Homework 5

The version of Spark is version 2.1.0
The version of Python is version 2.7.10

- **Betweenness**
  Source code name: ChiWei_Liu_betweenness.py
  Output file: ChiWei_Liu_betweenness.txt
  Command line:
  bin/spark-submit --master "local[*]" /FilePath/ChiWei_Liu_betweenness.py
  /FilePath/ratings.csv /FilePath/ChiWei_Liu_betweenness.txt

- **Modularity**
  Source code name: ChiWei_Liu_communities.py
  Output file: ChiWei_Liu_communities.txt
  Command line:
  bin/spark-submit --master "local[*]" /FilePath/ChiWei_Liu_communities.py
  /FilePath/ratings.csv /FilePath/ChiWei_Liu_communities.txt

- Bonus
  Source code name: ChiWei_Liu_community.jar
  Output file: ChiWeiLiu Scala
  Command line:
  bin/spark-submit --packages ml.sparkling:sparkling-graph-examples_2.11:0.0.6 --class
  BetweennessTesting --master "local[*]" / FilePath /ChiWei_Liu_community.jar /
  FilePath /ratings.csv