

World worksheet

4 Oct 2010

; $\frac{\text{ } \text{ TICK FUNCTION NAME } \text{ }}{\text{ STATE TYPE }} : \frac{\text{ } \text{ STATE TYPE } \text{ }}{\text{ STATE TYPE }} \rightarrow \frac{\text{ } \text{ STATE TYPE } \text{ }}{\text{ STATE TYPE }}$
 ; calculates the state following the given state if only time passes

```
(define (  $\frac{\text{ } \text{ TICK FUNCTION NAME } \text{ }}{\text{ STATE TYPE }}$  current )
  current ) ; stub, state is unchanged
```

; $\frac{\text{ } \text{ KEY FUNCTION NAME } \text{ }}{\text{ STATE TYPE }} : \frac{\text{ } \text{ STATE TYPE } \text{ }}{\text{ STATE TYPE }} \text{ KeyEvent} \rightarrow \frac{\text{ } \text{ STATE TYPE } \text{ }}{\text{ STATE TYPE }}$
 ; calculates the state following the given state if given key is pressed

```
(define (  $\frac{\text{ } \text{ KEY FUNCTION NAME } \text{ }}{\text{ STATE TYPE }}$  current key )
  current ) ; stub, state is unchanged
```

; $\frac{\text{ } \text{ RENDER FUNCTION NAME } \text{ }}{\text{ STATE TYPE }} : \frac{\text{ } \text{ STATE TYPE } \text{ }}{\text{ STATE TYPE }} \rightarrow \text{image}$
 ; constructs an image representing the given state

```
(define (  $\frac{\text{ } \text{ RENDER FUNCTION NAME } \text{ }}{\text{ STATE TYPE }}$  current )
  (text current 40 "red") ) ; stub, renders as text
```

```
(define ( main init-val )
  (big-bang init-val

    (on-tick  $\frac{\text{ } \text{ TICK FUNCTION NAME } \text{ }}{\text{ STATE TYPE }}$  )

    (on-key  $\frac{\text{ } \text{ KEY FUNCTION NAME } \text{ }}{\text{ STATE TYPE }}$  )

    (to-draw  $\frac{\text{ } \text{ RENDER FUNCTION NAME } \text{ }}{\text{ STATE TYPE }}$  ) )
```

```
(main  $\frac{\text{ } \text{ INITIAL STATE } \text{ }}{\text{ STATE TYPE }}$  )
```