Cycle	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
lw $t2, 12($s0)	IF	ID	EX	MEM	WB																				
la $t0, player_x		IF	ID	EX	MEM	WB																			
lw $t1, 0($t0)*			IF	-	-	-	ID	EX	MEM	WB															
addi $t1, $t1, 16**							IF	-	-	-	ID	EX	MEM	WB											
blt $t1, $t2, loop***											IF	-	-	-	ID	EX	MEM	WB							
lw $t2, 12($s0)****															-	-	IF	ID	EX	MEM	WB				

* lw needs to read t0 at ID stage so must wait for WB (writeback) of t0 to complete.

** addi needs to read t1 at ID stage so must wait for WB (writeback) of t1 to complete.

*** blt needs to read t1 at ID stage so must wait for WB (writeback) of t1 to complete.

**** This is the taken branch so when IF is vacated at cycle 15, it will be filled with PC + 4. At cycle 16, branch outcome will be calculated and the PC updated with branch target. Only at cycle 17 can lw be fetched.