

Bankers Code:

```
#include <iostream>
using namespace std;

int main()
{
    int n, m, i, j, k;
    cout<<"enter no of process"<<"\n";
    cin>>n;
    m = 3;
    int alloc[n][3];
    for(int i=0;i<n;i++)
    {
        for(int j=0;j<3;j++)
        {
            cin>>alloc[i][j];
        }
        cout<<"\n";
    }
    int max[5][3] = { { 7, 5, 3 },
                      { 3, 2, 2 },
                      { 9, 0, 2 },
                      { 2, 2, 2 },
                      { 4, 3, 3 } };

    int avail[3] = { 3, 3, 2 };

    int f[n], ans[n], ind = 0;
    for (k = 0; k < n; k++) {
        f[k] = 0;
    }
    int need[n][m];
    for (i = 0; i < n; i++) {
        for (j = 0; j < m; j++)
            need[i][j] = max[i][j] - alloc[i][j];
    }
    int y = 0;
    for (k = 0; k < 5; k++) {
        for (i = 0; i < n; i++) {
            if (f[i] == 0) {

                int flag = 0;
                for (j = 0; j < m; j++) {
                    if (need[i][j] > avail[j]){
                        flag = 1;
                        break;
                    }
                }
            }
        }
    }
}
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        }

        if (flag == 0) {
            ans[ind++] = i;
            for (y = 0; y < m; y++)
                avail[y] += alloc[i][y];
            f[i] = 1;
        }
    }
}

int flag = 1;
for(int i = 0; i < n; i++)
{
    if(f[i]==0)
    {
        flag = 0;
        cout << "The given sequence is not safe";
        break;
    }
}

if(flag==1)
{
    cout << "Following is the SAFE Sequence" << endl;
    for (i = 0; i < n - 1; i++)
        cout << " P" << ans[i] << " ->";
    cout << " P" << ans[n - 1] << endl;
}

return (0);
}

```

OUTPUT:

enter no of process

5

0 1 0

2 0 0

3 0 2

2 1 1

0 0 2

Following is the SAFE Sequence

P1 -> P3 -> P4 -> P0 -> P2