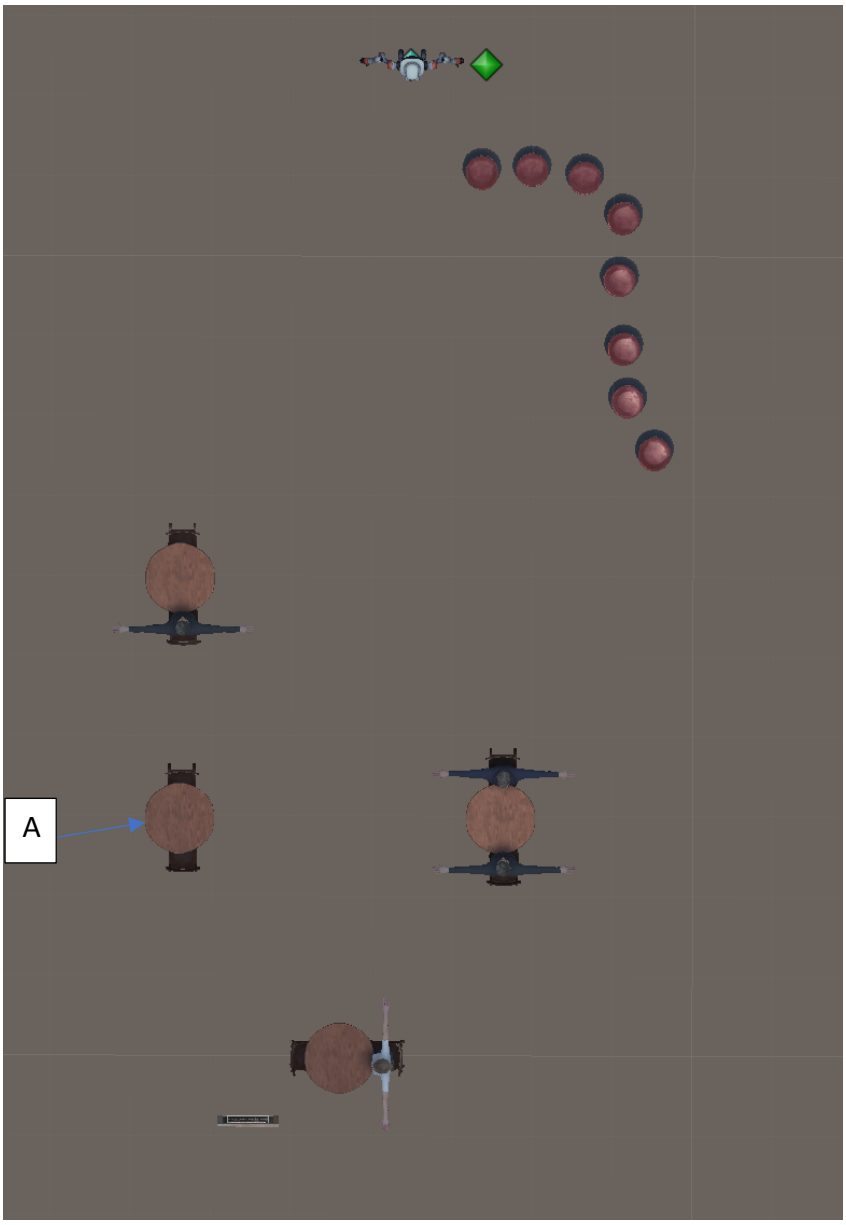
The following is a document holding information for path generation for the legibility study. Below is a birds-eye view of the restaurant (with walls and floors removed). The four target tables are the circle tables. The participant's table is table A.



Room Dimensions:
Front Wall: y= 3.05
Back Wall: y= -10.7
(Front and back marked by yellow diamonds)

Side Wall 1: x=1.23
Side Wall 2: x=11.22
(Side walls marked by red diamonds)

The room is 13.75 meters from front to back and 12.45 meters from side to side

Table Layout
Note: Table Front has also been referred to as Table Before

The tables are circles that have a diameter of approximately 1 meters. The chairs stick out about another .25 meters *without people in them*

The center of the tables are 2.5 meters apart (moving from front to back), or 3.75 meters apart (moving side to side)

The table's centers are at the following locations:
Table Front: (3.6, -4)
Table Viewpoint: (3.6, -7)
Table Across: (7.6, -7)
Table Perpendicular: (5.6, -10)

So, for example, Table Front is 7.05 meters from the front wall and 2.37 meters from side wall 1
The goal locations are .7 meters towards the aisle and adjusted slightly further to make the server stop most naturally.

The table's goal locations are at the following:
Front: (4.3, -4.3)
Viewpoint: (4.3, -7.3)
Across: (6.9, -7.3)
Perpendicular: (5.6, -9.3)

Path Start Locations

Inside door to kitchen: (7.4, 2.37) - green diamond
Outside door to kitchen: (6.46, 2.37) - teal diamond
So basically, the server may always want to start at (7.4, 2.37) and move to (6.46, 2.37) before following whatever path

Camera Locations

Viewpoint A (aka Viewpoint with back to door):

- Position is (3.51, -6.37)
- Height is 1.14
- Rotation is 145º, towards the middle of the restaurant (180º is looking straight ahead in seat, towards the back wall of the restaurant)
- Field of View is 60º

Viewpoint B (aka Viewpoint facing door)

- Position is (3.49, -7.71)
- Height is 1.14
- Rotation is 35º, towards the middle of the restaurant (0º is looking straight ahead in seat, towards the doors of the restaurant)
- Field of View is 60º

Final Note

The above locations are all described in the (x,y) plane for easy conversions to the 2D simulator we're using for path generation. Thus, what is described here as y-axis and y-coordinates are actually the z-axis and z-coordinates.

Also, be extremely careful with using hard coordinates when objects are children of other objects. Unity automatically adjusts their position in terms of the parent object.

Conversions to Pixels for Path Planning Simulation

The following is the output from converter.py

- ROOM MEASUREMENTS - PIXELS
    - *note: the front wall and back walls are the width measurement. the side walls are the height measurement
    - pixel width: 408.36
    - pixel height: 450.99999999999994
- START COORDINATES - PIXELS
    - *note: where the server should start. If you want the server to always start inside the kitchen before emerging, start at the insideStartCoordinates, move to the startCoordinates, and then follow the path. Otherwise, just start at the startCoordinates
    - start coordinates (22.30399999999999, 171.54399999999998)
    - inside start coordinates (22.30399999999999, 202.37599999999998)
- TABLE COORDINATES - PIXELS
    - *note: this is the case when the room is a 451 pixel x 408.36 pixel rectangle and (0,0) is the bottom left coordinate and (451,408.36) is the top right coordinate
    - Front table pixel coordinates: (231.23999999999998, 77.736)
    - Viewpoint table pixel coordinates: (329.64, 77.736)
    - Across table pixel coordinates: (329.64, 208.93599999999995)
    - Perpendicular table pixel coordinates: (428.04, 143.33599999999996)
- GOAL COORDINATES - PIXELS
    - *note: these are the locations where the server should go
    - Front table goal pixel coordinates: (241.07999999999998, 100.696)
    - Viewpoint table goal pixel coordinates: (339.4799999999999, 100.696)
    - Across table goal pixel coordinates: (339.4799999999999, 185.976)
    - Perpendicular table goal pixel coordinates: (405.08000000000004, 143.33599999999996)
- CAMERA/VIEWPOINT COORDINATES - PIXELS
    - *note: these are just their locations, should also take into account that they are rotated 35º towards the middle of the restaraunt
    - viewpointA camera coordinates (308.976, 74.78399999999999)
    - viewpointB camera coordinates (352.928, 74.12800000000001)