

```
}
somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116_dos/dosass5$ gcc Q1.c
Q1.c: In function 'producer':
Q1.c:26:13: warning: implicit declaration of function 'sleep' [-Wimplicit-function-declaration]
   26 |         sleep(1); // Simulate production time
      |         ^
      |         ^ here, not there
```

```
somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116_dos/dosass5$ ./a.out
```

```
Producer produced: 1
Producer produced: 2
Producer produced: 3
Producer produced: 4
Producer produced: 5
Consumer consumed: 5
Consumer consumed: 4
Producer produced: 6
Producer produced: 7
Producer produced: 8
Producer produced: 9
Producer produced: 10
Consumer consumed: 10
Producer produced: 11
Producer produced: 12
Producer produced: 13
Consumer consumed: 13
Producer produced: 14
Consumer consumed: 14
Producer produced: 15
Consumer consumed: 15
Producer produced: 16
Consumer consumed: 16
Producer produced: 17
Consumer consumed: 17
Producer produced: 18
Consumer consumed: 18
Producer produced: 19
Consumer consumed: 19
Producer produced: 20
Consumer consumed: 20
```

```
}
```

```
somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116_dos/dosass5$ gcc Q2.c
```

```
somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116_dos/dosass5$ ./a.out
```

```
Thread A (Odd): 1
```

```
Thread B (Even): 2
```

```
Thread A (Odd): 3
```

```
Thread B (Even): 4
```

```
Thread A (Odd): 5
```

```
Thread B (Even): 6
```

```
Thread A (Odd): 7
```

```
Thread B (Even): 8
```

```
Thread A (Odd): 9
```

```
Thread B (Even): 10
```

```
Thread A (Odd): 11
```

```
Thread B (Even): 12
```

```
Thread A (Odd): 13
```

```
Thread B (Even): 14
```

```
Thread A (Odd): 15
```

```
Thread B (Even): 16
```

```
Thread A (Odd): 17
```

```
Thread B (Even): 18
```

```
Thread A (Odd): 19
```

```
Thread B (Even): 20
```

```
somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116_dos/dosass5$ |
```

[illegible]

```
3  
somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116_dos/dosass5$ gcc Q4.c  
somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116_dos/dosass5$ ./a.out  
Thread A (Countdown): 10  
Thread B (Countup): 1  
Thread A (Countdown): 9  
Thread B (Countup): 2  
Thread A (Countdown): 8  
Thread B (Countup): 3  
Thread A (Countdown): 7  
Thread B (Countup): 4  
Thread A (Countdown): 6  
Thread B (Countup): 5  
Thread A (Countdown): 5  
Thread B (Countup): 6  
Thread A (Countdown): 4  
Thread B (Countup): 7  
Thread A (Countdown): 3  
Thread B (Countup): 8  
Thread A (Countdown): 2  
Thread B (Countup): 9  
Thread A (Countdown): 1  
Thread B (Countup): 10  
somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116_dos/dosass5$ |
```

}

somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116\_dos/dosass5\$ gcc Q5.c

somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116\_dos/dosass5\$ ./a.out

A1

B2

C3

A4

B5

C6

A7

B8

C9

A10

B11

C12

A13

B14

C15

A16

B17

C18

A19

B20

somya@LAPTOP-AHPH4VNL:/mnt/d/2241004116\_dos/dosass5\$ |