

```
#Finds the Excel workbook with the data
workbook = xlrd.open_workbook('Homework_13.xlsx')
#Finds the specific Excel Sheet with the Data--when it's named Data
worksheet= workbook.sheet_by_name('Data')
```

```
#This finds the last column having a value in it. This helps us to know how many nodes are
in the network.
```

```
last_column = worksheet.ncols
```

```
#We set the number of nodes equal to the number of non-empty columns
num_nodes = last_column - 1
```

```
#Initialize the V-set
```

```
V = []
```

```
#For loop to add nodes to the V-Set based on the number of nodes
```

```
for i in range(num_nodes):
```

```
    V.append(i+1)
```

```
#Initialize the set of edges E
```

```
E = []
```

```
#Initialize the cost parameter
```

```
c={}
```

```
#These for loops go through the table of data to
```

```
#figure out which edges are in the network
```

```
#If the edge exists, then we add that edge to the set E
```

```
#And, we set the set the cost of the edge
```

```
#equal to the value in the cell
```

```
for i in V:
```

```
    for j in V:
```

```
        if worksheet.cell(j, i).value != "--":
```

```
            #Only consider when i < j since this is the way to define
```

```
            #the set of edges
```

```
            if i < j:
```

```
                #set the cost of (i,j) equal to the integer value in the cell
```

```
                c[i,j] = int(worksheet.cell(j,i).value)
```

```
                #Adds (i,j) to the set E
```

```
                E.append((i,j))
```