演算法Lab2 - 電機4C 洪愷尹 0710851

- 演算法涵蓋一下幾個部分：

- 1. Create GraphMST

    1. Adding Vertex：O(|V|) ->single for loop 讀檔。
    2. Building Adjacent Matrix：O(|V|^2) -> double for loop to calculate Manhattan distance。
    3. Adding Existed Edge to Adjacent Matrix：O(|E|) -> single for loop。
  2. Perform Prim's MST：O(|V|^2) ->因為是用Adjacent Matrix實作，所以複雜度是在Vertex的平方。

```
Perform Prim's MST
Algorithm
        |
        v
    Maintain
    key array
    predecessor array
    visited array
        |
        v
    Initial
    all of array
```

```
Start from
Index 0 vertex
        |
        v
Extract Minimum  <----  no
value from Key
        |
        v
Mark as visited  -------->  if not visited and   ----->  Update key value of
        |                   weighted edges is            adjacent
        |                   bigger than so far           vertices
all visited?    yes         key value
        |
        v
     Return
```