Banker's Algorithm

① Store the elements of Allocation in a two dimensional array.

② Store the elements of Maximum in a two two dimensional array.

③ Store the available elements in one-dimensional array.

④ Create a new array with all elements equals to 1 to check every process is executed or not.

⑤ Create a function to calculate need.

$$\boxed{\text{Need} = \text{Maximum} - \text{Allocation}}$$

Create a 2-D array for Need of same size the use two nested loop to extract every elements from maximum and Allocation. ~~rowwise~~ rowwise manner and substract them and then store the result in Need.

⑥ Create a function to check whether all the process can be executed or not.
In this function we are able to check whether the system is in safe state or not.

In this function we check every elements of need with available.

If every element of need is less than or equal to available then process will be executed
Otherwise process will not be executed

→ if → need ≤ available → Process Execute

→ else – Process not executed.

New available = Add [Allocation and given available]

(7) If all process are executed then system is in safe state.

If any one of the process is not executed then the system is not in safe state.

(8) Display the Allocation, Maximum, Need and Processess executed on the terminal.

Also display the system is in safe state or not.

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