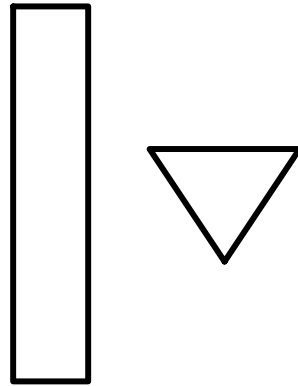


# Attach point system

Thursday, August 31, 2023 9:04 AM



## 1. Goals:

- a. Simple yet powerful tool
  - i. Optimization matters for connections if I want to simulate dynamic destruction
- b. I want to be able to add new blocks as prefabs with as little manual effort as possible to ensure a good base to build from and expand

## 2. Questions:

- a. All blocks have a flat surface along one axis?
  - i. What if they don't
    - 1) Is possible?
  - ii. Snap block to closest gameobject
- b. Manually set up attach points
  - i. Add to each prefab multiple times
  - ii. Snap to a vector2 that has been created with the prefab
- c. Use a grid system?
  - i. Snap to a coordinate on the grid system
- d. Can unity use sprites that have a weird hitbox

## 3. Current ideas:

- a. Manually set points on each block prefab
- b. Have like 4 tick boxes for each side if I want a attach point there
  - i. Only works if all blocks are of equal length and height
- c. Make abstract classes for each shape
  - i. E.g. iso triangle has 1 attach point
  - ii. Right angle triangle has 2
  - iii. Ect
- d. Try making some over complicated system that will find the middle of the length of one side of a block then generate attach point there
  - i. Many problems with this one; cannot edit in inspector, may produce weird behavior with transparent sprites that still need to fit in a box as images at boxes
- e. Some weird method of snapping the block to the nearest other block sprite, once again faces the problem of transparent sprites
- f. Drop block system and have players draw their ship where  $u^2$  is the cost depending on material?

create a test script, create a custom inspector for it, add Vector3[] array to it, in the custom inspector in OnSceneGUI, use Handles class to draw spheres that are associated with points in that array, use Handles transform gizmo to move points around, result is you can click, drag, delete points in that array after that everything else will be clear

From <<https://discord.com/channels/489222168727519232/763495187787677697/1147554872124768338>>