

---

 LINKED LIST TIP
 

---

CURR = LIST.HEAD

PREV = NONE

WHILE CURR IS NOT NONE:

... CURR.ITEM...

PREV, CURR = CURR, CURR.NEXT

NOTE: PREV.NEXT = CURR (IF PREV IS NOT NONE)

---

 [OBSERVATION I:]

 RUNNING TIME (USUALLY) DEPENDS ON THE MACHINE  
 AND COMPUTING ENVIRONMENT

[OBSERVATION II:]

 DEFINITIONS OF A COMPUTATIONAL "STEP" DO  
 NOT HELP.

[OBSERVATION III:]

RUNNING TIME DEPENDS ON THE INPUT SIZE

---

 || RUNTIME AS A FUNCTION OF INPUT SIZE

→ BIG-OH NOTATION

+ FOCUS ON ASYMPTOTIC BEHAVIOUR

 $\varphi: O(1) :: \text{CONSTANT TIME}$

### PYTHON LIST EFFICIENCY (SIZE = n)

INSERT	AT FRONT	$O(n)$
INSERT	AT END	$O(1)$
-- LEN --		$O(1)$
-- GETITEM --		$O(1)$

### LINKED LIST EFFICIENCY (SIZE = n)

INSERT	AT FRONT	$O(1)$
INSERT	AT END	$O(n)$
-- LEN --		$O(1)$
-- GETITEM --		?