LAB 10

Demonstrate Inter process Communication

```java
class Q
{
    int n;
    boolean valueSet = false;
    synchronized int get ()
    {
        while (!valueSet) {
            try {
                System.out.println("Consumer waiting");
                wait ();
            }
            catch (InterruptedException e){
                System.out.println("Interruption caught");
            }
            System.out.println("Got: " + n);
            valueSet = false;
            System.out.println("Intimate Producer");
            notify ();
            return n;
        }
    }

    synchronized void put (int n)
    {
        while (valueSet) {
            try {
                System.out.println("Producer waiting");
                wait ();
            } catch (InterruptedException e) {
```

```java
            System.out.println("Interrupted");
        }
        this.n = n;
        valueSet = true;
        System.out.println("Put : " + n);
        System.out.println("Intimate consumer");
        notify();
    }
}


class Producer implements Runnable
{
    Q q;
    Producer (Q q)
    {   this.q = q;
        new Thread(this, "Producer").start();
    }
    public void run()
    {
        int i = 0;
        while (i < 5)
        {   q.put(i++);
        }
    }
}

class Consumer implements Runnable
{
    Q q;
    Consumer (Q q) {
        this.q = q;
        new Thread (this, "Consumer").start();
    }
}
```

```
            public void run()
            {      int i=0;
                   while (i<5)
                   {    int r=q.get();
                        System.out.println(" Consumed:"
                                   + r);

                        i++;
                   }
            }
      }


class PCFixed
{
      public static void main (String args[])
      {

            Q q = new Q();
            new Producer (q);
            new Consumer (q);
            System.out.println(
      }
}
```

OUTPUT :

Put : 0
Intimate Consumer
Producer waiting
Got : 0
Intimate Producer
Put : 1
Intimate Consumer
Producer waiting

Got : 1
Intimate Producer
Put : 2
Intimate Consumer
Producer waiting
Got : 2
Intimate Producer
Put : 3
Intimate Consumer
Producer waiting
Got : 3
Intimate Producer
Put : 4
Intimate Consumer
Producer waiting
Got : 4
Intimate Producer

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Got : 1
Intimate Producer
Put : 2