```cpp
#include<iostream>
#include<cmath>
using namespace std;
class Pair
{
        int s;
        int a[10][10];
        public :
        void setd();
        void getter(int[10][10], int);
        Pair();
        void shortest();


};
void Pair :: setd()
                {
                        cout<<"Enter no of nodes : ";
                        cin>>s;
                        int i=0;
                        int j=0;
                        cout<<"Enter A0 (100 if infinity) : "<<endl;
                        for(i=1;i<=s;i++)
                        {
                                for(j=1;j<=s;j++)
                                {
                                        if(i==j)
                                        {
                                                a[i][j]=0;
                                                cout<<"["<<i<<"]"<<"["<<j<<"]"<<": "<<a[i][j]<<endl;
```

```cpp
                }
                else
                {
                        cout<<"["<<i<<"]"<<"["<<j<<"]"<<": ";
                        cin>>a[i][j];
                }
        }
    }
    getter(a,s);
}
void Pair :: shortest()
{
    int k=1;
    while(k!=s+1)
    {
        for(int i=1;i<=s;i++)
        {
            for(int j=1;j<=s;j++)
            {
                if(a[i][k]+a[k][j]<a[i][j])
                {
                    a[i][j]=a[i][k]+a[k][j];
                }
            }
        }
        cout<<"A"<<k<<" : "<<endl;
        getter(a,s);
        cout<<endl;

cout<<"_____
_____"<<endl;

        k++;
```

```cpp
                    }
               }
               void Pair :: getter(int a[10][10],int n)
               {
                    cout<<endl;
          for(int i=1;i<=n;i++)
                    {
                         for(int j=1;j<=n;j++)
                         {
                              cout<<a[i][j]<<" ";
                         }
                         cout<<endl;
                    }

               }
          Pair :: Pair()
               {
                    setd();
                    cout<<endl;
                    shortest();
               }
int main()
{
     Pair p;
}
```