## Subject: "(23PGCA206)-Object Oriented Programming using Java"

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**1. Write a Program Armstrong Number is a positive number if it is equal to the sum of cubes of its digits is called Armstrong number and if its sum is not equal to the number then it's not a Armstrong number.**

**Answer:**

```java
import java.util.*;
class Arm
{
    public static void main(String[] args)
    {
        int originalNum, digit, cubeSum = 0,num;

        System.out.print("Enter the number:");
        Scanner sc = new Scanner(System. in );
        num = sc.nextInt();
        originalNum = num;

        while (num!= 0)
        {
            digit = num % 10;
            cubeSum += Math.pow(digit, 3);
            num /= 10;
        }

        if(cubeSum == originalNum)
            System.out.println(originalNum+ " is an Armstrong number");
        else
```

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```java
        System.out.println(originalNum+ " is not an Armstrong number");
    }
}
```

**Output:**

```
D:\JAVA>java Arm
Enter the number:
153
153 is an Armstrong number

D:\JAVA>javac Arm.java

D:\JAVA>java Arm
Enter the number:12345
12345 is not an Armstrong number
```

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**2. Write a Program a number is said to be Buzz Number if it ends with 7 or is divisible by 7.**

**Answer:**

```java
import java.util.*;
class Cbno
{
        int no,rem,c=0;
        Scanner sc=new Scanner(System.in);
        Cbno(int no)
        {
                if(no%10==7 || no%7==0)
                {
                        System.out.println("buzz");
                }
                else
                {
                        System.out.println("not buzz");
                }
        }
}
class Buzz
{
        public static void main(String[] args)
        {
                Scanner sc=new Scanner(System.in);
                System.out.print("Enter Buzz num:");
                int no=sc.nextInt();
```

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```
        //Cbno c1=new Cbno();
        Cbno c=new Cbno(no);
    }
}
```

**Output:**

D:\JAVA>java Buzz
Enter Buzz num:345
not buzz

D:\JAVA>javac Buzz.java

D:\JAVA>java Buzz
Enter Buzz num:717
buzz

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**3. Write a program that takes three numbers and checks and then prints the**
**greatest number**

**Answer:**

```java
import java.util.Scanner;
class Gretest
{
        public static void main(String[] args)
        {
                int a,b,c,large,ternary;
                Scanner sc=new Scanner(System.in);
                System.out.println("Enter first number:");
                a=sc.nextInt();
                System.out.println("Enter second number:");
                b=sc.nextInt();
                System.out.println("Enter third number:");
                c=sc.nextInt();
                ternary=a>b?a:b;
                large=c>ternary?c:ternary;
                System.out.println("the largest number is:"+large);
        }
}
```

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**Output:**

D:\JAVA>javac Gretest.java

D:\JAVA>java Gretest
Enter first number:
20
Enter second number:
50
Enter third number:
90
the largest number is:90

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**4. Write a program that a Duck number is a number which has zeroes present in**
**it, but there should be no zero present in the beginning of the number.**

**Answer:**

```java
import java.util.*;
class Cdno
{
    int no,rem,c=0;
    Scanner sc=new Scanner(System.in);
    Cdno()
    {
        System.out.println("enter number");
        no=sc.nextInt();
        while(no!=0)
        {
            rem=no%10;
            if(rem==0)
                c++;
            no=no/10;
        }
        if(c>0)
        {
            System.out.println("Duck");
        }
        else
        {
            System.out.println("not duck");
```

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```java
            }
        }
}
class Duck
{
        public static void main(String[] args)
        {
                Scanner sc=new Scanner(System.in);
                Cdno c=new Cdno();
                // int no=sc.nextInt();
        }
}
```

**Output:**

D:\JAVA>java Duck
enter number
40003
Duck

D:\JAVA>javac Duck.java

D:\JAVA>java Duck
enter number
23456
not duck

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## 5. Write a program that Floyd Triangle.

## Answer:

```java
class Loop5
{
        public static void main(String[] args)
        {
                int n=5;
                int i, j, k = 1;
                for(i=1;i<=n;i++)
                {
                        for(j=1; j<=i;j++)
                        {
                                System.out.print(k+" ");
                                k++;
                        }
                        System.out.println("\n");
                }
        }
}
```

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**Output:**

D:\JAVA>javac Loop5.java

D:\JAVA>java Loop5
1

2 3

4 5 6

7 8 9 10

11 12 13 14 15