

IPC Online

Section: A1

Time: 25 min

Run three threads.

- Thread1 prints 'p' in an infinite loop
- Thread2 prints 'q' in an infinite loop
- Thread3 prints 'r' in an infinite loop

Now, these three threads should run in a way that at each iteration, 'p', 'q' and 'r' all three are printed before moving on to the next iteration and the number of each letter to be printed at each iteration increases with the iteration count . So, the output may look like. *

```
pqr           [iteration 1]
qqpprr       [iteration 2]
pppqqrrrr    [iteration 3]
```

....

Implement this using semaphore only. Take iteration count as input.

Hint: Only one semaphore lock will suffice for this code.

Create a file <student_id>.cpp and submit it.

*If you can generate the following output correctly, you will get 8/10. If you can implement it with randomness, you will get 10 points.

```
pqr           [iteration 1]
ppqqrr       [iteration 2]
pppqqrrrr    [iteration 3]
```