

① Insert At Beginning

$$\text{new.next} = \text{None} \wedge \text{first}$$

$$\text{first.next} = [\text{new}] \wedge [\text{None} \wedge \text{first.next}]$$

$$\text{first} = \text{new}$$

② Insert at end

$$\text{prev} = \text{None}$$

$$\text{curr} = \text{first}$$

$$\text{while (curr)}$$

$$\text{temp} = \text{prev} \wedge \text{curr.next}$$

$$\text{prev} = \text{curr}$$

$$\text{curr} = \text{temp}$$

$$\text{prev.next} = \text{new} \wedge [\text{None} \wedge \text{prev.next}]$$

$$\text{new.next} = \text{None} \wedge \text{prev}$$