

```

#include<stdio.h>

int ary[10][10],completed[10],n,cost=0;

void takeInput()
{
    int i,j;

    printf("Enter the number of villages: ");
    scanf("%d",&n);

    printf("\nEnter the Cost Matrix\n");

    for(i=0;i < n;i++)
    {
        printf("\nEnter Elements of Row: %d\n",i+1);

        for( j=0;j < n;j++)
            scanf("%d",&ary[i][j]);

        completed[i]=0;
    }

    printf("\n\nThe cost list is:");

    for( i=0;i < n;i++)
    {
        printf("\n");

        for(j=0;j < n;j++)
            printf("\t%d",ary[i][j]);
    }

```

```
}
```

```
void mincost(int city)
```

```
{
```

```
int i,ncity;
```

```
completed[city]=1;
```

```
printf("%d--->",city+1);
```

```
ncity=least(city);
```

```
if(ncity==999)
```

```
{
```

```
ncity=0;
```

```
printf("%d",ncity+1);
```

```
cost+=ary[city][ncity];
```

```
return;
```

```
}
```

```
mincost(ncity);
```

```
}
```

```
int least(int c)
```

```
{
```

```
int i,nc=999;
```

```
int min=999,kmin;
```

```
for(i=0;i < n;i++)
```

```
{
```

```
if((ary[c][i]!=0)&&(completed[i]==0))
```

```
if(ary[c][i]+ary[i][c] < min)
{
min=ary[i][0]+ary[c][i];
kmin=ary[c][i];
nc=i;
}
}
```

```
if(min!=999)
cost+=kmin;
```

```
return nc;
}
```

```
int main()
{
takeInput();
```

```
printf("\n\nThe Path is:\n");
mincost(0);
```

```
printf("\n\nMinimum cost is %d\n ",cost);
```

```
return 0;
}
```

```
C:\Users\Sravya M\Documents\tavel.exe
2
3
3
1
Enter Elements of Row: 3
3
2
1
4
5
Enter Elements of Row: 4
3
2
4
5
1
Enter Elements of Row: 5
2
3
2
4
5
The cost list is:
    1    2    3    4    5
    4    5    2    3    1
    3    2    1    4    5
    3    2    4    5    1
    2    3    2    4    5
The Path is:
1--->2--->5--->3--->4--->1
Minimum cost is 12
-----
Process exited after 29.57 seconds with return value 0
Press any key to continue . . .
```