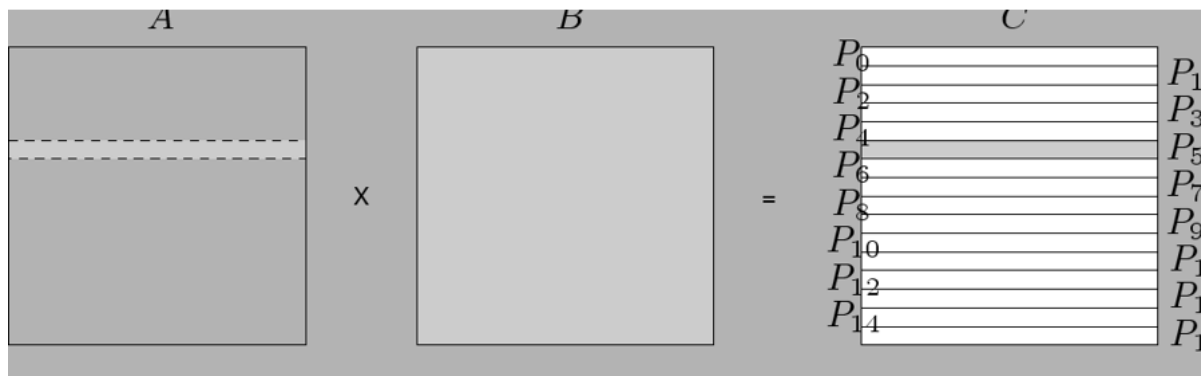Part 1

I used below algorithm by seeing a lecture note.



I can find a reason why the algorithm above is faster than naïve algorithm in the most used 3<sup>rd</sup> for loop. Columns of array2 and array4 move due to j value

```
[-bash-4.1$ ./Part_1 100
20125 microseconds occured
11586 microseconds occured
[-bash-4.1$ ./Part_1 100
11008 microseconds occured
8657 microseconds occured
```

First one is the naïve implementation and latter one is the optimized implementation.