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Project: Tetris

Requirements:

UR-06: Player can manipulate the piece on the board

UR-07: Player can collect randomly spawned bonuses.

Use Case Documents:

Use Case ID:	UC-02
Use Case Name:	Manipulate Piece
Description:	Player starts game then uses keyboard inputs to manipulate current piece on board

Actors:	Player		
Pre-conditions:	The game is currently running		
Post-conditions:	Player quits game or fails to place piece under height threshold		
Frequency of Use:	Duration of the game		
Flow of Events:		Actor Action	System Response
	1	Press Left, Right, Down arrow, Z or X	<ul style="list-style-type: none">- Check piece's current state (position, orientation)- Check if valid potential state- If valid, update piece's state- Display piece state
Variations:	<ol style="list-style-type: none">1. Is boarder or resting piece in requested state?<ol style="list-style-type: none">a. Yes: don't update state, exitb. No: continue with system response2. Is bonus in requested state?<ol style="list-style-type: none">a. Yes: execute bonus properties (x2 points for example), continueb. No: continue with system response3. Is placement of piece a tight fit in gap between resting pieces?		

	<ul style="list-style-type: none"> a. Yes: destroy those pieces (the objective!!), continue b. No: continue with system response <p>4. Is placement of piece above height limit?</p> <ul style="list-style-type: none"> a. Yes: end current game, exit b. No: continue with system response
Exceptions:	None
Developer Notes:	This is the basis of the game, so make it very responsive!

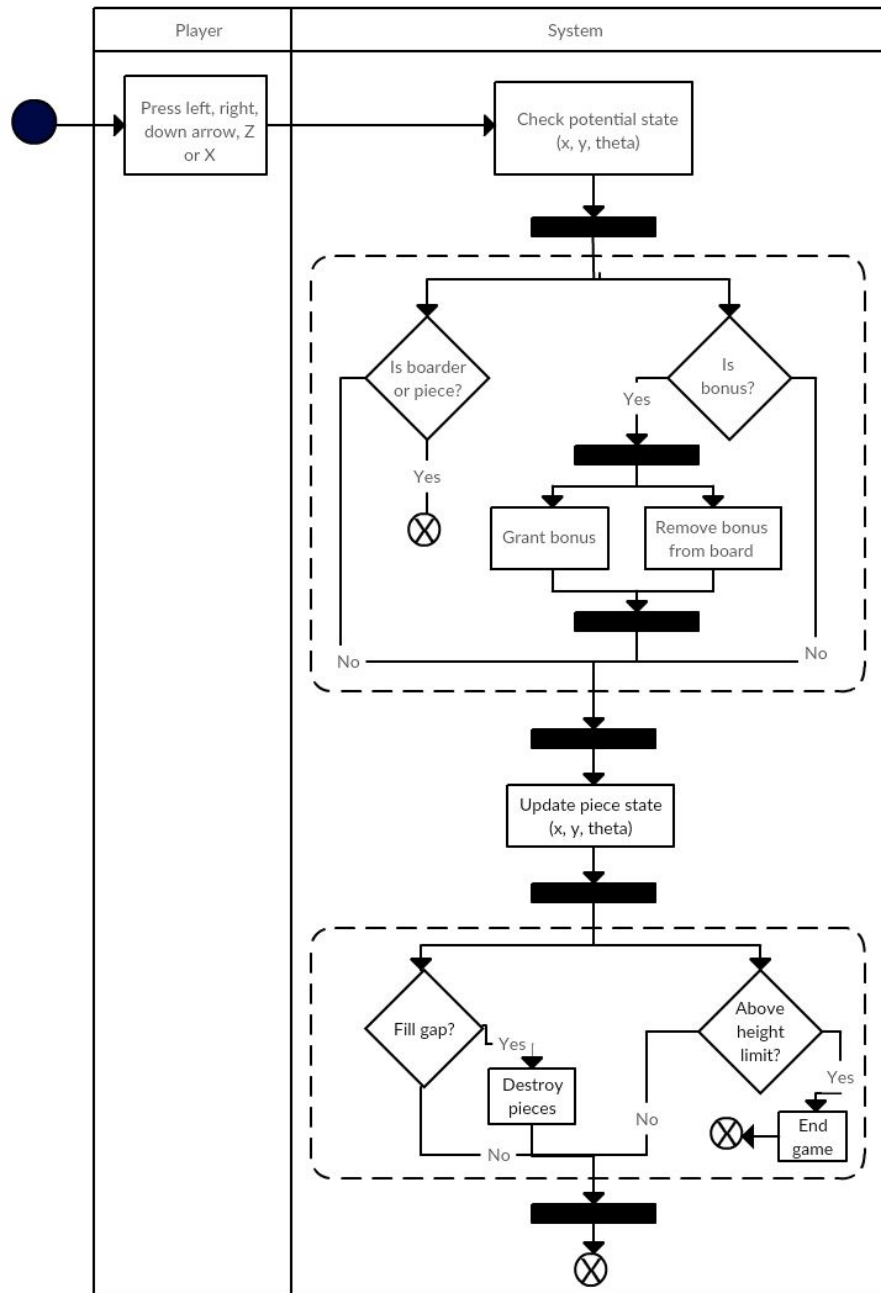
Use Case ID:	UC-03
Use Case Name:	Collect Bonuses
Description:	Player is in game and a bonus has spawned, can use keyboard inputs to move to and collect that bonus

Actors:	Player		
Pre-conditions:	The game is currently running and the system has spawned a bonus		
Post-conditions:	Player collects the bonus and gets the reward, or player misses/ignores it and carries on with game		
Frequency of Use:	Periodically spawned during game, lasting ~4 seconds and no less than a minute apart		
Flow of Events:		Actor Action	System Response
	1	Manipulate Piece (Press Left, Right, Down, Z, or X)	<ul style="list-style-type: none"> - Run system response for Manipulate Piece - If piece occupies same position (x,y) as bonus, grant reward
Variations:	<ul style="list-style-type: none"> 1. Is bonus collected? <ul style="list-style-type: none"> a. Yes: grant reward b. No: continue game 2. Is bonus x2 points? <ul style="list-style-type: none"> a. Yes: grant x2 points for ~15 seconds 3. Is bonus nuke? <ul style="list-style-type: none"> a. Yes: destroy ½ current pieces on board 4. Is bonus slow-mo? 		

	a. Yes: run game at half speed for ~15 seconds
Exceptions:	None
Developer Notes:	Feel free to tweak bonuses (duration, rewarded points, etc.) to find best values

Activity Diagram:

UR-06:
UC-02: Manipulate Piece
Jake Traut



User Interactions (Sequence Diagram):

