[Guideline for Data-science assignment #3]

Perform clustering on a given data set by using DBSCAN

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1. Environment Setting

A. OS: Windows

B. Languages: Python

2. How to compile and execute the code

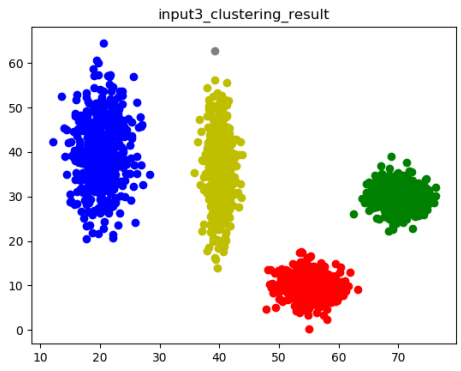
- Input files, output files, (and answer files, Testing program) are in a same directory
  - Dir name: ./files
  - 코드 상 Directory path는 코드 실행 시 넣어주는 파라미터 값[input file path]을 사용하기 때문에, files 폴더가 아니더라도 input parameter값에 따라 유동적으로 동작 가능
- Command: python [executable file name] [input file path] [n] [Eps] [MinPts]
  - Python clustering.py ./files/input1.txt 8 15 22

```
PS C:\Users\LG\Desktop\Data_Science\Assignment3> python clustering.py ./files/input1.txt 8 15 22
PS C:\Users\LG\Desktop\Data_Science\Assignment3> python clustering.py ./files/input2.txt 5 2 7
PS C:\Users\LG\Desktop\Data_Science\Assignment3> python clustering.py ./files/input3.txt 4 5 5
```

3. Specification for running the code

A. 좌표 간 거리 계산: Euclidean distance

B. 번외로 plotting 시키는 코드도 작성 -> show_plot() 함수 (주석처리함)
Plot image 저장 위치: ./result_img/
예시) input3 파일 clustering 결과



4. Result of clustering

```
PS C:\Users\LG\Desktop\Data_Science\Assignment3\files> ./PA3.exe input1
98.9744점
PS C:\Users\LG\Desktop\Data_Science\Assignment3\files> ./PA3.exe input2
94.86598점
PS C:\Users\LG\Desktop\Data_Science\Assignment3\files> ./PA3.exe input3
99.97736점
```