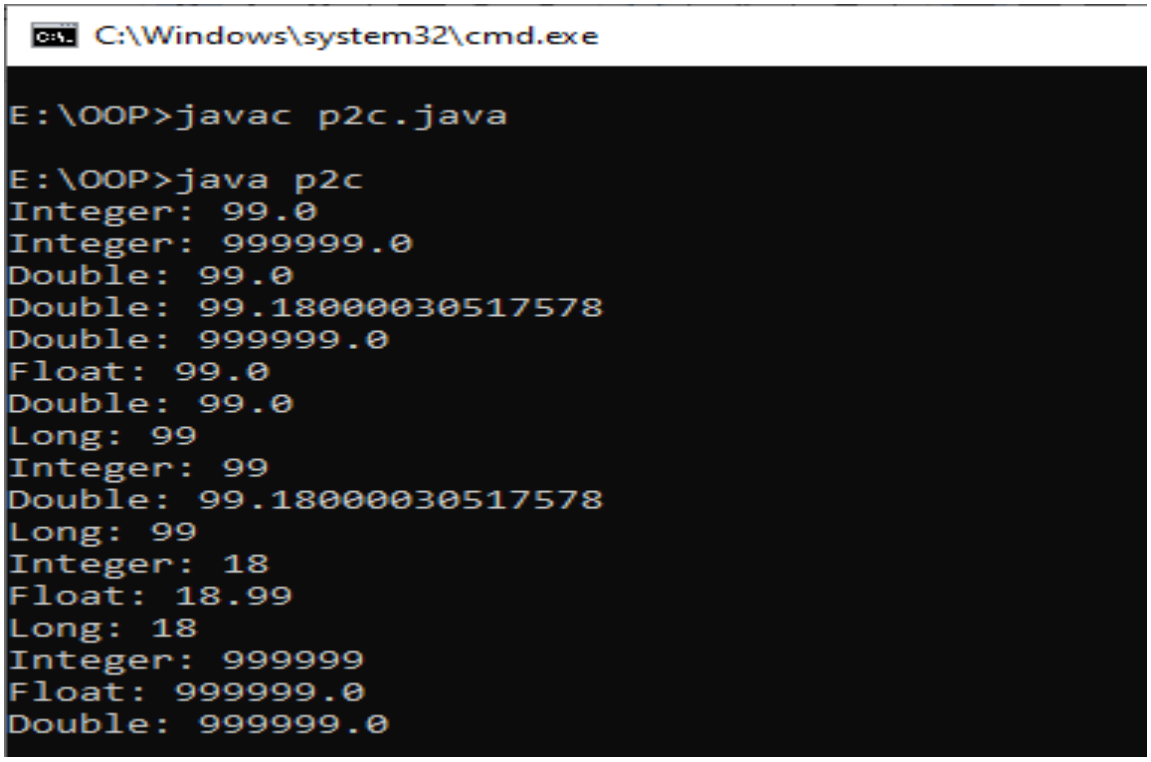
Methodology followed:

Input:

```
public class p2c
{
  public static void main (String args[])
  {
    int i = 99;
    float f = 99.18f;
    double d = 18.99d;
    long l = 999999;

    float if1 = i;
    float lf = l;

    double id = i;
    double fd = f;
    double ld = l;

    // Integer and Long to Float
    System.out.println ("Integer: " + if1);
    System.out.println ("Integer: " + lf);

    // Integer, Float and Long to Double
    System.out.println ("Double: " + id);
    System.out.println ("Double: " + fd);
```

```
    System.out.println ("Double: " + ld);

    // Integer to Float, Double and Long
    System.out.println ("Float: " + (float) i);
    System.out.println ("Double: " + (double) i);
    System.out.println ("Long: " + (long) i);

    // Float to Int, Double and Long
        System.out.println("Integer: "+(int)f);
        System.out.println("Double: "+(double)f);
        System.out.println("Long: "+(long)f);

        // Double to Integer, Float and Long
        System.out.println("Integer: "+(int)d);
        System.out.println("Float: "+(float)d);
        System.out.println("Long: "+(long)d);

    // Long to Integer, Float and Double
        System.out.println("Integer: "+(int)l);
        System.out.println("Float: "+(float)l);
        System.out.println("Double: "+(double)l);
  }
}
```

Output:



Conclusion:

I learnt about how we have study the difference between each data types And importance.

Practical No.: 2 (d).i

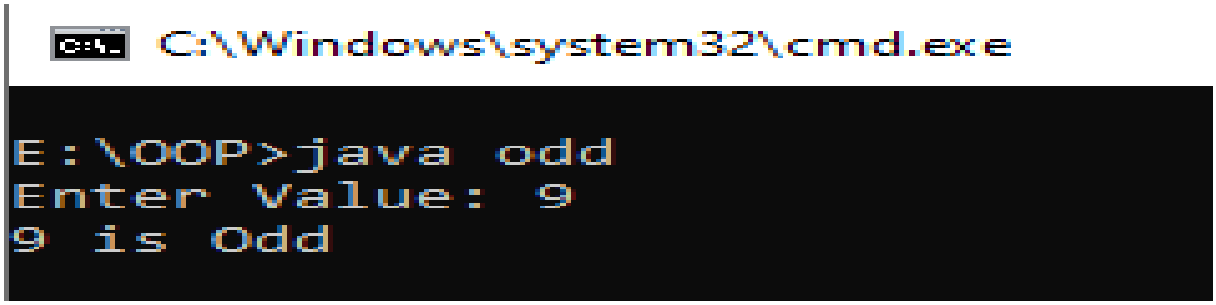
AIM: Write a Java program to: check whether a number is odd or even (using if – else statement)

Methodology followed:

Input:

```
import java.util.*;
class odd
{
	public static void main(String args[])
	{
		int n;
		System.out.print("Enter Value: ");
		Scanner s = new Scanner(System.in);
		n=s.nextInt();
		//Condition to check odd or even
		if(n%2==0)
		{
			System.out.println(n+" is Even");
		}
		else
		{
			System.out.println(n+" is Odd");
		}
	}
}
```

Output:



Conclusion :

I learnt how to check whether the number is odd or even.

Practical No.: 2 (d).ii

AIM: Write a Java program to: check the category of a given character. (using if…else…if ladder)

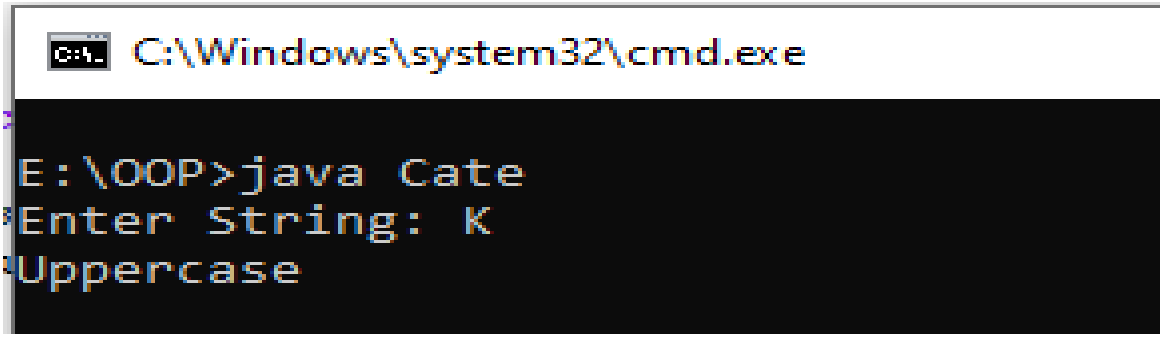
Methodology followed:

Input:

```
import java.util.*;


class Cate
{
	public static void main(String args[])
	{
		Scanner scan = new Scanner(System.in);
		System.out.print("Enter String: ");
		char c = scan.next().charAt(0);
		int a=c;
		if(a>=65 && a<=90)
		{
			System.out.println("Uppercase");
		}
		else if(a>=97 && a<=122)
		{
			System.out.println("Lowercase");
		}
		else if(a>=48 && a<=57)
		{
			System.out.println("Digit");
		}
```

```
            else if(a>=33 && a<=47 || a>=58 && a<=64 || a>=91 && a<=96 ||
a>=123 && a<=126)
            {
                System.out.println("Special Character");
            }
        }
}
```

Output:



Conclusion :

I learnt how to check the category of Character whether it is lowercase, uppercase, digit or a special character.

Practical No.: 2 (d).iii

AIM: Write a Java program to: check whether a number is prime or not. (using for loop)

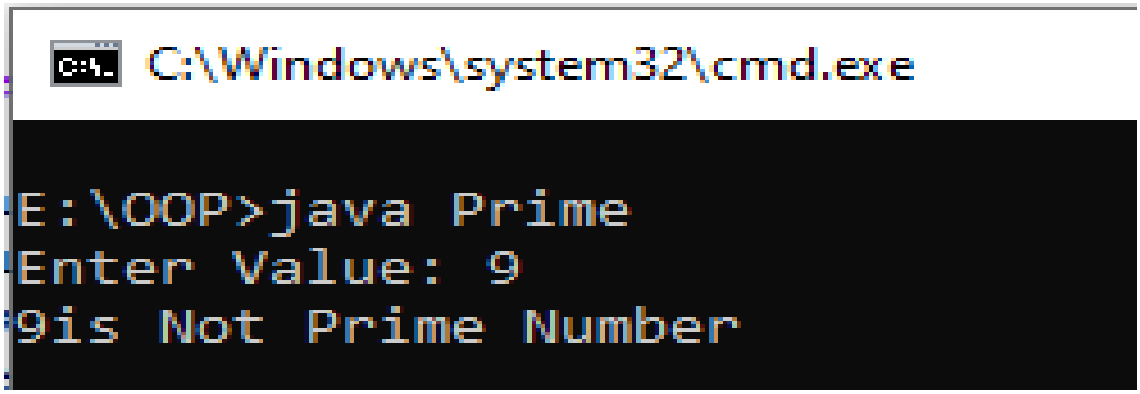
Methodology followed:

Input:

```
import java.util.*;
class Prime
{
	public static void main(String args[])
	{
		int n,flag=1;
		Scanner scan = new Scanner(System.in);
		n=scan.nextInt();
		for(int i=2;i<n;i++)
		{
			if(n%i==0)
			{
				flag=0;
				break;
			}
		}
		if(flag==1)
		{
			System.out.println(n+" is Prime Number");
		}
		else
		{
			System.out.println(n+"is Not Prime Number");
```

```
            }
        }
}
```

Output:



Conclusion :

I learnt how to check whether the number is prime number or not prime.

Practical No.: 2 (d).iv

AIM: Write a Java program to: display reverse of a number and check whether it is palindrome or not. (using while/do while loop)

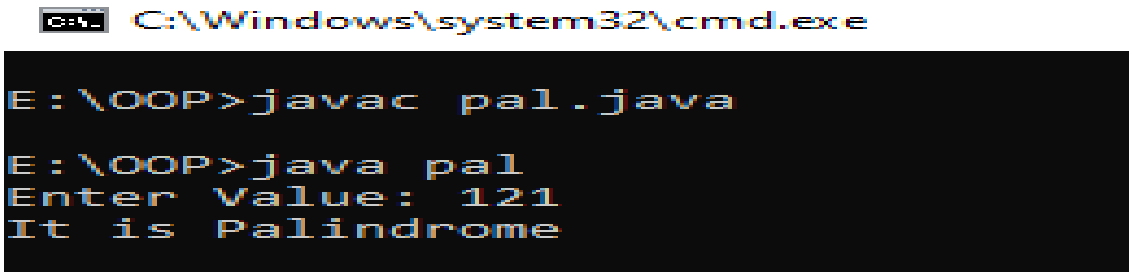
Methodology followed:

Input:

```
import java.util.*;
class pal
{
   public static void main(String args[]) {
      int n,rev=0,mod;
      Scanner scan = new Scanner(System.in);
      System.out.print("Enter Value: ");
      n = scan.nextInt();
      int temp=n;
      while(n>0)
      {
         mod = n%10;
         rev = (rev*10) + mod;
         n = n/10;
      }
      if(temp==rev)
      {
         System.out.println("It is Palindrome");
      }
      else
      {
         System.out.println("It is not a Palindrome");
      }
```

```
    }
}
```

Output:



Conclusion :

I learnt how to reverse the number and check whether the number is palindrome or not.

Practical No.: 2 (d).v

AIM: Write a Java program to: pattern printing. (using nested loops)

```
        1
      1 2
    1 2 3
  1 2 3 4
1 2 3 4 5
1 2 3 4 5 6
```

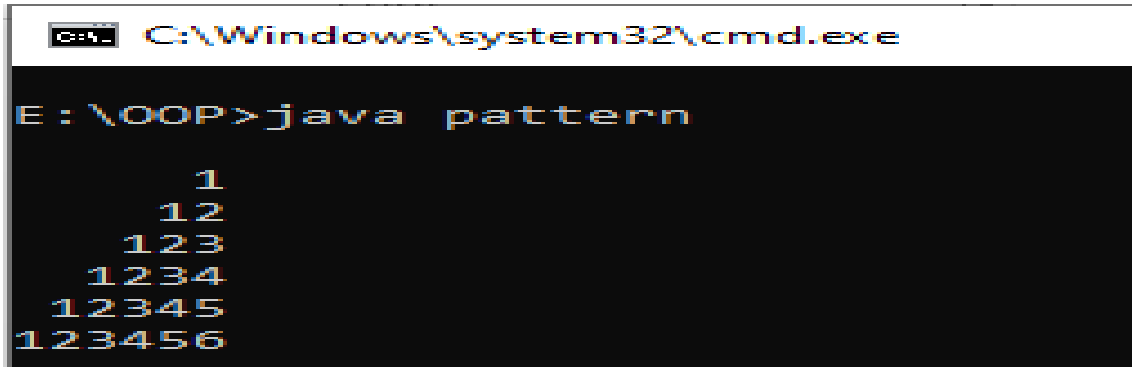
Methodology followed:

Input:

```
class pattern
{
   public static void main(String args[])
   {
      int i,j,k;
      for(i=1;i<=7;i++)
      {
         for(j=6;j>=i;j--)
         {
            System.out.print(" ");
         }
         for(k=1;k<i;k++)
         {
            System.out.print(k);
         }
         System.out.println();
      }
   }
```

}

Output:



Conclusion :

I learnt how to print a pattern using nested for loops.