

GFG - Adding two matrices

I/P: $A[i][j] = \{ \{1, 2, 3\}, \{4, 5, 6\} \}$

Output: 2 5 6 6 8 9

$B[j][i] = \{ \{1, 3, 3\}, \{2, 3, 3\} \}$

Thought \Rightarrow 2 matrices can only be added when their size is same, (no. of rows & no. of columns both).

\rightarrow If size is same, then further:

we will initialize a zero matrix of same size.

then just iterating over & adding $A[i][j] + B[i][j]$

code \Rightarrow

```
if (A.size() != B.size() || A[0].size() != B[0].size())  
    return {};
```

```
int rows = A.size();
```

```
int cols = A[0].size();
```

```
vector<vector<int>> ans (rows, vector<int>(cols, 0));
```

```
for (i = 0  $\rightarrow$  rows;
```

```
    for (j = 0  $\rightarrow$  cols;
```

```
        ans[i][j] = A[i][j] + B[i][j];
```

```
    return ans;
```