

CSE 101-02 5-5-22

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Pa5: ext. 2 more days (Monday)

Pa6: Posted

Assignment operator: $A = B;$

3-way assignment $A = B = C;$

i. need to return *this.

Note: Queue A; // calls constructor

Queue B; " "

B = A; // calls assignment, which
// calls copy constructor

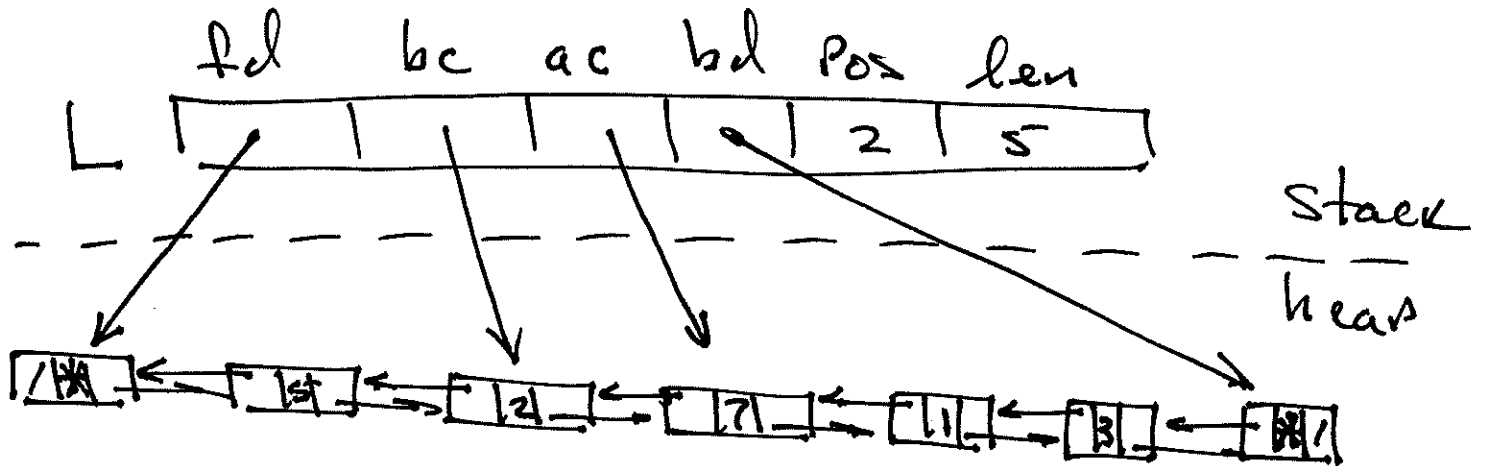
Queue C = A; // calls copy constructor

pas: List ADT in C++

client:

Ex $L = (\begin{array}{c} 5 \\ 0 \end{array} \mid \begin{array}{c} 2 \\ 1 \end{array} \mid \begin{array}{c} 7 \\ 2 \end{array} \mid \begin{array}{c} 1 \\ 3 \end{array} \mid \begin{array}{c} 3 \\ 4 \end{array})$

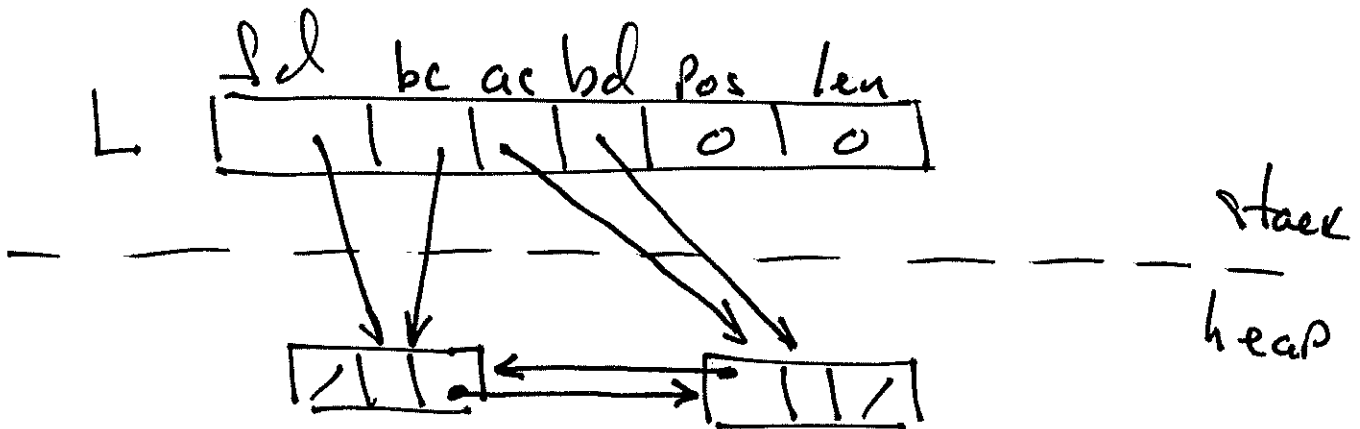
inside:



Ex. empty state

client: $L = (\mid)$
0

inside:



Ex. `cleanup()`

client views:

$$L = (\textcircled{2} \neq \textcircled{1} \neq \textcircled{3} \mid \cancel{\neq} \neq \cancel{\neq} \cancel{\neq} \neq \cancel{\neq} \neq \cancel{\neq})$$

after `L.cleanup()`

$$L = (2 \ 1 \ 3 \mid)$$

Pa6: example

Ex. addition $b=100, p=2$

carry: 1 1 1 0

$$(88 \ 21 \ 33) = 882,133$$

$$(65 \ 91 \ 79) = 659,179$$

$$(1 \ 54 \ 13 \ 12) = 1,541,312$$

another way:

$$(88 \ 21 \ 33)$$

$$(65 \ 91 \ 79)$$

Carry: 1 1 1 0

$$153 \ 112 \ 112$$

$$-100 \ -100 \ -100$$

vector-sum

$$(1 \ 54 \ 13 \ 12)$$

normalize

Ex. Subtraction $b=100$, $P=2$

borrow
 ↑
 same as
 negative
 carry

$$\begin{array}{r}
 \begin{array}{ccc} -1 & -1 & 0 \end{array} \\
 (88 \quad 21 \quad 33) \\
 (65 \quad 91 \quad 79) \\
 \hline
 (22 \quad 29 \quad 54)
 \end{array}$$

another way:

carry:

$$\begin{array}{r}
 (88 \quad 21 \quad 33) \\
 (65 \quad 91 \quad 79) \\
 \hline
 \begin{array}{ccc} -1 & -1 & 0 \\ 23 & -70 & -46 \\ 100 & 100 & \end{array}
 \end{array}$$

Vector difference

$(22 \quad 29 \quad 54)$ normalize