



**Temporal Logic**

**Always**, if an obstacle is hit, then, in the **neXt** step, turn left:  $G(obs \Rightarrow X\textit{left})$

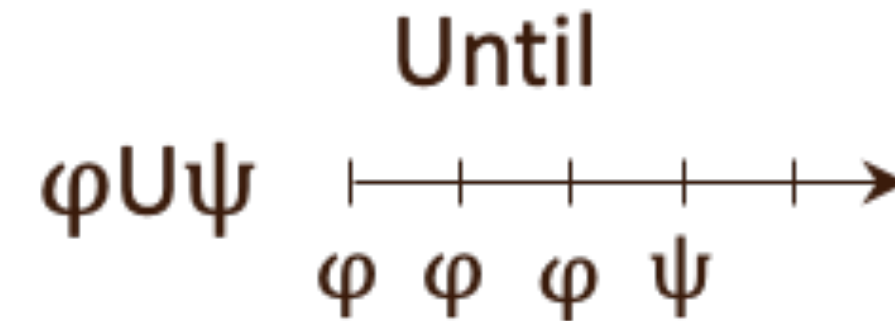
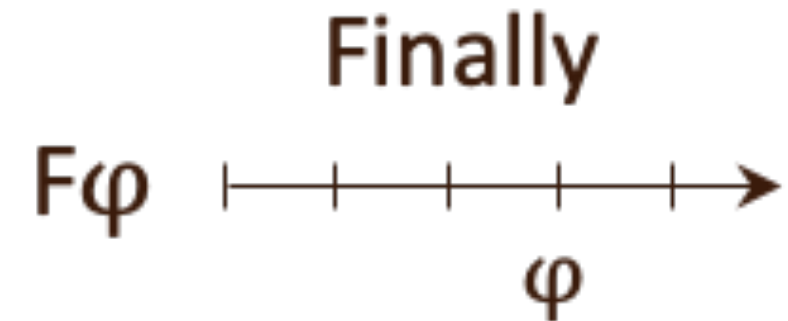
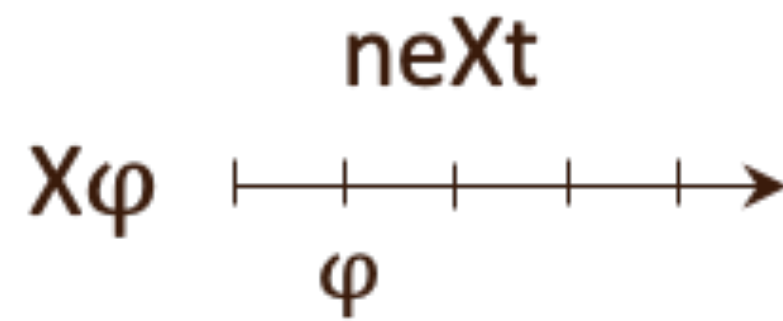
# Propositions

$p, q, r : \textit{True} \text{ or } \textit{False}$

(Representing system events)

# Boolean Operators

$\wedge$  (and)    $\vee$  (or)    $\neg$  (neg)    $\implies$  (implies)



**Temporal Operators**





# Linear Temporal Logic (LTL)

# Temporal Logic

## Linear Temporal Logic (LTL)

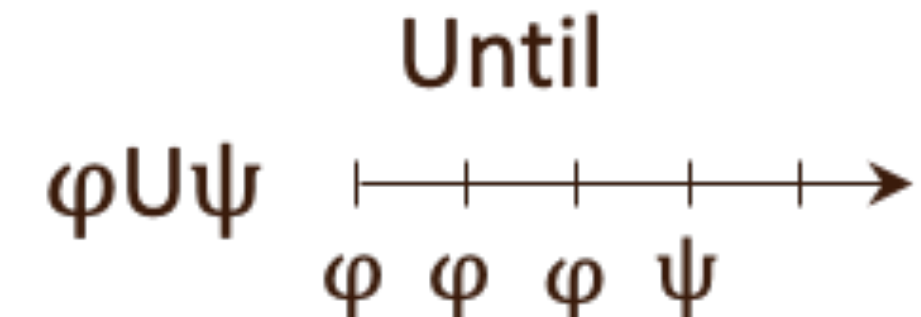
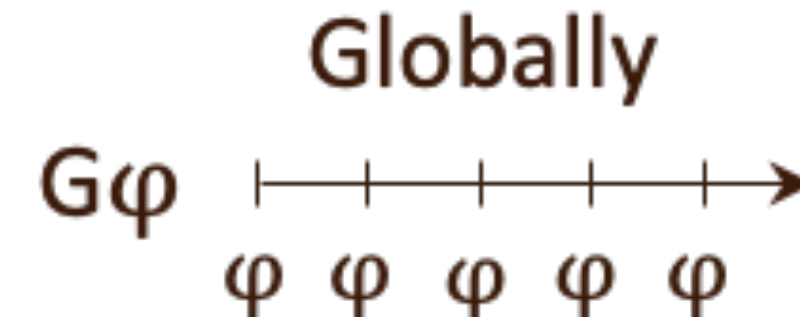
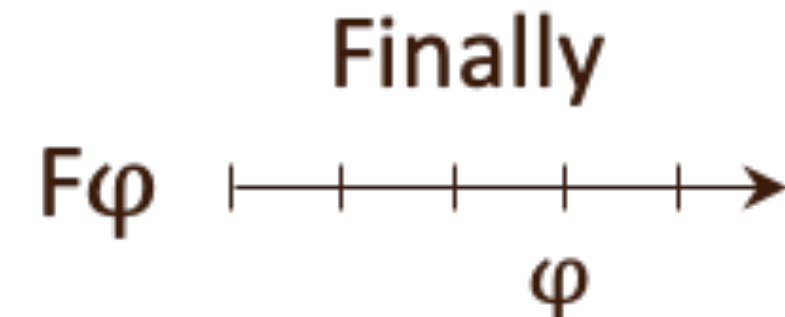
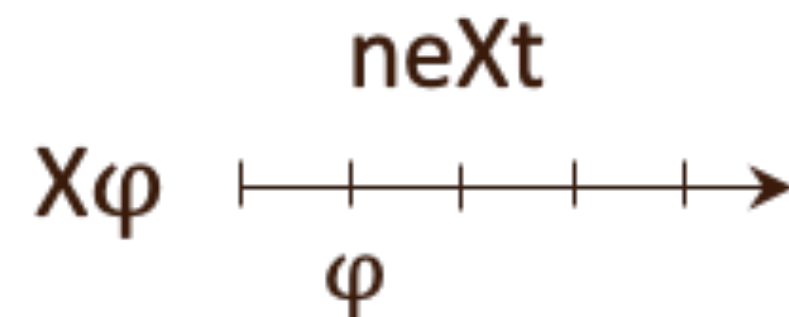
### Propositions

$p, q, r$  : *True or False*  
(Representing system events)

### Boolean Operators

$\wedge$  (and)  $\vee$  (or)  $\neg$  (neg)  $\implies$  (implies)

### Temporal Operators



**Always**, if an obstacle is hit, then, in the **neXt** step, turn left:  $G(obs \implies X \text{ left})$

# Temporal Logic

## Metric Temporal Logic (MTL)

### Propositions

$p, q, r$  : *True* or *False*  
(Representing system events)

### Boolean Operators

$\wedge$  (and)  $\vee$  (or)  $\neg$  (neg)  $\implies$  (implies)

### Timed Temporal Operators

