

Pong / PLC_1 [CPU 1214C DC/DC/DC] / Program blocks

Pong Game [OB30]

Pong Game Properties							
General							
Name	Pong Game	Number	30	Type	OB	Language	SCL
Numbering	automatic						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Pong Game			
Name	Data type	Default value	Comment
▼ Input			
Initial_Call	Bool		Initial call of this OB
Event_Count	Int		Events discarded
Temp			
▼ Constant			
Delta	Int	1	

```
0001 IF "Run" THEN
0002
0003 //RIGHT
0004 IF "Right" THEN
0005     "Ball_x" := "Ball_x" + #Delta;
0006
0007     IF "Ball_x" > 300 THEN
0008         IF "Ball_y" > "Player2_position" AND "Ball_y" < "Player2_position" + 75 THEN
0009             "Right" := 0;
0010             "Left" := 1;
0011         ELSE
0012             "Player1_points" := "Player1_points" + 1;
0013             "Ball_x" := 150;
0014             "Ball_y" := 110;
0015             "Up" := 0;
0016             "Down" := 1;
0017             "Left" := 1;
0018             "Right" := 0;
0019         END_IF;
0020     END_IF;
0021 END_IF;
0022
0023 //LEFT
0024 IF "Left" THEN
0025     "Ball_x" := "Ball_x" - #Delta;
0026
0027     IF "Ball_x" < 4 THEN
0028         IF "Ball_y" > "Player1_position" AND "Ball_y" < "Player1_position" + 75 THEN
0029             "Right" := 1;
0030             "Left" := 0;
0031         ELSE
0032             "Player2_points" := "Player2_points" + 1;
0033             "Ball_x" := 150;
0034             "Ball_y" := 110;
0035             "Up" := 0;
0036             "Down" := 1;
0037             "Left" := 0;
0038             "Right" := 1;
0039         END_IF;
0040     END_IF;
0041 END_IF;
0042
0043 //UP
0044 IF "Up" THEN
0045     "Ball_y" := "Ball_y" - 2 * #Delta;
0046
0047     IF "Ball_y" < 0 THEN
0048         "Up" := 0;
0049         "Down" := 1;
0050     END_IF;
0051 END_IF;
0052
0053 //DOWN
0054 IF "Down" THEN
0055     "Ball_y" := "Ball_y" + 2 * #Delta;
0056
0057     IF "Ball_y" > 220 THEN
0058         "Up" := 1;
0059         "Down" := 0;
0060     END_IF;
0061 END_IF;
0062 END_IF;
0063
0064
0065 IF "Reset" THEN
0066     "Player1_points" := 0;
0067     "Player2_points" := 0;
```

Totally Integrated Automation Portal			
<div>0068"Ball_x" := 150;</div> <div>0069"Ball_y" := 110;</div> <div>0070"Player1_position" := 110;</div> <div>0071"Player2_position" := 110;</div> <div>0072END_IF;</div> <div>0073</div>			
Symbol	Address	Type	Comment
"Ball_x"	%MW109	Int	
"Ball_y"	%MW111	Int	
"Down"	%M108.3	Bool	
"Left"	%M108.1	Bool	
"Player1_points"	%MB104	USInt	
"Player1_position"	%MW100	Int	
"Player2_points"	%MB105	USInt	
"Player2_position"	%MW102	Int	
"Reset"	%M108.5	Bool	
"Right"	%M108.0	Bool	
"Run"	%M108.4	Bool	
"Up"	%M108.2	Bool	
#Delta	1	Int	