

Assignment 3

May 22, 2023 2:37 PM

2 a)

$$(\text{empty-stack}) = \lceil \emptyset \rceil$$

$$(\text{push } \lceil x \rceil \lceil f \rceil) = \lceil g \rceil \text{ where the last element of } \lceil g \rceil \text{ is } \lceil x \rceil$$

$$(\text{pop } \lceil f \rceil) = \lceil g \rceil \text{ where } \lceil g \rceil = (\lceil f \rceil - \text{peek}(\lceil f \rceil))$$

$$(\text{peek } \lceil f \rceil) = \lceil x \rceil \text{ where } \lceil x \rceil \text{ is the last element of } \lceil f \rceil$$

$$(\text{empty-stack? } \lceil f \rceil) \begin{cases} + & \text{if } f = \lceil \emptyset \rceil \\ f & \text{else} \end{cases}$$

2 b)

The constructors are:

(empty-stack)

(push)

The observers are:

(peek)

(empty - stack?)

(pop)