

M3 JOB Last Checkpoint 9 minutes ago (autosaved)

File Edit View Insert Cell Kernel Help Trusted Python 3 Memory: 663.5 MB / 2 GB

```
In [13]: import time
import numpy as np

s=time.time()
a=np.random.randint(10,size=(1000,1000))
c=a.transpose()
e=time.time()

print(c)
print(" ")
print("Waktu CPU:",e - s, "detik")

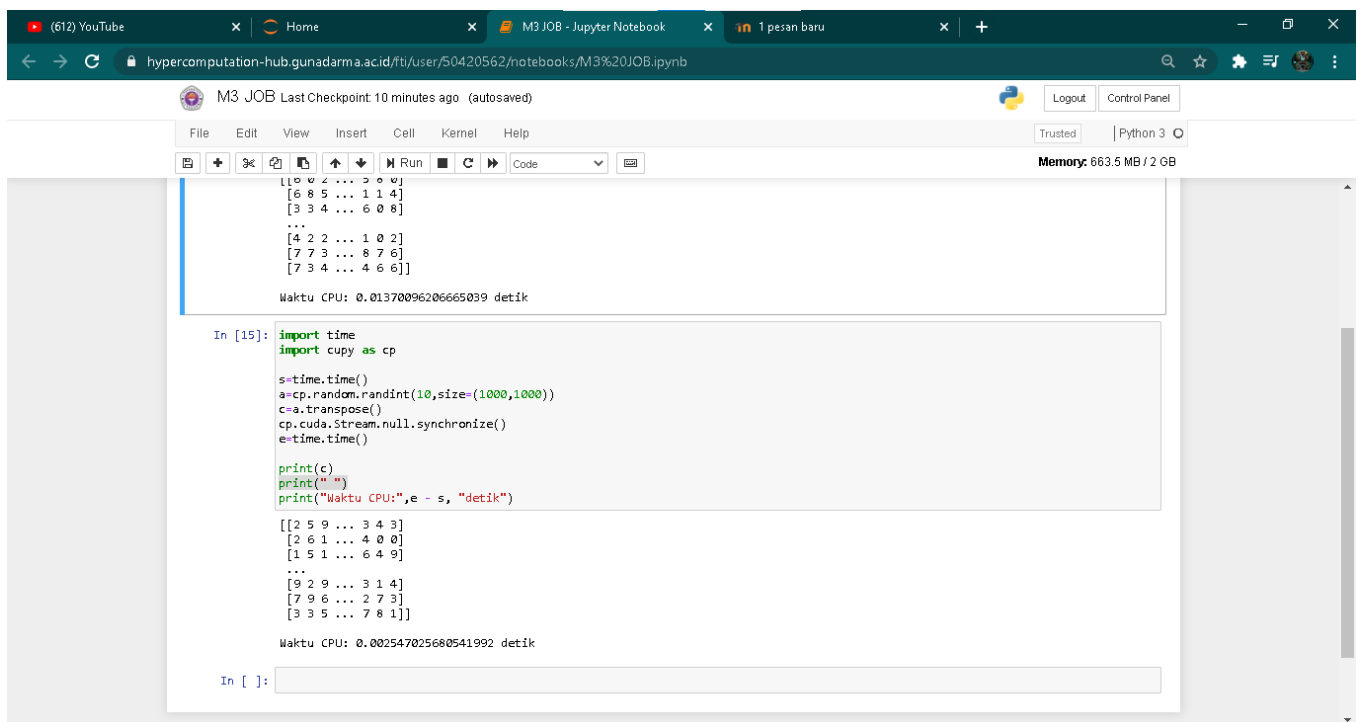
[[6 0 2 ... 5 8 0]
 [6 8 5 ... 1 1 4]
 [3 3 4 ... 6 0 8]
 ...
 [4 2 2 ... 1 0 2]
 [7 7 3 ... 8 7 6]
 [7 3 4 ... 4 6 6]]

Waktu CPU: 0.01370096206665039 detik
```

```
In [15]: import time
import cupy as cp

s=time.time()
a=cp.random.randint(10,size=(1000,1000))
c=a.transpose()
cp.cuda.Stream.null.synchronize()
e=time.time()

print(c)
print(" ")
print("Waktu CPU:",e - s, "detik")
```



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```
[[6 0 2 ... 5 8 0]
 [6 8 5 ... 1 1 4]
 [3 3 4 ... 6 0 8]
 ...
 [4 2 2 ... 1 0 2]
 [7 7 3 ... 8 7 6]
 [7 3 4 ... 4 6 6]]

Waktu CPU: 0.01370096206665039 detik
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```
In [15]: import time
import cupy as cp

s=time.time()
a=cp.random.randint(10,size=(1000,1000))
c=a.transpose()
cp.cuda.Stream.null.synchronize()
e=time.time()

print(c)
print(" ")
print("Waktu CPU:",e - s, "detik")

[[2 5 9 ... 3 4 3]
 [2 6 1 ... 4 0 0]
 [1 5 1 ... 6 4 9]
 ...
 [9 2 9 ... 3 1 4]
 [7 9 6 ... 2 7 3]
 [3 3 5 ... 7 8 1]]

Waktu CPU: 0.002547025680541992 detik
```

In []: