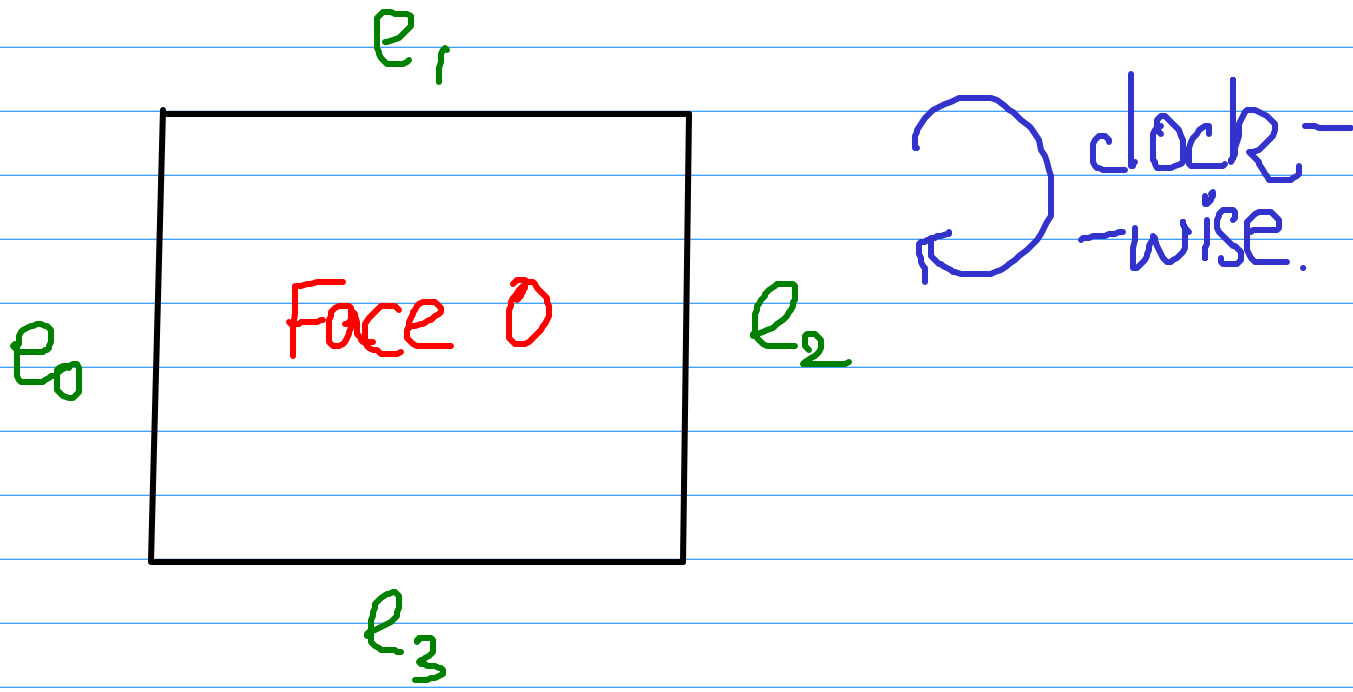
C++ LAB 2

Sep 15

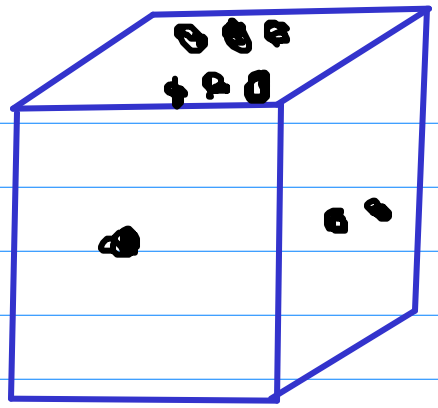
- What you have done so far :



- DCEL → Higher Dimensional Objects

⇓

More than one face



Eg. Cube has 6 faces

↓

We need to represent them

↳ Done using Twin Pointers between faces.

- New Functionality

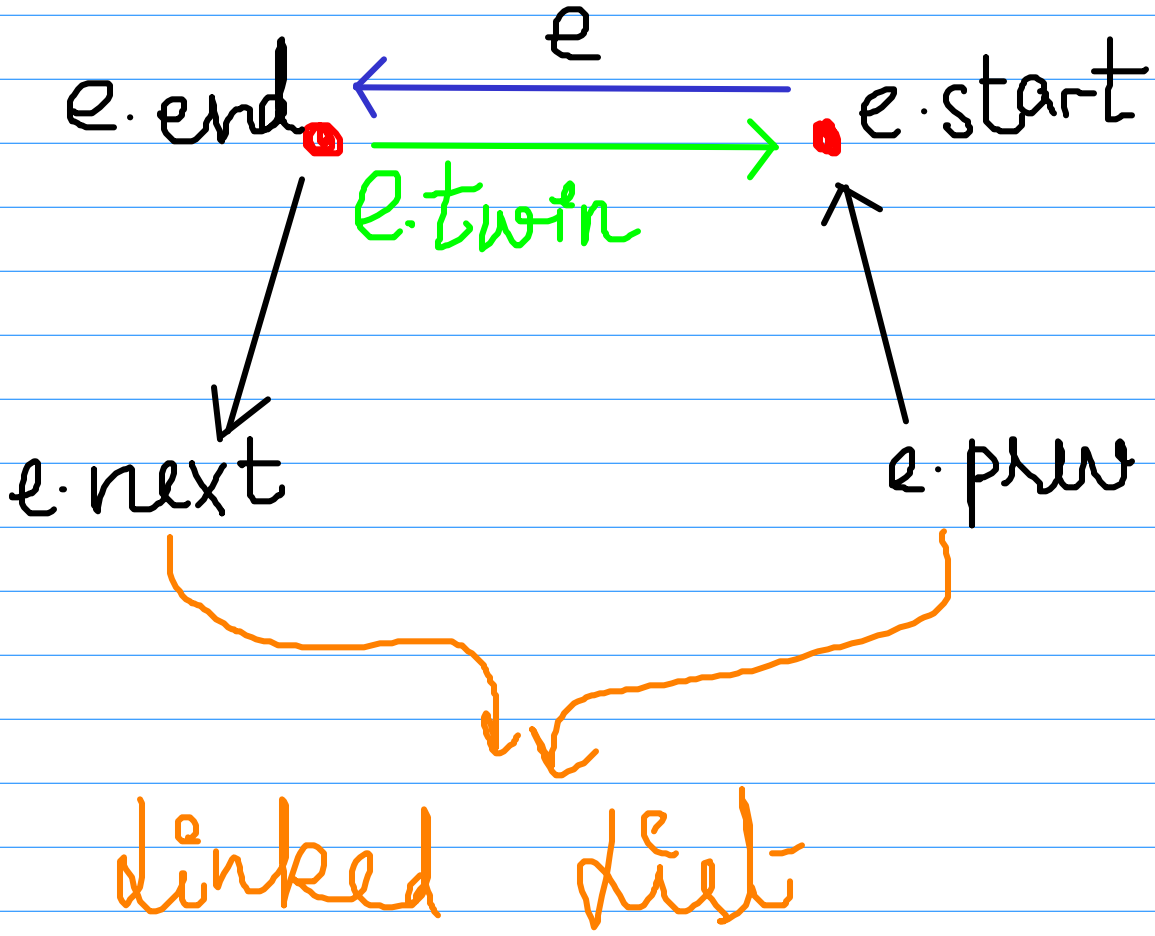
split (e1, e2)

edge indices, given in a file.

Do it in C++ (classes)

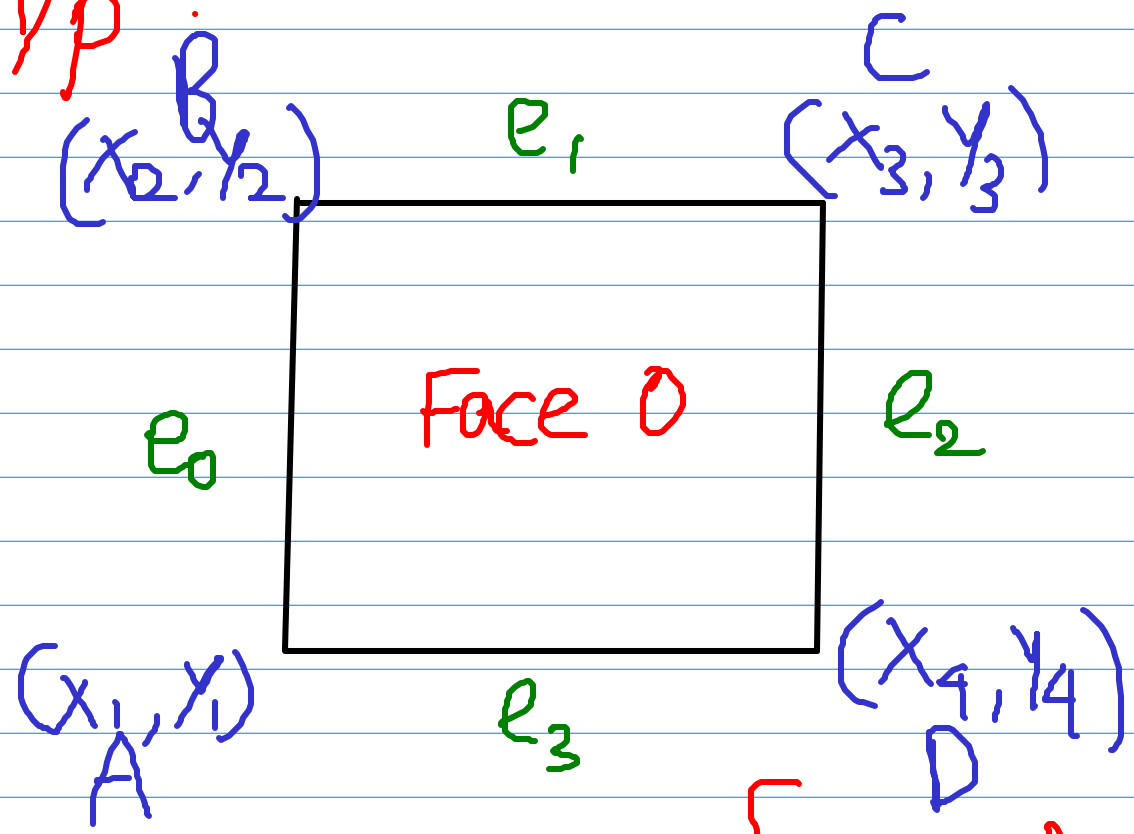
- But, before that, what is a twin pointer!?

(Note: You don't need it for lab 1, but you need it for lab 2.)



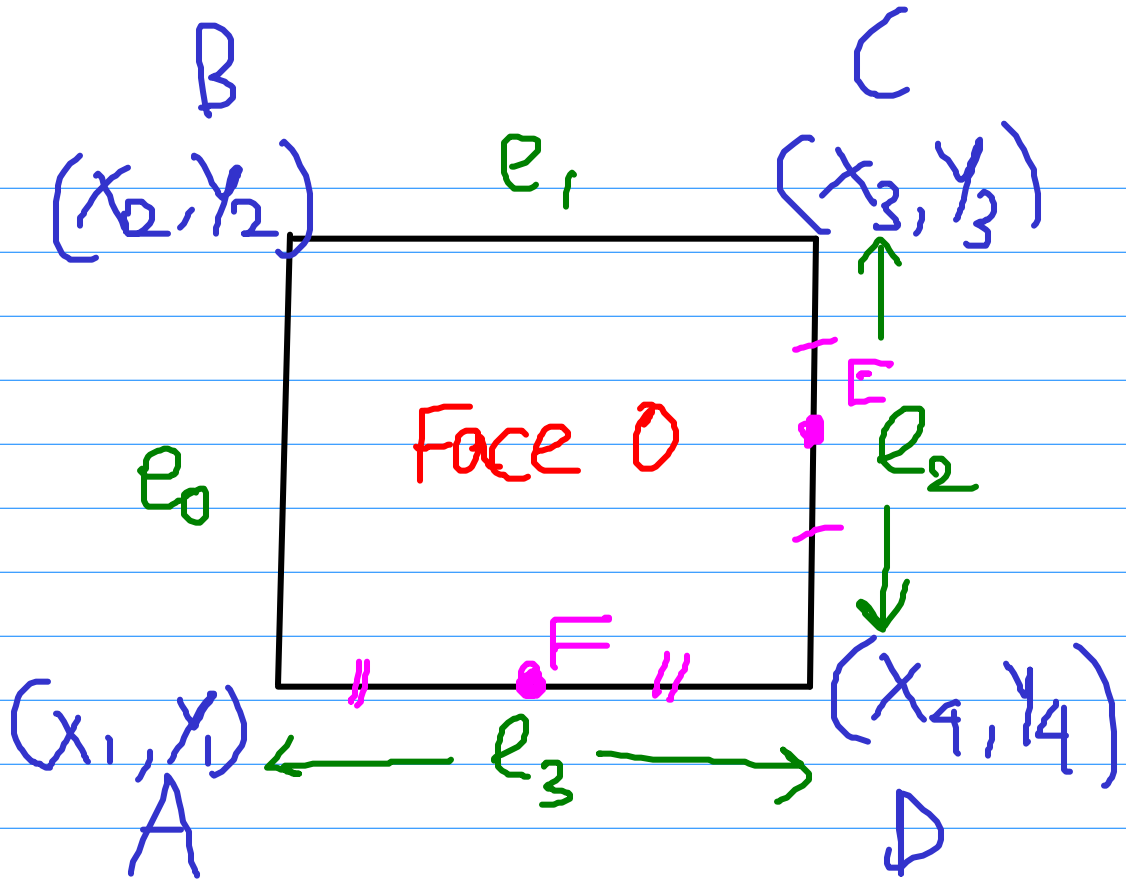
– Split function Walkthrough :

i/p :



Split Edge $\{e_2, e_3\}$

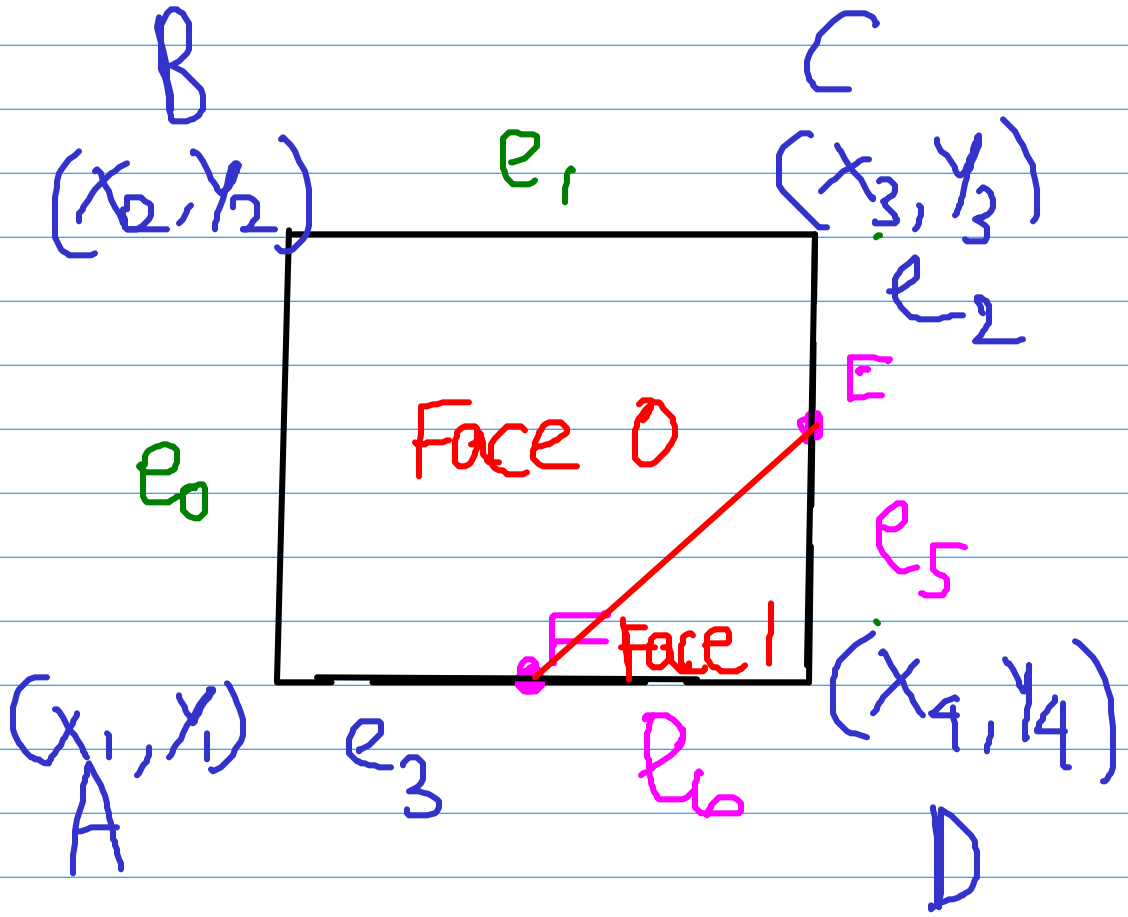
① Add new vertices at the edge bisectors.



(2) Connect these vertices with a new edge.

Also, re-number existing edges. (and create new

faces, if necessary.)



(3) "Respect the clockwise order" feature of DCEL.

- Things to note:

(1) Print op after every split (Format same as that of set 1.)

(2) There will be multiple splits

(3) There will be multiple test cases 😊