Doc-05 27/04/21 → list of available space

→ Insertion algo.

list of available space / Free pool :

→ Besides the linked list in memory, there is also a special list maintained which consist of unused memory cells.

→ This list which has its own pointer is called list of available space or Free pool.

→ Link is the parallel array which stores all the linked part of memory. Then, the unused memory cells of array can be linked together to form a link using Avail as the list pointer variable.

Overflow :

Avail list is empty → no space in memory.

∴ overflow condn: **Avail = Null**

(during insertion, check for overflow condn.)

→ during deletion, check for underflow condn.

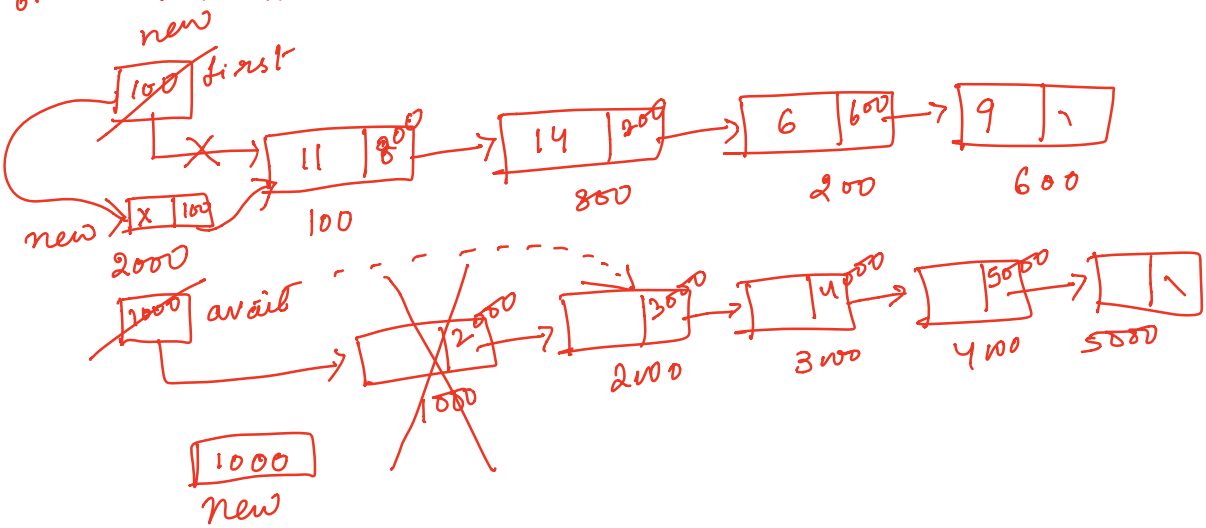
underflow :

when one wants to delete an item/node from a linked list, but the list is empty, then underflow situation arises.

Start = Null

1) Insert - begin :

1. if avail = NULL, write "overflow", return.
2. set new = avail
   avail = link (avail)
3. set info (new) = X
4. set link (new) = first
5. set first = new
6. return.



2) Insert - end

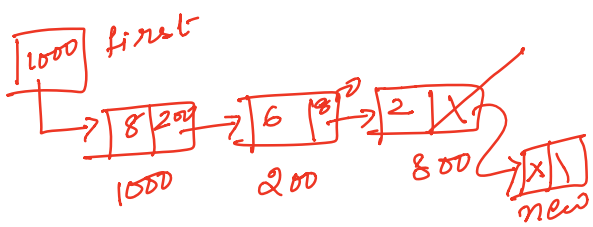
1. if avail = NULL, write "overflow", return.
2. new = avail
   avail = link (avail)
3. info (new) = X
   link (new) = NULL
4) if FIRST = NULL then set FIRST = new, return (FIRST)
   else
5) set PTR = FIRST

6) repeat while link (ptr) ≠ NULL
ptr = link (ptr)

7) link (ptr) = new.

8) return (FIRST)

Exit



ptr	link (ptr)
1000	200
~~200~~	800
800	\