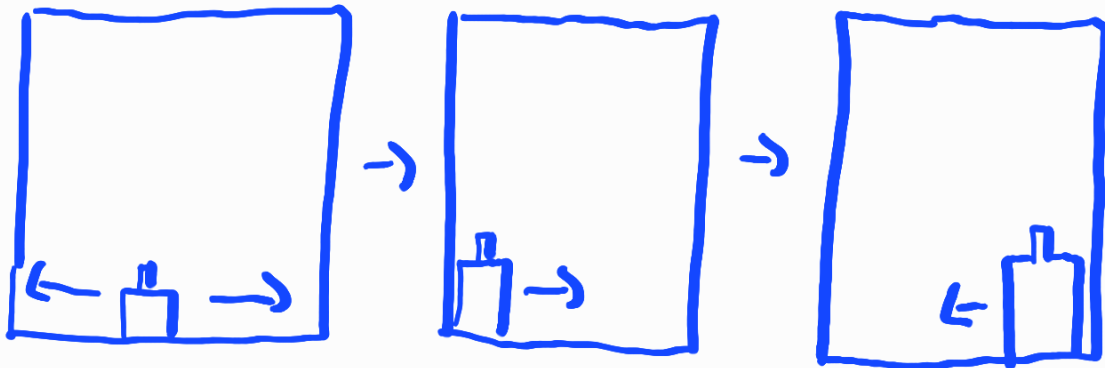


Domain Analysis for Space Invaders:

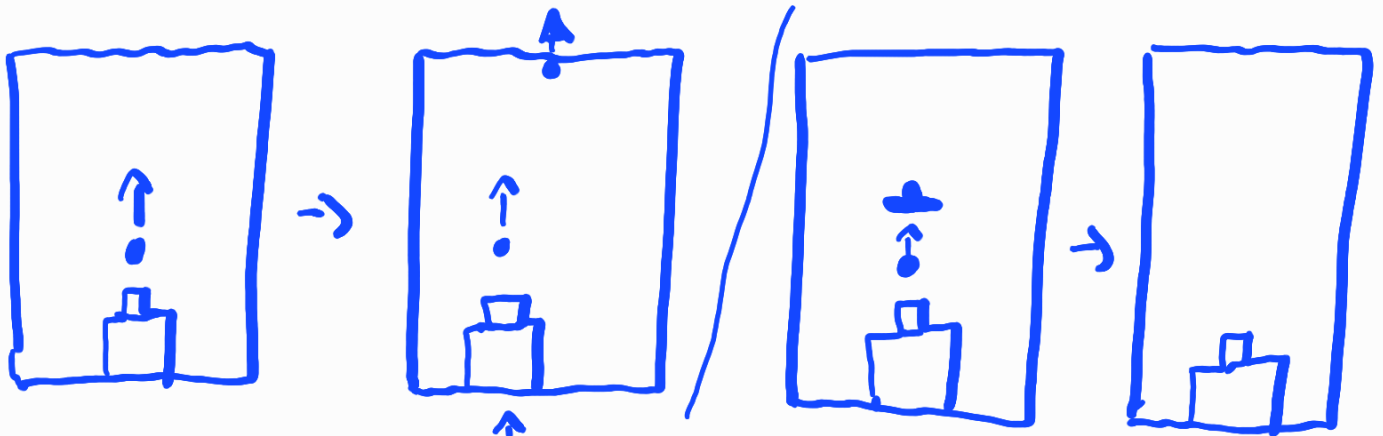
1. Sketch Program Scenarios:

Tank movement:



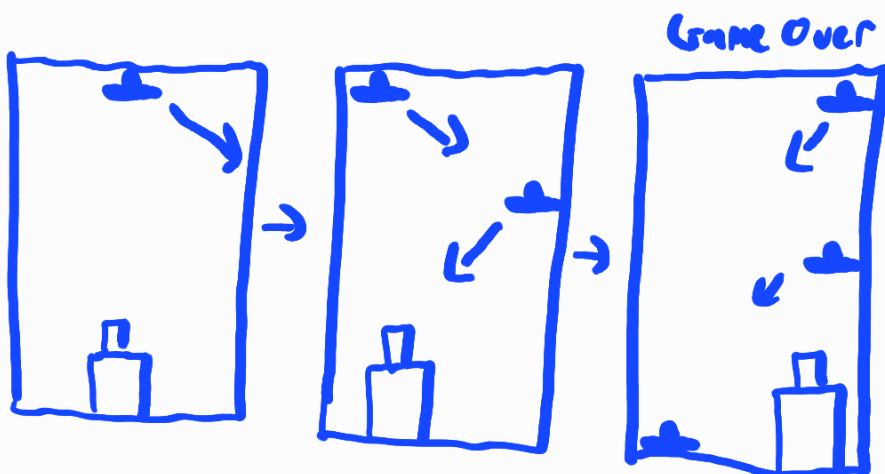
Assume tank is always moving

Missile movement/Space Invader Interaction:



Assume missile ceases to exist offscreen

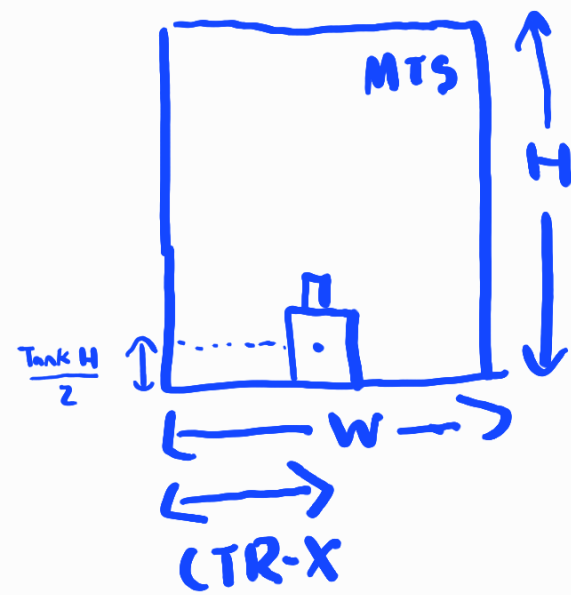
Space Invader Movement:



Assume a game over once Space Invader reaches floor.

Invaders always move at a 45° angle

Background:



Assume Screen starts with
Only the tank at CTR-X
Assume tank y-coordinate to
always be Tank height/2

2. Identify Constant Information:

- [Width
- [Height
- [Space Invader speed (can be broken into x and y speeds)
- [Tank speed
- [Missile speed
- [Rate of Invader appearance
- [Background
- [Space Invader IMG
- [Tank IMG
- [Missile IMG
- [CTR-X
- [Tank y-coordinate
- [Missile hitbox

3. Identify Changing Information:

[Tank x-coordinate
Tank direction

[Time (for invader rate

[Invader x-coordinate
Invader y-coordinate
Invader direction

[Missile x-coordinate
Missile y-coordinate

Including positions of all game components

[game state (state of space invaders game)
game status (game over or currently ongoing)

4. Identify Big Bang Options:

On-tick
to-draw
on-key
stop-when