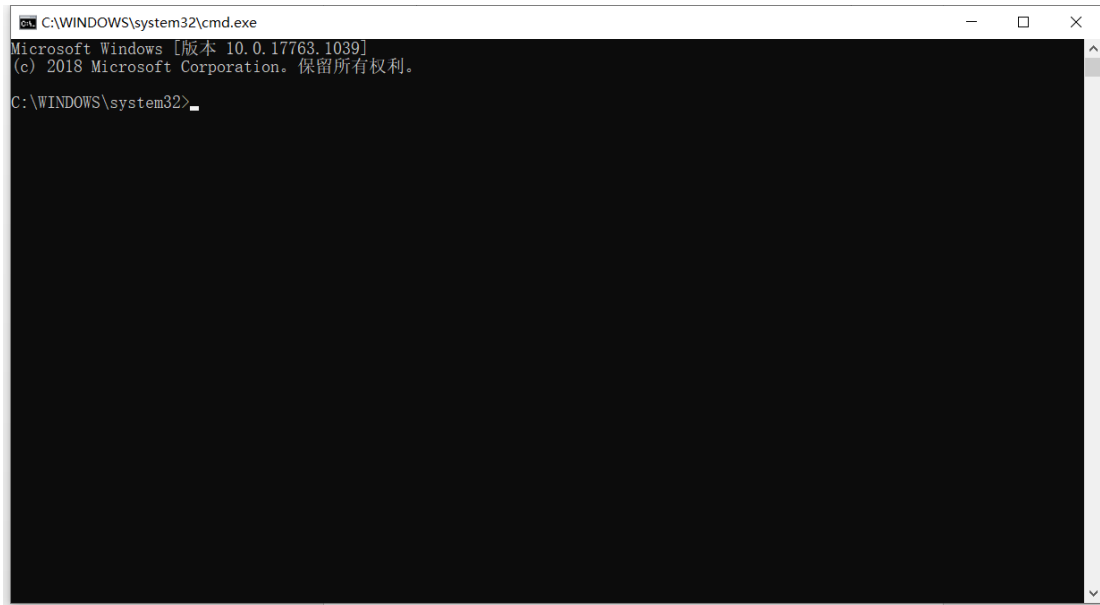


# The manual of the CTE.jar

## Step 1:

Run CMD



## Step 2

Make sure the Java JDK is installed correctly (command refer to javac)

## Step 3

Input: `java -jar CTE.jar F:\CTE\sim1.txt 5 200 50 10`

Parameters Explanation:

Parmeter1: F:\CTE\sim1.txt ; File path of fMRI data.

Parmeter2: 5 ; Number of brain regions (Integers greater than 1).

Parmeter3: 200 ; Length of fMRI timeseries (Integers greater than 1).

Parmeter4: 50 ; Number of subjects (Integers greater than 0).

Parmeter5: 10 ; Running times (Integers greater than 0).

C:\WINDOWS\system32\cmd.exe - java -jar CTE.jar F:\sim1.txt 5 200 50 10

```
F:\>java -jar CTE.jar F:\sim1.txt 5 200 50 10
Initialization heuristic information matrix.
Heuristic information: brain region1---brain region1 :-Infinity
Heuristic information: brain region1---brain region2 :403.1372639921901
Heuristic information: brain region1---brain region3 :65.82814187843906
Heuristic information: brain region1---brain region4 :7.909513206621341
Heuristic information: brain region1---brain region5 :377.870385903454
Heuristic information: brain region2---brain region1 :502.4005621867982
Heuristic information: brain region2---brain region2 :-Infinity
Heuristic information: brain region2---brain region3 :602.8839283775051
Heuristic information: brain region2---brain region4 :60.59792807749909
Heuristic information: brain region2---brain region5 :92.03911686209176
Heuristic information: brain region3---brain region1 :87.1530500682311
Heuristic information: brain region3---brain region2 :678.6091334287776
Heuristic information: brain region3---brain region3 :-Infinity
Heuristic information: brain region3---brain region4 :544.1823127526259
Heuristic information: brain region3---brain region5 :131.90130838236655
Heuristic information: brain region4---brain region1 :11.948791834736767
Heuristic information: brain region4---brain region2 :71.32545012553237
Heuristic information: brain region4---brain region3 :601.3015326408422
Heuristic information: brain region4---brain region4 :-Infinity
Heuristic information: brain region4---brain region5 :563.5060054439782
Heuristic information: brain region5---brain region1 :476.01614954533943
Heuristic information: brain region5---brain region2 :102.54207782523008
Heuristic information: brain region5---brain region3 :137.30707711768991
Heuristic information: brain region5---brain region4 :580.4142363809005
Heuristic information: brain region5---brain region5 :-Infinity
End, total[249745]ms
Waiting for ACO algorithm.....
```

C:\WINDOWS\system32\cmd.exe

```
Ants search for the best solution: the 8-th run.
Searching is stop at 6-th generations (Algorithm gets the highest score)
=====
The number of nodes: 5
The Graph with best CTE score is:
1->2
1->5
2->3
3->4
4->5
=====

Ants search for the best solution: the 9-th run.
Searching is stop at 6-th generations (Algorithm gets the highest score)
=====
The number of nodes: 5
The Graph with best CTE score is:
1->2
1->5
2->3
3->4
4->5
=====

Ants search for the best solution: the 10-th run.
Searching is stop at 6-th generations (Algorithm gets the highest score)
=====
The number of nodes: 5
The Graph with best CTE score is:
1->2
1->5
2->3
3->4
4->5
=====

F:\>_
```