Banker’s Algorithm Question | Operating System – M04 P06

This is a multipart blog article series, and in this series I am going to explain you the concepts of operating system. This article series is divided into multiple modules and this is the forth module which consists of 8 articles.

In this article we will see a question on banker’s algorithm, to get better understanding of the concept.

**Question:** Check for the deadlock, if deadlock is not present then find the safe sequence.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Process No. | Allocation of A | Allocation of B | Allocation of C | Max need of E | Max need of F | Max need of G | Current availability of E | Current availability of F | Current availability of G | Remaining need of E | Remaining need of F | Remaining need of G |
| P0 | 1 | 0 | 1 | 4 | 3 | 1 | 3 | 3 | 0 | 3 | 3 | 0 |
| P1 | 1 | 1 | 2 | 2 | 1 | 4 | 4 | 3 | 1 | 1 | 0 | 2 |
| P2 | 1 | 0 | 3 | 1 | 3 | 3 | 5 | 3 | 4 | 0 | 3 | 0 |
| P3 | 2 | 0 | 0 | 5 | 4 | 1 | 6 | 4 | 6 | 3 | 4 | 1 |

**Answer:**

* Current availability: (3,3,0)
* With the current availability we can fulfill the request of P0
* Current availability: (4,3,1)
* With current availability we can fulfill the request of P2
* Current availability: (5,3,4)
* With current availability we can fulfill the request of P1
* Current availability: (6,4,6)
* With current availability we can fulfill the request of P3
* Safe sequence = P0 -> P2 -> P1 -> P3
* No deadlock will occur. So it is safe.

So this was a question on banker’s algorithm. Hope you liked it and learned something new from it.

If you have any doubt, question, queries related to this topic or just want to share something with me, than please feel free to contact me.