

- Run HW2(IR).ipynb file
- These libraries must be preinstalled

```
import math
import heapq
import numpy as np
import matplotlib.pyplot as plt
import json
import pickle
import sklearn
from sklearn import metrics
from sklearn.feature_extraction.text import TfidfVectorizer
import networkx as nx
import pandas as pd
from nltk.cluster.util import cosine_distance
```