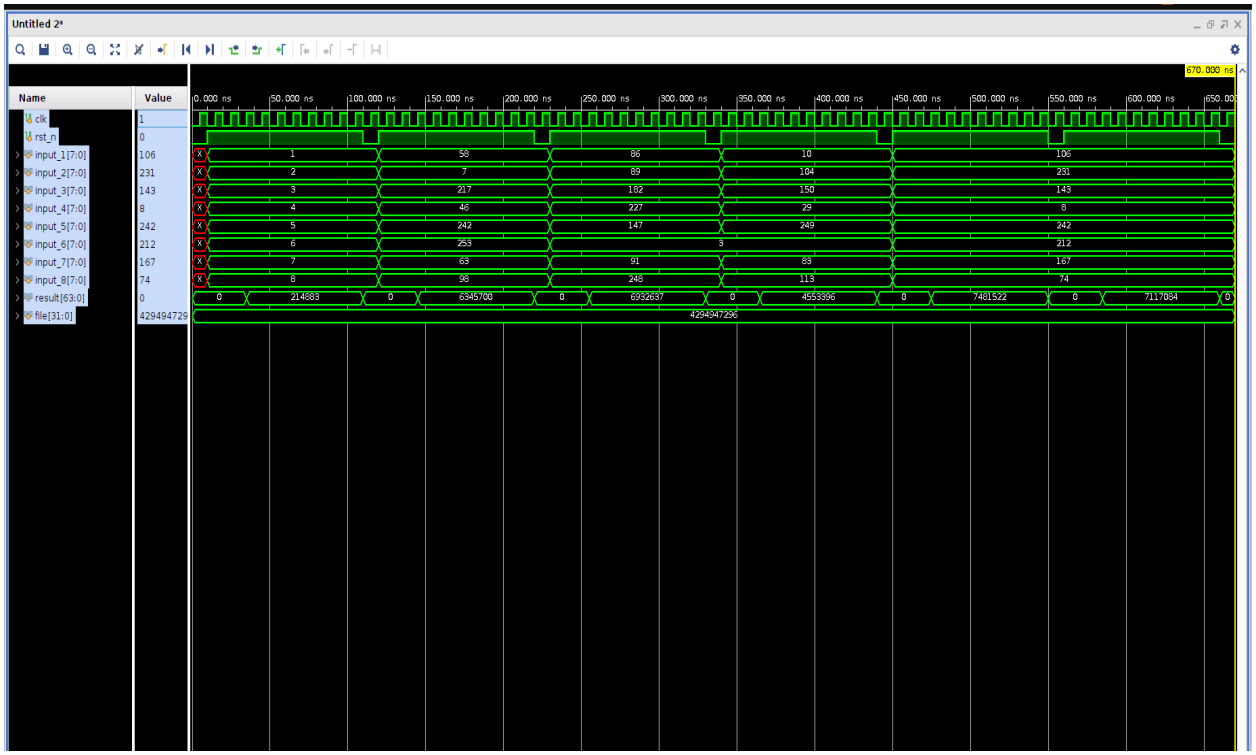
Lab 3

Here P = 8 and Q = 10000 (Reconfigurable code)

Input Sorted Nos = 40
Saved as input.txt file

```
0001 0002 0003 0004 0005 0006 0007 0008
2362 2567 2777 2862 3058 3069 3135 3426
3926 3929 4022 4067 5011 5123 5211 5368
5386 5736 5782 6429 6649 6915 7763 7793
8042 8167 8335 8456 8690 9172 9383 9802
```

a)As per Hardware point of view , component A and component B should be executed 1 -1 time as instantiated in the top module



b) Latency = 670 nanoseconds

```
INFO: [USF-XSim-69] 'elaborate' step finished in '1' seconds
Time resolution is 1 ps
```

```
Result: 214883  ,            110000ns
Result: 6345700  ,           220000ns
Result: 6932637  ,           330000ns
Result: 4553396  ,           440000ns
Result: 7481522  ,           550000ns
Result: 7117084  ,           660000ns
$finish called at time : 670 ns
```

THROUGHPUT

Total inputs processed / total execution in ns

P = 8 inputs , and total is 40 nos

= 40 inputs/summation of all the time

= 40 / 2,310,000 ns

approximately 0.00001732 inputs per nanosecond.

Throughput can be increased by increasing the value of P .