#include <iostream>

#include <fstream>

#define inf 99999

using namespace std;

ifstream f("intrate.in");

int main()

{

int n,m,c,i,j,k,x,y,a[100][100];

f>>n>>m;

for(i=1;i<=n;i++)

for(j=1;j<=n;j++)

if(i==j) a[i][j]=0;

else a[i][j]=inf;

for(i=1;i<=m;i++)

{

f>>x>>y>>c;

a[x][y]=a[y][x]=c;

}

for(int k=1;k<=n;k++)

for(int i=1;i<=n;i++)

for(int j=1;j<=n;j++)

if(a[i][j]>a[i][k]+a[k][j]) a[i][j]=a[i][k]+a[k][j];

for (int i=1;i<=n;i++)

{

for (int j=1;j<=n;j++)

cout<<a[i][j]<<" ";

cout<<endl;

}

return 0;

}

/\*

--------INTRARE----------

4 8  
1 2 5  
1 3 10  
1 4 1  
2 3 3  
3 4 2  
4 1 3  
4 2 20  
4 3 16

\*/