Output :

5 random numbers:

8

1

7

9

9

Square of 5 is 25

Cube of 10 is 1000

```java
    {
        System.out.println("cube of "+n+" is "+(n*n*n));
    }
}

class lab3B
{
    public static void main (String args[])
    {
        A t1=new A();
        B t2=new B(5);
        C t3 = new C(10);
        t1.start();
        try
        {
            t1.join();
        }
        catch (InterruptedException e)
        {
        }
        t2.start();
        t3.start();
    }
}
```

join() → waits until thread completes
the execution

```
        {
        y
y y y

class B extends Thread
{
    int n;
    B(int num)
    {
        n=num;
    }
    public void run()
    {
        System.out.println("square g "+n+" is "+(n*n));
    }
}

class C extends Thread
{
    int n;
    C(int num)
    {
        n=num;
    }
    public void run()
```

Extending thread
Thread → built in class allows to create thread
(extending thread
(implementing runnable interface

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P3 B) Write a Java program that implements a
multithread application that has 3 threads.
First thread generates a random integer for
every 1 second; second thread computes
the square of the number & prints; third
thread will print the values y averg the
number.

Thread (class)
(Run method
call
Start ()
Start the thread
& Run ()
method gets
executed

```
import java.util.*;
class A extends Thread
{

    public void run ()
    {

        System.out.println(" Ingenerating 5 random
                    numbers ");
        Random m = new Random();
        for(int i=0; i<5; i++)
        {
            int num = m.nextInt(10);
            System.out.println(num);
            try   // shud generate no. for every 1 sec. so
            {        thread is made to sleep for 1s
                Thread.sleep(1000);
            }
            catch (InterruptedException e)
```

// Random class
(has nextInt() -method
(can create randomno)

→ range
// the no.s generates
are from 0 to 9
total range=0

// takes any in the range
1ms   1000ms-1s

may throw an exception.
if thread is interrupted
while it is asleep → exception
occurs

```
Lab3A e1 = new Lab3A();
e1.fun(n1, n2);
y
y
```

output:

```
Enter 2 numbers:
10
5
The result is: 2.0

Enter 2 numbers:
2
0
caught exception: java.lang.ArithmeticException:
                                                  / by zero
```

Exeptn: unwanted event occuring during statement exec. which cause the pgm to stop.

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96 exec

$\frac{a}{b}$

P3A) Write a Java program to read 2 integers a & b. Compute a/b & print when b is not zero. Raise an exception when b is equal to zero.

```java
import java.util.*;
public class Lab3A{
void fun(int a, int b)
{
    float res;
    try
    {
        res = a/b;
        System.out.println(" The result is : ", +res);
    }
    catch(Exception e)
    {
        System.out.println("caught exception: +e);
    }
}

public static void main(String[] args){
    System.out.println(" Enter 2 numbers:");
    Scanner in = new Scanner(System.in);
    int n1 = in.nextInt();
    int n2 = in.nextInt();
```