exp5

March 8, 2022

[ ]:
```python
import random

NO_OF_PROCESSES = 4
NO_OF_ITERATIONS = 10

time = [0]*NO_OF_PROCESSES

for _ in range(NO_OF_ITERATIONS):
    sender = random.randint(0, NO_OF_PROCESSES-1)
    recv = random.randint(0, NO_OF_PROCESSES-1)

    if sender == recv:
        continue

    time[sender] += 1
    time[recv] = max(time[sender], time[recv]) + 1

    # print(f"P{sender}[{time[sender]}]->P{recv}[{time[recv]}]")

    print(f"P{sender} -> P{recv}")
    print(time)
```

```
P0 -> P3
[1, 0, 0, 2]
P1 -> P2
[1, 1, 2, 2]
P0 -> P3
[2, 1, 2, 3]
P1 -> P0
[3, 2, 2, 3]
P2 -> P0
[4, 2, 3, 3]
P2 -> P1
[4, 5, 4, 3]
P1 -> P0
[7, 6, 4, 3]
```

[ ]:
```python
import random

NO_OF_PROCESSES = 5
NO_OF_ITERATIONS = 20

time = [[0 for i in range(NO_OF_PROCESSES)]for i in range(NO_OF_PROCESSES)]

for _ in range(NO_OF_ITERATIONS):
    sender = random.randint(0, NO_OF_PROCESSES-1)
    recv = random.randint(0, NO_OF_PROCESSES-1)

    if sender == recv:
        continue

    time[sender][sender] += 1
    for i in range(NO_OF_PROCESSES):
        time[recv][i] = max(time[recv][sender], time[recv][sender])+1

    # print(f"P{sender}[{time[sender]} -> P{recv}[{time[recv]}")
    print(f"P{sender} -> P{recv}")
    print(time)
```

```
P0 -> P4
[[1, 0, 0, 0, 0], [0, 0, 0, 0, 0], [0, 0, 0, 0, 0], [0, 0, 0, 0, 0], [1, 2, 2,
2, 2]]
P0 -> P4
[[2, 0, 0, 0, 0], [0, 0, 0, 0, 0], [0, 0, 0, 0, 0], [0, 0, 0, 0, 0], [2, 3, 3,
3, 3]]
P0 -> P1
[[3, 0, 0, 0, 0], [1, 2, 2, 2, 2], [0, 0, 0, 0, 0], [0, 0, 0, 0, 0], [2, 3, 3,
3, 3]]
P0 -> P3
[[4, 0, 0, 0, 0], [1, 2, 2, 2, 2], [0, 0, 0, 0, 0], [1, 2, 2, 2, 2], [2, 3, 3,
3, 3]]
P0 -> P4
[[5, 0, 0, 0, 0], [1, 2, 2, 2, 2], [0, 0, 0, 0, 0], [1, 2, 2, 2, 2], [3, 4, 4,
4, 4]]
P3 -> P2
[[5, 0, 0, 0, 0], [1, 2, 2, 2, 2], [1, 1, 1, 1, 2], [1, 2, 2, 3, 2], [3, 4, 4,
4, 4]]
P1 -> P2
[[5, 0, 0, 0, 0], [1, 3, 2, 2, 2], [2, 2, 3, 3, 3], [1, 2, 2, 3, 2], [3, 4, 4,
4, 4]]
P1 -> P0
[[1, 1, 2, 2, 2], [1, 4, 2, 2, 2], [2, 2, 3, 3, 3], [1, 2, 2, 3, 2], [3, 4, 4,
4, 4]]
P1 -> P0
[[2, 2, 3, 3, 3], [1, 5, 2, 2, 2], [2, 2, 3, 3, 3], [1, 2, 2, 3, 2], [3, 4, 4,
```

```
4, 4]]
P4 -> P2
[[2, 2, 3, 3, 3], [1, 5, 2, 2, 2], [4, 4, 4, 4, 4], [1, 2, 2, 3, 2], [3, 4, 4,
4, 5]]
P1 -> P0
[[3, 3, 4, 4, 4], [1, 6, 2, 2, 2], [4, 4, 4, 4, 4], [1, 2, 2, 3, 2], [3, 4, 4,
4, 5]]
P1 -> P2
[[3, 3, 4, 4, 4], [1, 7, 2, 2, 2], [5, 5, 6, 6, 6], [1, 2, 2, 3, 2], [3, 4, 4,
4, 5]]
P2 -> P1
[[3, 3, 4, 4, 4], [3, 3, 3, 4, 4], [5, 5, 7, 6, 6], [1, 2, 2, 3, 2], [3, 4, 4,
4, 5]]
P0 -> P4
[[4, 3, 4, 4, 4], [3, 3, 3, 4, 4], [5, 5, 7, 6, 6], [1, 2, 2, 3, 2], [4, 5, 5,
5, 5]]
P4 -> P1
[[4, 3, 4, 4, 4], [5, 5, 5, 5, 5], [5, 5, 7, 6, 6], [1, 2, 2, 3, 2], [4, 5, 5,
5, 6]]
P1 -> P0
[[4, 4, 5, 5, 5], [5, 6, 5, 5, 5], [5, 5, 7, 6, 6], [1, 2, 2, 3, 2], [4, 5, 5,
5, 6]]
P0 -> P1
[[5, 4, 5, 5, 5], [6, 7, 7, 7, 7], [5, 5, 7, 6, 6], [1, 2, 2, 3, 2], [4, 5, 5,
5, 6]]
P4 -> P1
[[5, 4, 5, 5, 5], [8, 8, 8, 8, 8], [5, 5, 7, 6, 6], [1, 2, 2, 3, 2], [4, 5, 5,
5, 7]]
P3 -> P1
[[5, 4, 5, 5, 5], [9, 9, 9, 9, 10], [5, 5, 7, 6, 6], [1, 2, 2, 4, 2], [4, 5, 5,
5, 7]]
```

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