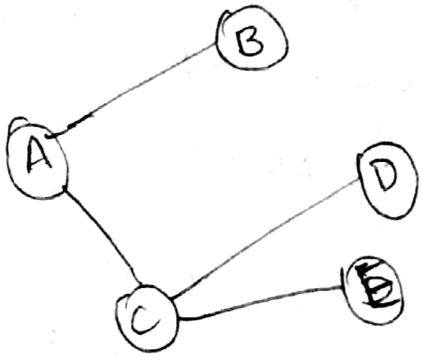
CYCLE - 2

WAP for distance Vector algorithm to find Suitable path for transmission.



```
# include <stdio.h>
# include <bits/stdc++.h>
# define   MAX   10
int n;

~~Void input(int~~
Class router {
   Char   adj-new[MAX], adj-old[MAX];
   int    table-new[MAX], table-old[MAX];

      void copy()
      {     for (int i=0; i<n; i++) {
                 adj-old[i] = adj-new[i];
                 table-old[i] = table-new[i];
      }     }
```

```
int equal() {
for (int i=0; i< n; i++)
  if (table-old != table_new [i] || adj-new [i]
     != ~~adj~~ adj-old [i]) return 0;

  return 1;
  }

Void input (int j) {
   Cout<< " Enter  1- if router exist ;
else - enter 99 :           " << endl;
   for (int i=0 ; i<n ; i++)
    if ( i!=j)    Cout << (Char)('A'+j)<<" ";
      Cout<< "\n Enter Matrix :";
   for( i=0 ; i<n; i++) {
     if (i==j)    table-new [j]= 0;

     else
          cin>> table - new [i];
        adj-new [i] =(Char) ('A'+i);
      }
      cout<<endl;
  }
```

```
Void display(){
    Cout << "\n Destination Router"
for(int i=0 ; i<n; i++) cout <<(char)('A'+i)<<"
    Cout << "\n Outgoing line"
for(int i=0 ; i<n; i++) Cout << adj.new[i]<<"
    Cout << "\n Hop Count :    "} ;
for(int i=0;i<n ,i++) Cout << table_new[i]<<"

}

Void build (int j) {
  for(int i=0 ; i<n ; i++)
    for( int k=0 ;(i!=j) && (k<n) ; k++)
      if (table_old [i] != 99)
        if (table_new[i]+ r[i].table_new [e]
                  < table_new [k]) {
          table_new [k] = table_new[i] +
                  r[i]. table_new[k];
          adj_new [k] = char ('A'+i);

        }
    }
} r[10];
```

```
Void build table (){

int i=0; j=0;
   while (i!= n){
      for ( i=j ; i<n; i++){
            r[i].copy();
         r[i]. ~~true~~ build (i);

         }
      for (i=0; i<n; i++)
      if ( ! r[i]. equal ()) {
            j=i;

      break;
       }

   }

   }
Void main() {
 Cout << "Enter the no. of routers : ";
 cin >> n;
 for (int i=0; i<n; i++) r[i]. ~~put~~ input ();
   build_table ();
 for (i=0; i<n; i++){
   Cout<< "Router Table Entries for router"
      << (char)('A'+i) << ":";
 r[i].display();   }      }
```