

Q1

```
● vscode → .../code/sem4git/csd204/lab7 (main) $ ./a.out
Enter total available instances of resources X, Y, Z: 7 5 7
Enter Allocation matrix (5 processes × 3 resources):
P1: 1 0 2
P2: 3 1 0
P3: 0 1 1
P4: 1 0 1
P5: 1 0 2
Enter Max matrix (5 processes × 3 resources):
P1: 6 5 3
P2: 4 2 1
P3: 5 1 2
P4: 1 0 2
P5: 5 2 3

The safe sequence is: P2 -> P4 -> P5 -> P3 -> P1
```

Q2

```
● vscode → .../code/sem4git/csd204/lab7 (main) $ ./a.out
Enter Process Size (in bytes): 4096
Enter Logical Address Bits: 16
Enter Main Memory Size (in bytes): 65536
Enter Page Size (in bytes): 1024

--- Address Translation Details ---
Logical Address Bits = 16
Page Number Bits = 6
Page Offset Bits = 10
Physical Address Bits = 16
Frame Number Bits = 6
Frame Offset Bits = 10
Total number of pages in Logical Address Space = 64
Total number of frames in Main Memory = 64
```