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In [12]: %%file q1.py
# NOT SURE OF ACCURACY OF THIS CODE
from mrjob.job import MRJob
from mrjob.step import MRStep

class pageRankSimple(MRJob):
    def mapper(self, _, line):
        vertexImp, neighbors = line.strip().split('->')
        neighborsList = neighbors.split(',')
        vertex, imp = vertexImp.split(',')
        #First Type of Packet Generation
        for neighbor in neighborsList:
            yield vertex, (neighbor, 'n')

        #Second Type of Packet Generation
        eachImp=float(float(imp)/len(neighborsList))
        for neighbor in neighborsList:
            yield neighbor, (eachImp, 'imp')

    def reducer(self, key, values):
        sumImp=0
        neighbors=[]
        for value in values:
            if(value[1]=='imp'):
                sumImp=sumImp+value[0]
            else:
                neighbors.append(value[0])

        yield key, sumImp
        if(neighbors):
            yield key, neighbors

    def steps(self):
        return [
            MRStep(mapper=self.mapper, reducer=self.reducer)
        ]

if __name__ == '__main__':
    pageRankSimple.run()
```

Overwriting q1.py

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In [13]: !python q1.py file3.txt
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"0" 0.8
"1" 0.8
"1" ["2", "4"]
"2" 1.6
"2" ["3", "4"]
"3" 1.2000000000000002
"3" ["1"]
"4" 0.8
"4" ["0"]
"5" 0
"5" ["6", "2"]
"6" 0.4
"6" ["3"]
"7" 0
"7" ["2"]
```

```
No configs found; falling back on auto-configuration
No configs specified for inline runner
Creating temp directory C:\Users\DELL\AppData\Local\Temp\q1.DELL.20240501.061509.155135
Running step 1 of 1...
job output is in C:\Users\DELL\AppData\Local\Temp\q1.DELL.20240501.061509.155135\output
Streaming final output from C:\Users\DELL\AppData\Local\Temp\q1.DELL.20240501.061509.155135\output...
Removing temp directory C:\Users\DELL\AppData\Local\Temp\q1.DELL.20240501.061509.155135...
```

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In [ ]:
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