Computing In-degree and Out-degree for directed graph

In [22]:
```
f = open("metabolic.edgelist.txt")
```

In [2]:
```
list_ =  f.readlines()
```

In [6]:
```
u = []
v = []

for i in list_:
    getArray = i.split("\t")

    getU = getArray[0]
    getV = getArray[1][:-1]

    u.append(int(getU))
    v.append(int(getV))
```

In [12]:
```
indegree = {}

for item in u:
    if (item in indegree):
        indegree[item] += 1
    else:
        indegree[item] = 1

indegree = dict(sorted(indegree.items()))

print(indegree)
```

```
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```

In [13]:
```
outdegree = {}

for item in v:
    if (item in outdegree):
        outdegree[item] += 1
    else:
        outdegree[item] = 1

outdegree = dict(sorted(outdegree.items()))

print(outdegree)
```

```
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```
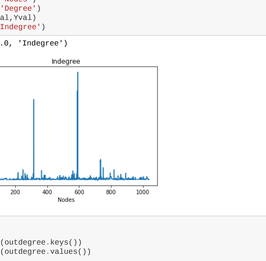

In [16]:
```
import matplotlib.pyplot as plt
```

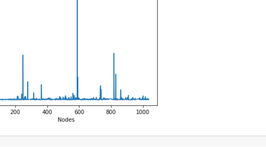
In [20]:
```
#indegree
Xval = list(indegree.keys())
Yval = list(indegree.values())

plt.xlabel('Nodes')
plt.ylabel('Degree')
plt.plot(Xval,Yval)
plt.title('Indegree')
```

Out[20]:
```
Text(0.5, 1.0, 'Indegree')
```



In [21]:
```
#outdegree

Xval = list(outdegree.keys())
Yval = list(outdegree.values())

plt.xlabel('Nodes')
plt.ylabel('Degree')
plt.plot(Xval,Yval)
plt.title('Outdegree')
```

Out[21]:
```
Text(0.5, 1.0, 'Outdegree')
```



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