Answer on Question#49934 - <Programming> - <C++>

Program

```
#include <iostream>
#define N 3
#define M 3
using namespace std;
void getInput(int **mass)
{
 int i,j;
 for(i=0;i<N;i++)
   for(j=0;j<M;j++)
    {
       cout<<"Input element ["<<i<<"]["<<j<<"]: ";
       cin>>mass[i][j];
    }
}

void print(int **mass)
{
 int i,j;
 for(i=0;i<N;i++)
 {
    for(j=0;j<M;j++)
       cout<<mass[i][j]<<" ";
    cout<<endl;
 }
}

void addMat(int** mas1, int **mas2, int **res)
{
 int i,j;
 for(i=0;i<N;i++)
    for(j=0;j<M;j++)
      res[i][j]=mas1[i][j]+mas2[i][j];

}

void multMat(int **mas1, int **mas2, int **res)
{
 int i,j,k;
 if(N==M)
   for(i=0;i<N;i++)
     for(j=0;j<M;j++)
       {
         res[i][j]=0;
```

```
          for(k=0;k<N;k++)
            res[i][j]+=mas1[i][k]*mas2[k][j];
          }
}
int main( )
{

int **mat1=new int*[N], **mat2=new int*[N], **res=new int*[N];
int i;
for(i=0;i<N;i++)
{
   mat1[i]=new int[M];
   mat2[i]=new int[M];
   res[i]=new int[M];
}

cout<<"Please enter a 3x3 matrix: ";
getInput(mat1);
cout<<"Please enter a 3x3 matrix: ";
getInput(mat2);
addMat( mat1, mat2, res);
cout<<"\nSum of matrices: "<<endl;
print(res);
multMat( mat1, mat2, res);
cout<<"\nProduct of matrices: "<<endl;
print(res);
return 0;
}
```

Example of execute program:

```
Please enter a 3x3 matrix: Input element [0][0]: 1
Input element [0][1]: 2
Input element [0][2]: 3
Input element [1][0]: 4
Input element [1][1]: 5
Input element [1][2]: 6
Input element [2][0]: 7
Input element [2][1]: 8
Input element [2][2]: 9
Please enter a 3x3 matrix: Input element [0][0]: 1
Input element [0][1]: 0
Input element [0][2]: 0
Input element [1][0]: 0
Input element [1][1]: 1
Input element [1][2]: 0
Input element [2][0]: 0
Input element [2][1]: 0
```

Input element [2][2]: 1

Sum of matrices:
2 2 3
4 6 6
7 8 10

Product of matrices:
1 2 3
4 5 6
7 8 9

Process returned 0 (0x0) execution time : 191.484 s
Press any key to continue.