

Word Problem: update-player

Directions: Write a function called `update-player`, which takes in the player's `y`-coordinate and the name of the key pressed, and returns the new `y`-coordinate.

Contract and Purpose Statement

Every contract has three parts...

<code>;</code>	<code>update-player</code>	<code>:</code>	<code>number string</code>	<code>→</code>	<code>number</code>
	<hr/>		<hr/>		<hr/>
	<i>function name</i>		<i>domain</i>		<i>range</i>

<code>;</code>	<code>Produce new y-coordinate depending on key press</code>
	<hr/>
	<i>what does the function do?</i>

Examples

Write some examples, then circle and label what changes...

<code>(EXAMPLE(</code>	<code>update-player</code>	<code>320 "up"</code>	<code>)</code>	<code>(+ 320 20)</code>	<code>)</code>
	<hr/>	<hr/>		<hr/>	
	<i>function name</i>	<i>input(s)</i>		<i>what the function produces</i>	

<code>(EXAMPLE(</code>	<code>update-player</code>	<code>100 "up"</code>	<code>)</code>	<code>(+ 100 20)</code>	<code>)</code>
	<hr/>	<hr/>		<hr/>	
	<i>function name</i>	<i>input(s)</i>		<i>what the function produces</i>	

<code>(EXAMPLE(</code>	<code>update-player</code>	<code>320 "down"</code>	<code>)</code>	<code>(- 320 20)</code>	<code>)</code>
	<hr/>	<hr/>		<hr/>	
	<i>function name</i>	<i>input(s)</i>		<i>what the function produces</i>	

<code>(EXAMPLE(</code>	<code>update-player</code>	<code>100 "down"</code>	<code>)</code>	<code>(- 100 20)</code>	<code>)</code>
	<hr/>	<hr/>		<hr/>	
	<i>function name</i>	<i>input(s)</i>		<i>what the function produces</i>	

Definition

Write the definition, given variable names to all your input values...

<code>(define(</code>	<code>update-player</code>	<code>y key</code>	<code>)</code>
	<hr/>	<hr/>	
	<i>function name</i>	<i>variables</i>	

<code>(cond</code>	<hr/>
<code>[(string=? "up" key)</code>	<code>(+ y 20)</code>
<hr/>	<hr/>
<code>[(string=? "down" key)</code>	<code>(- y 20)</code>
<hr/>	<hr/>
<code>[else</code>	<code>y</code>
<hr/>	<hr/>
	<code>]))</code>