15/2/2024

// An incorrect implementation of a producer and consumer. (inter process communication)

```
class Q {
    int n;

    synchronized void put(int n) {
        this.n = n;
        System.out.println("put : " + n);
    }

    synchronized int get() {
        System.out.println("Got : " + n);
        return n;
    }

    Synchronized void put(int n) {
        this.n = n;
        System.out.println("Put : " + n);
    }
}

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<15) {
        q.put(i++);
    }
}
}

Class consumer implements Runnable {
    Q, i;

    consumer(Q q) {
        this.q = q;
        new Thread(this, "consumer").start();
    }

    public void run() {
        int i=0;
        while (i<15) {
            int r = q.get();
            i++;
        }
    }
}

class PC {
    public static void main(String args[]) {
        Q q = new Q();
        new Producer(q);
        new consumer(q);
        System.out.println("press control-c
                            to stop.");
    }
}
```

Sample out Put :-

Put : 0
Put : 1
Put : 2
But : 3
Put : 4
Put : 5
put : 6
Put : 7
Put : 8
Put : 9
Put : 10
Put : 11
Put : 12
Put : 13
Put : 14

Got : 14
Got : 14
Got : 14
Got : 14
Got : 14
Got : 14
Got : 14
Got : 14
Got : 14
Got : 14
Got : 14
Got : 14
Got : 14
Got : 14
Got : 14

13/12/24