

BT18CSE063 : CHAUDHARI AMITSINH CN ASSIGNMENT – 4

Running instructions :

command : `python BT18CSE063_dvr.py config_file`

Routers distance vectors are initialized in 0th iteration using config_file

```
Activities Terminal Apr 8 7:24 PM
amitsinh@camitpc: ~/Desktop/sem6/CN/assignment4
amitsinh@camitpc:~/Desktop/sem6/CN/assignment4$ python BT18CSE063_dvr.py config_file1
ITERATION : 0 ^ ROUTER-NAME : E
MY DISTANCE VECTOR
- E -> A : 3
- E -> C : 17
- E -> B : 11
- E -> E : 0
- E -> D : 3
*****

ITERATION : 0 ^ ROUTER-NAME : D
MY DISTANCE VECTOR
- D -> A : 12
- D -> C : 3
- D -> B : 1000
- D -> E : 3
- D -> D : 0
*****

ITERATION : 0 ^ ROUTER-NAME : B
MY DISTANCE VECTOR
- B -> A : 7
- B -> C : 3
- B -> B : 0
- B -> E : 11
- B -> D : 1000
*****

ITERATION : 0 ^ ROUTER-NAME : C
MY DISTANCE VECTOR
- C -> A : 1000
- C -> C : 0
- C -> B : 3
- C -> E : 17
- C -> D : 3
*****

ITERATION : 0 ^ ROUTER-NAME : A
MY DISTANCE VECTOR
- A -> A : 0
- A -> C : 1000
- A -> B : 7
- A -> E : 3
- A -> D : 12
*****
```

```
Activities Terminal Apr 8 7:24 PM
amitsinh@camltpc: ~/Desktop/sem6/CN/assignment4

ITERATION : 1 ^ ROUTER-NAME : E
MY DISTANCE VECTOR
- E -> A : 3
* E -> C : 6
* E -> B : 10
- E -> E : 0
- E -> D : 3
*****

ITERATION : 1 ^ ROUTER-NAME : A
MY DISTANCE VECTOR
- A -> A : 0
* A -> C : 9
- A -> B : 7
- A -> E : 3
* A -> D : 6
*****

ITERATION : 1 ^ ROUTER-NAME : B
MY DISTANCE VECTOR
- B -> A : 7
- B -> C : 3
- B -> B : 0
* B -> E : 10
* B -> D : 6
*****

ITERATION : 1 ^ ROUTER-NAME : C
MY DISTANCE VECTOR
* C -> A : 9
- C -> C : 0
- C -> B : 3
* C -> E : 6
- C -> D : 3
*****

ITERATION : 1 ^ ROUTER-NAME : D
MY DISTANCE VECTOR
* D -> A : 6
- D -> C : 3
* D -> B : 6
- D -> E : 3
- D -> D : 0
*****
```

IN 1st iteration distance vectors are modified by knowing neighbours paths to diff destinations to optimize self distance vectors

```
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ITERATION : 2 ^ ROUTER-NAME : B
MY DISTANCE VECTOR
- B -> A : 7
- B -> C : 3
- B -> B : 0
* B -> E : 9
- B -> D : 6
*****

ITERATION : 2 ^ ROUTER-NAME : D
MY DISTANCE VECTOR
- D -> A : 6
- D -> C : 3
- D -> B : 6
- D -> E : 3
- D -> D : 0
*****

ITERATION : 2 ^ ROUTER-NAME : C
MY DISTANCE VECTOR
- C -> A : 9
- C -> C : 0
- C -> B : 3
- C -> E : 6
- C -> D : 3
*****

ITERATION : 2 ^ ROUTER-NAME : A
MY DISTANCE VECTOR
- A -> A : 0
- A -> C : 9
- A -> B : 7
- A -> E : 3
- A -> D : 6
*****

ITERATION : 2 ^ ROUTER-NAME : E
MY DISTANCE VECTOR
- E -> A : 3
- E -> C : 6
* E -> B : 9
- E -> E : 0
- E -> D : 3
*****
```

IN 2nd iteration also some significant amount of changes happened in routers B , E for converging to optimum reach paths

```
Activities Terminal Apr 8 7:24 PM amitsinh@camltpc: ~/Desktop/sem6/CN/assignment4

ITERATION : 3 ^ ROUTER-NAME : C
MY DISTANCE VECTOR
- C -> A : 9
- C -> C : 0
- C -> B : 3
- C -> E : 6
- C -> D : 3
*****

ITERATION : 3 ^ ROUTER-NAME : B
MY DISTANCE VECTOR
- B -> A : 7
- B -> C : 3
- B -> B : 0
- B -> E : 9
- B -> D : 6
*****

ITERATION : 3 ^ ROUTER-NAME : D
MY DISTANCE VECTOR
- D -> A : 6
- D -> C : 3
- D -> B : 6
- D -> E : 3
- D -> D : 0
*****

ITERATION : 3 ^ ROUTER-NAME : E
MY DISTANCE VECTOR
- E -> A : 3
- E -> C : 6
- E -> B : 9
- E -> E : 0
- E -> D : 3
*****

ITERATION : 4 ^ ROUTER-NAME : A
MY DISTANCE VECTOR
- A -> A : 0
- A -> C : 9
- A -> B : 7
- A -> E : 3
- A -> D : 6
*****

ITERATION : 4 ^ ROUTER-NAME : B
```

IN 3rd iteration no changes happended , so we can conclude routers distance vectors have converged to minimum by bellman ford equation