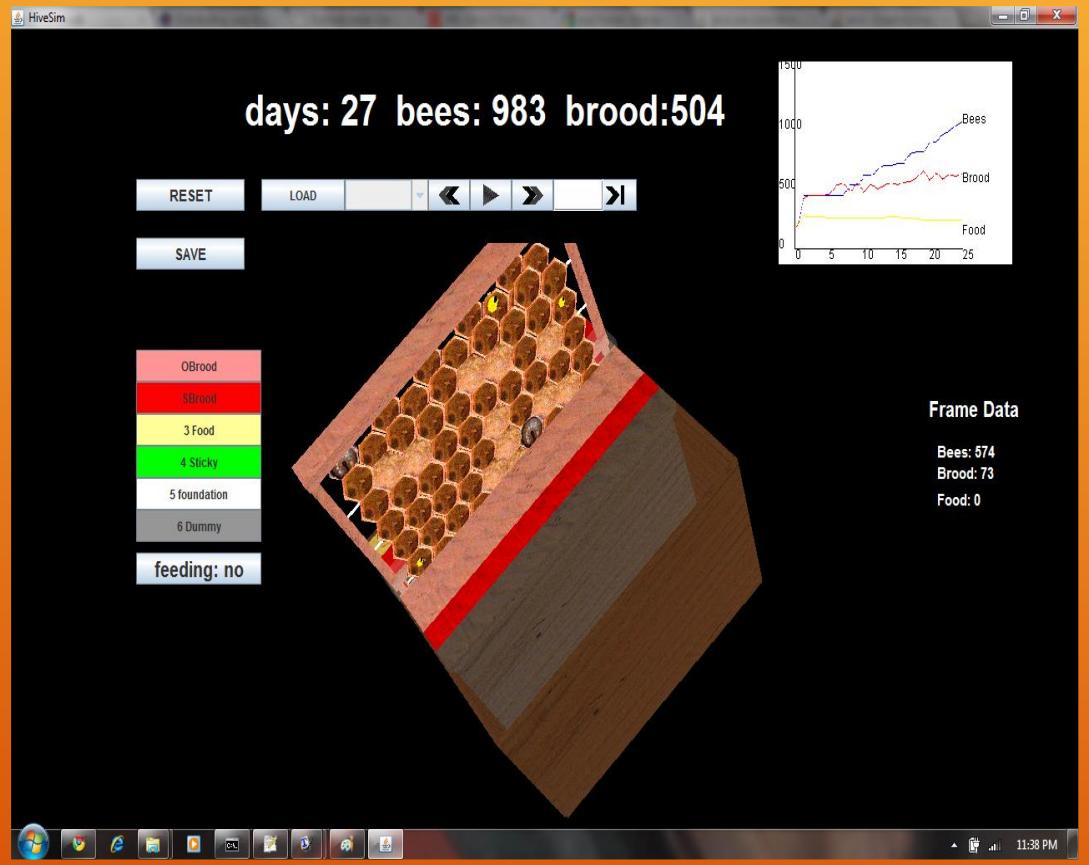
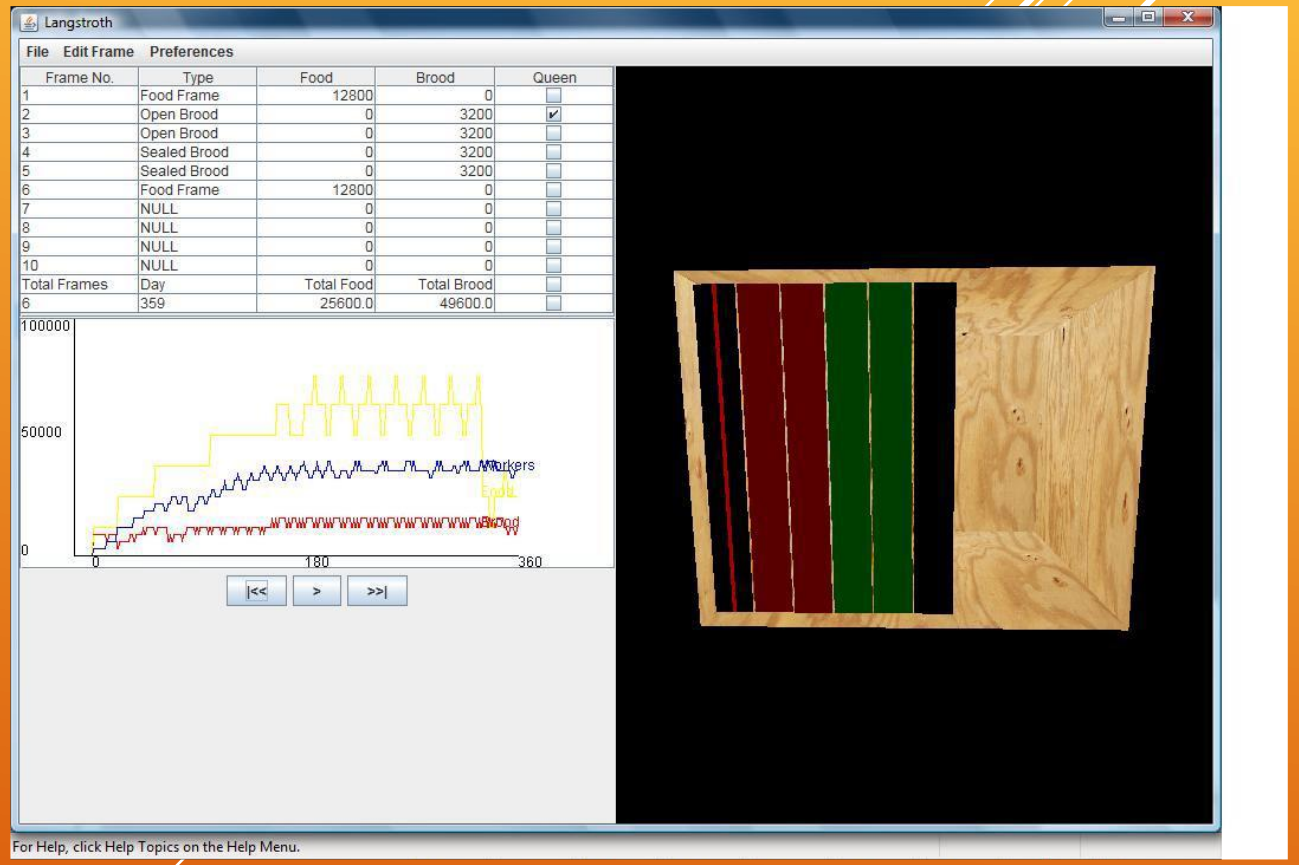
3D MOBILE SIMULATION APPLICATION FOR LEARNING SEASONAL BEEHIVE MANAGEMENT

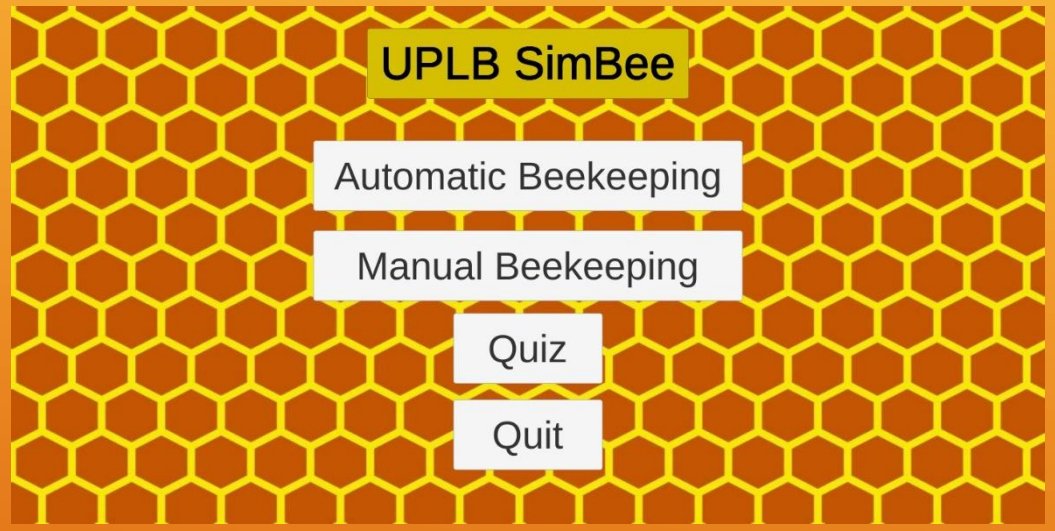
PREPARED BY: ALBERT DOMINIC CRISOSTOMO
2015-07794

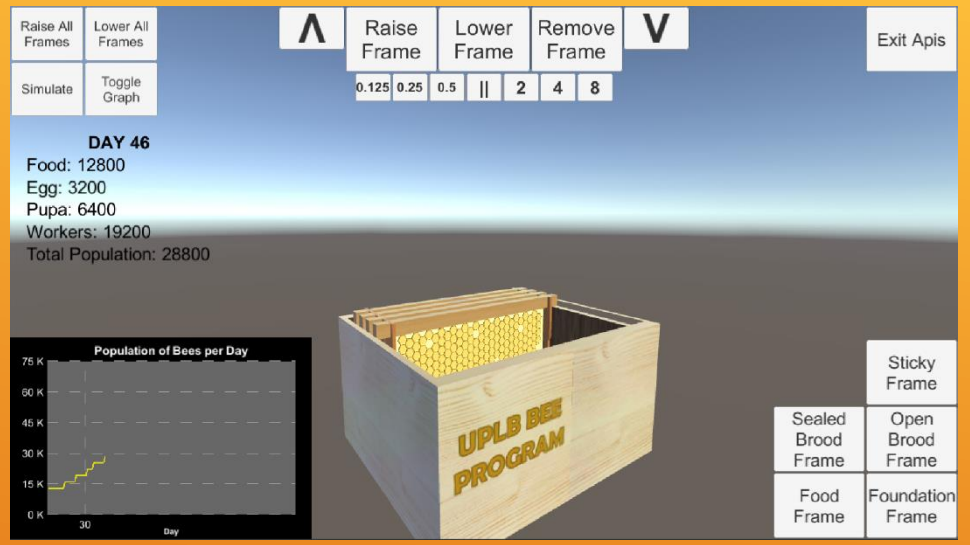
Related Works

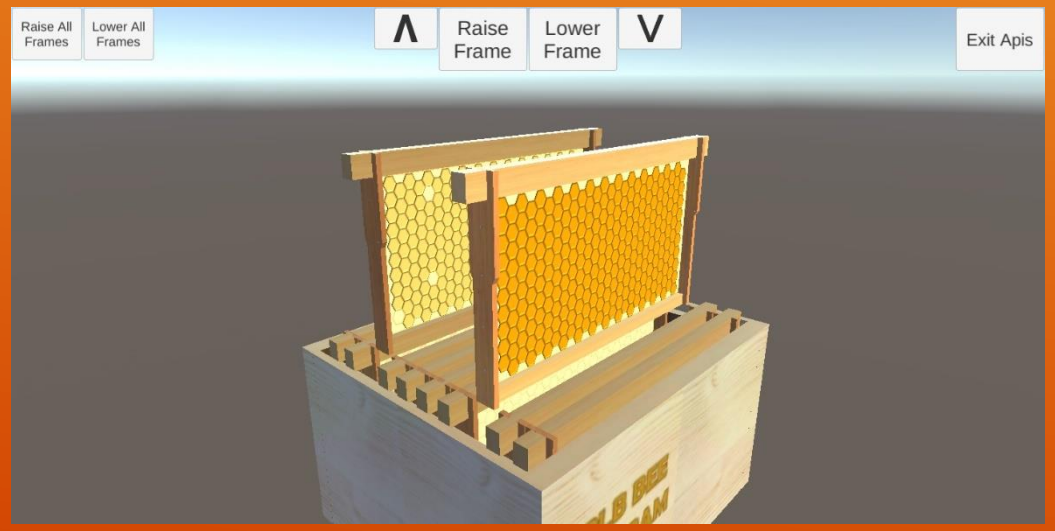


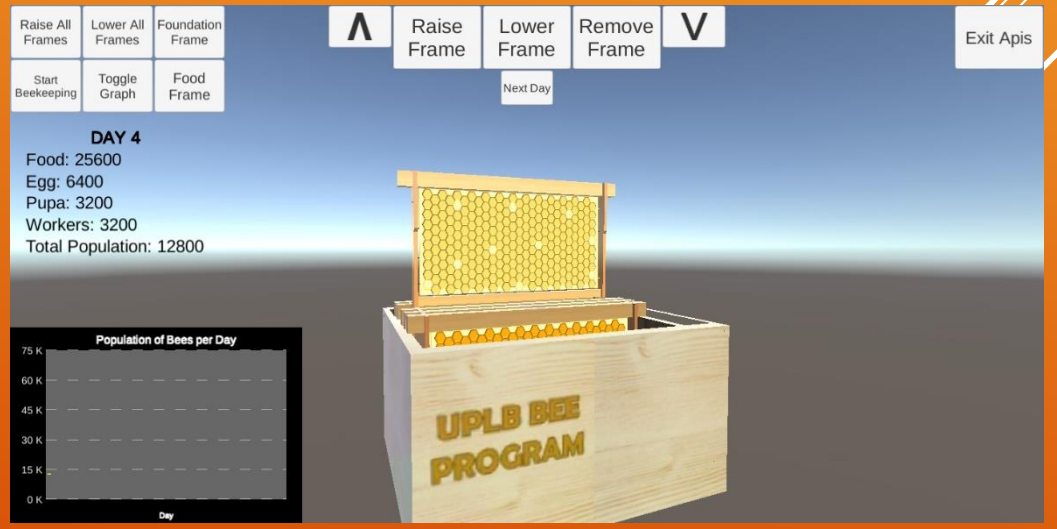


Solution

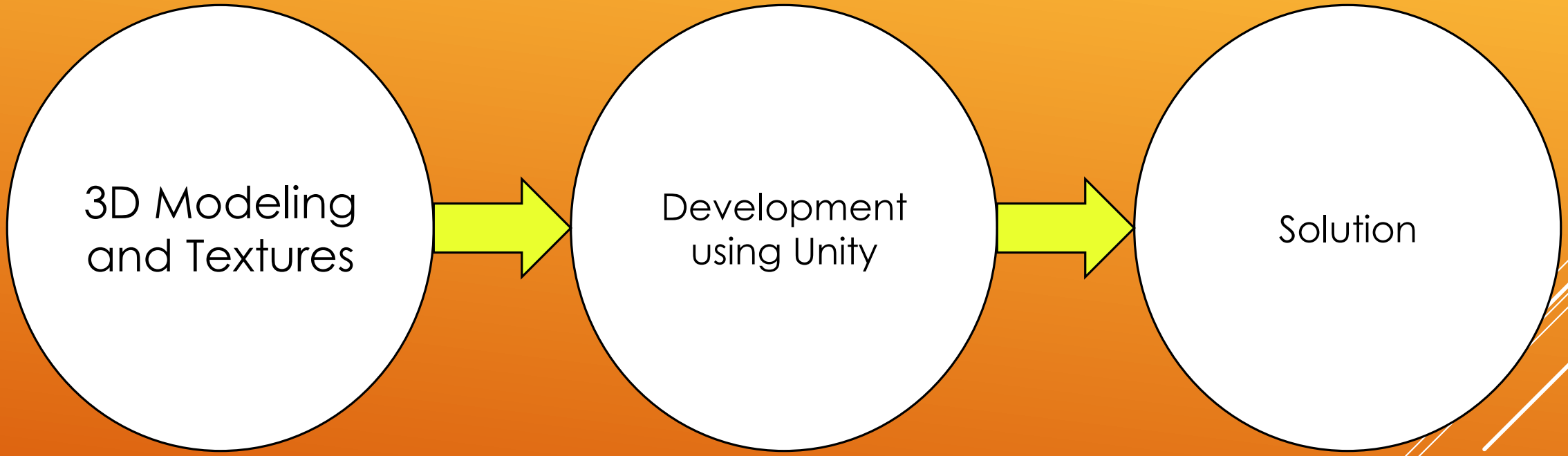

UPLB SimBee
Automatic Beekeeping
Manual Beekeeping
Quiz
Quit


Raise All Frames
Lower All Frames
Simulate
Toggle Graph
Raise Frame
Lower Frame
Remove Frame
0.125
0.25
0.5
||
2
4
8
Exit Apis
DAY 46
Food: 12800
Egg: 3200
Pupa: 6400
Workers: 19200
Total Population: 28800
Population of Bees per Day
75 K
60 K
45 K
30 K
15 K
0 K
30
Day
UPLB BEE PROGRAM
Sticky Frame
Sealed Brood Frame
Open Brood Frame
Food Frame
Foundation Frame


Raise All Frames
Lower All Frames
Raise Frame
Lower Frame
Exit Apis

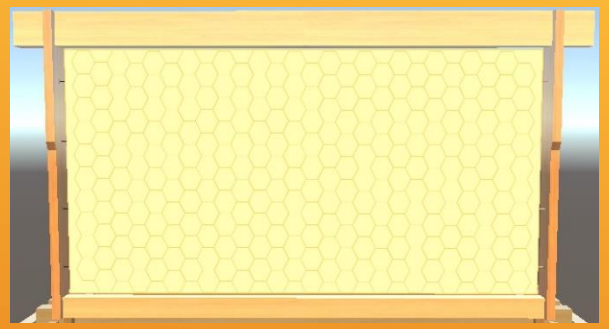

Raise All Frames
Lower All Frames
Foundation Frame
Start Beekeeping
Toggle Graph
Food Frame
Raise Frame
Lower Frame
Remove Frame
Next Day
Exit Apis
DAY 4
Food: 25600
Egg: 6400
Pupa: 3200
Workers: 3200
Total Population: 12800
Population of Bees per Day
75 K
60 K
45 K
30 K
15 K
0 K
Day
UPLB BEE PROGRAM

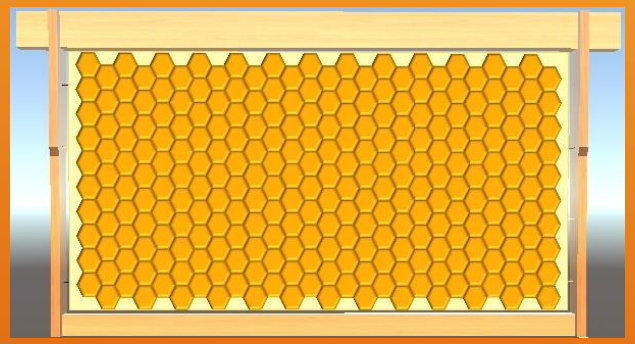
Methodology

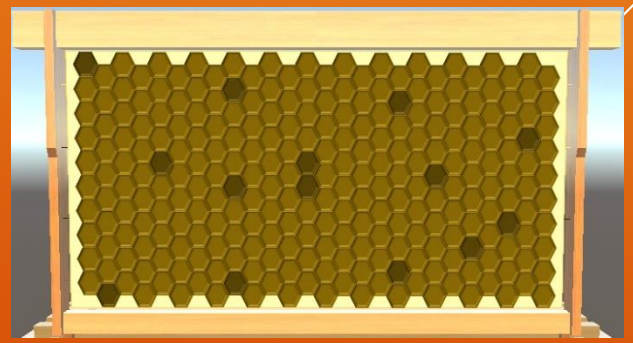


Beehive Elements

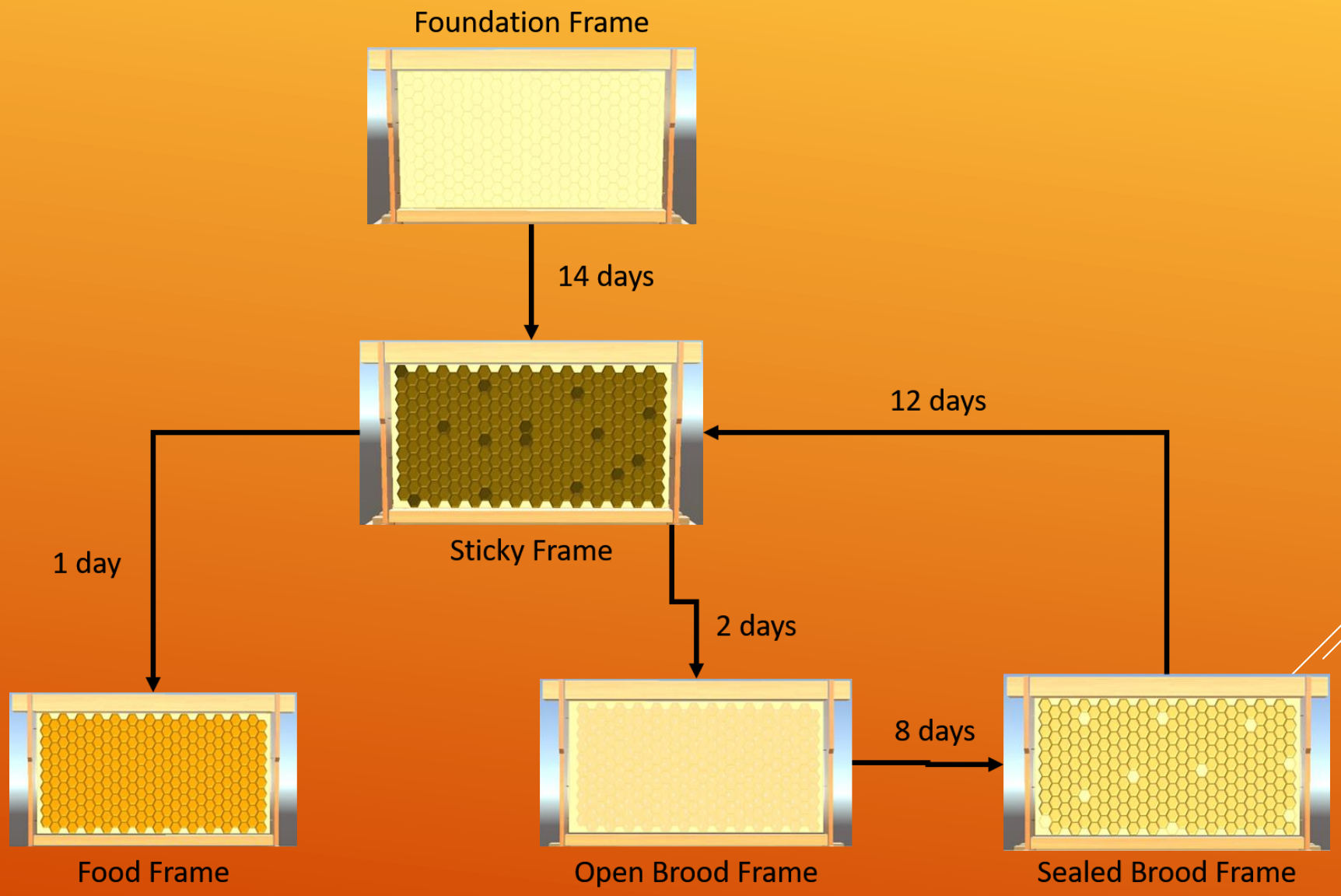
Langstroth boxed hive



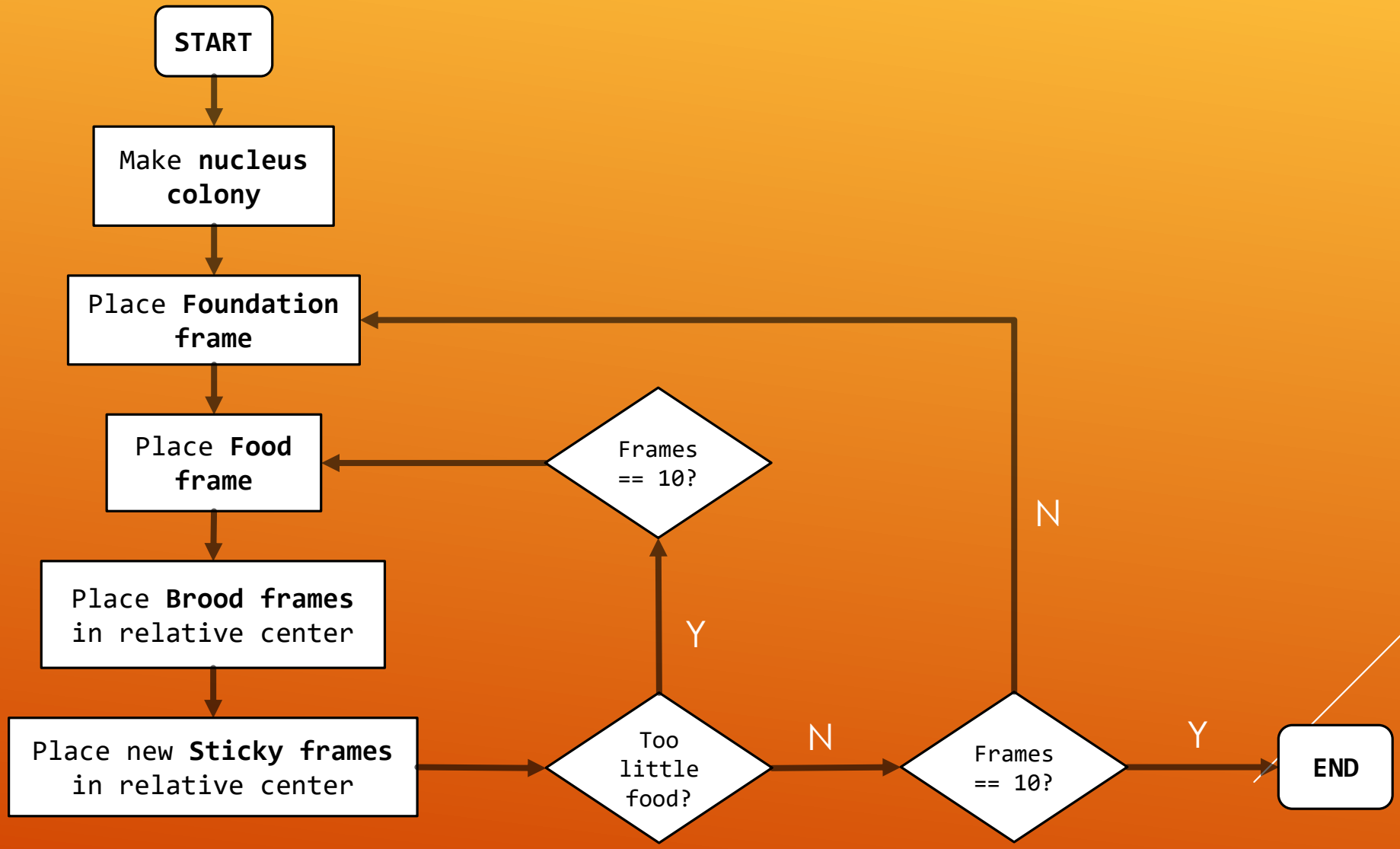




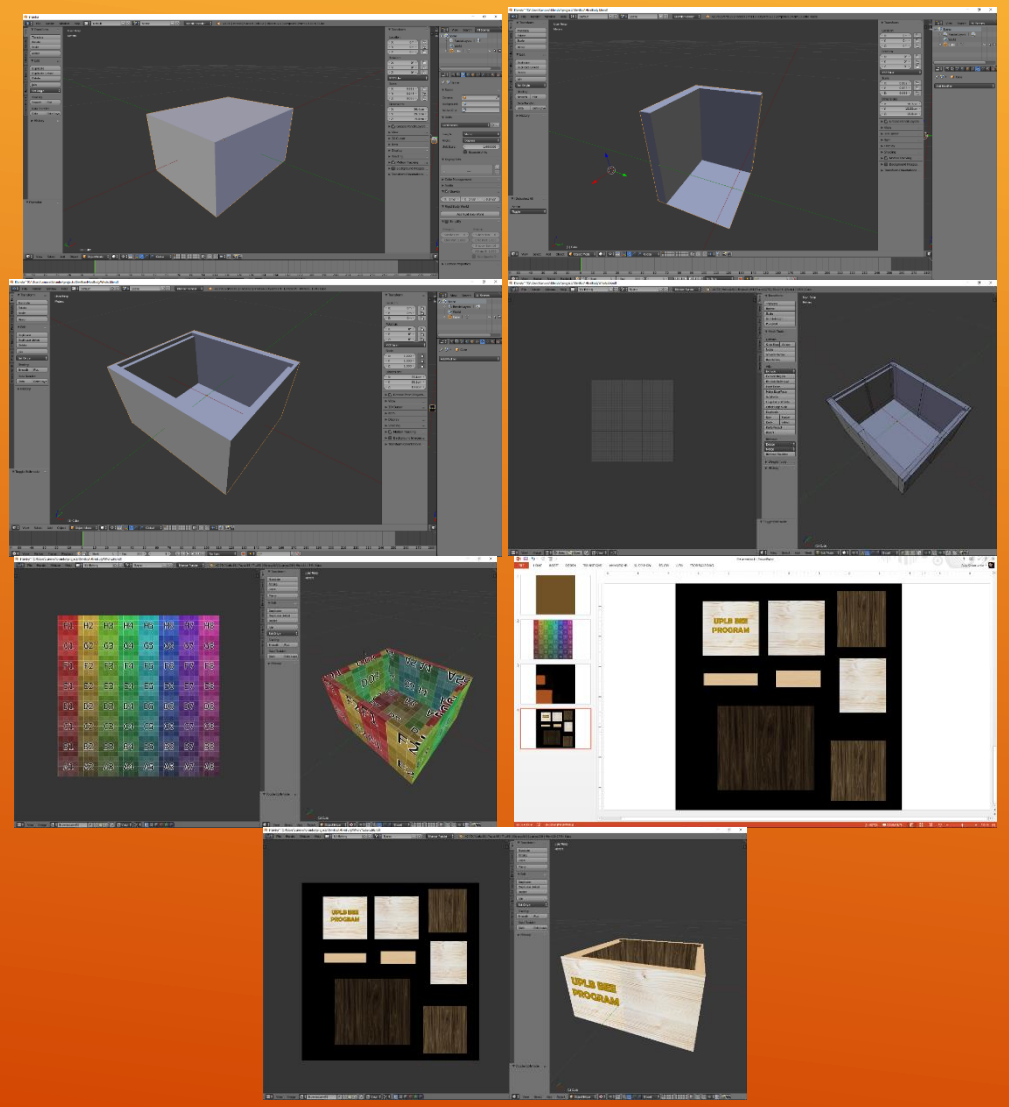
Frame Cycle

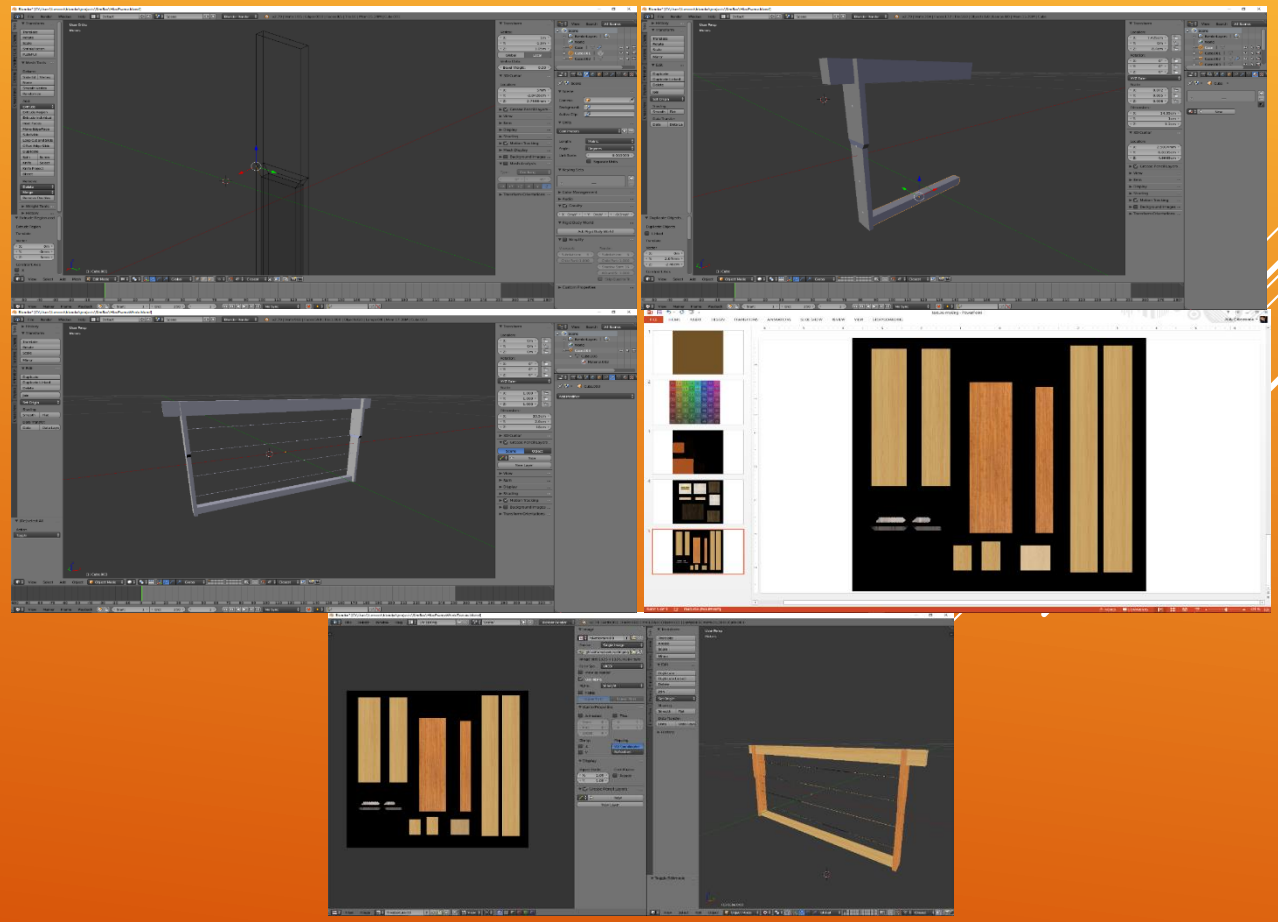

Foundation Frame
14 days
Sticky Frame
12 days
1 day
2 days
8 days
Food Frame
Open Brood Frame
Sealed Brood Frame

Proper Beehive Management

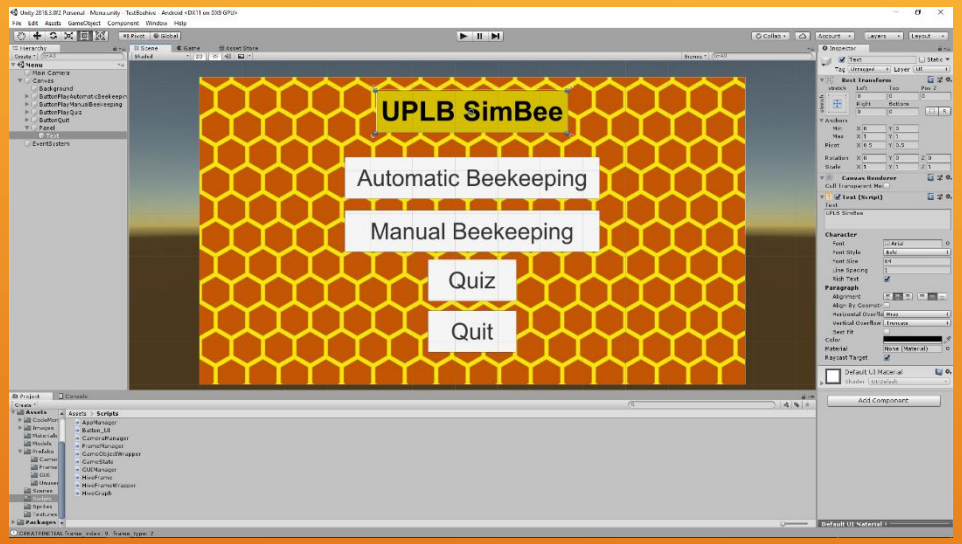


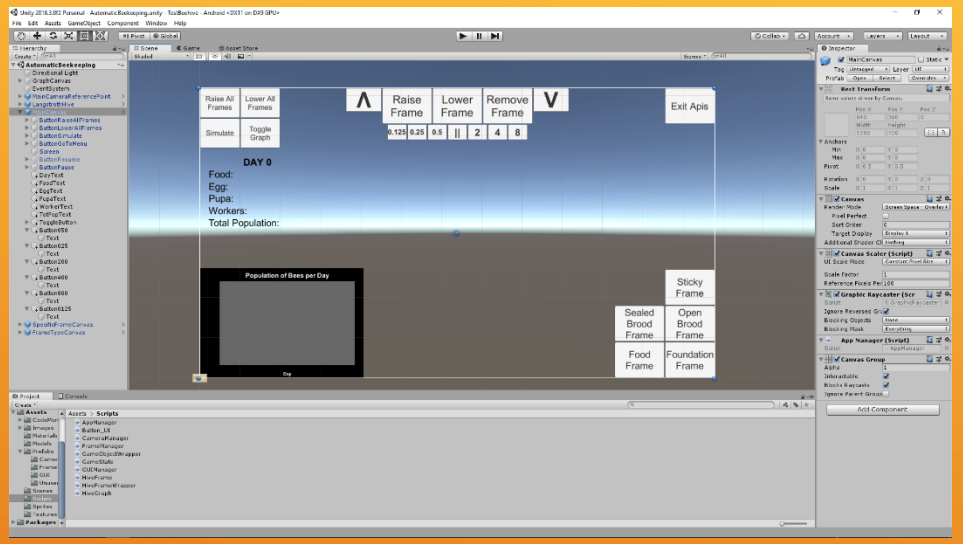
3D Modeling and Textures

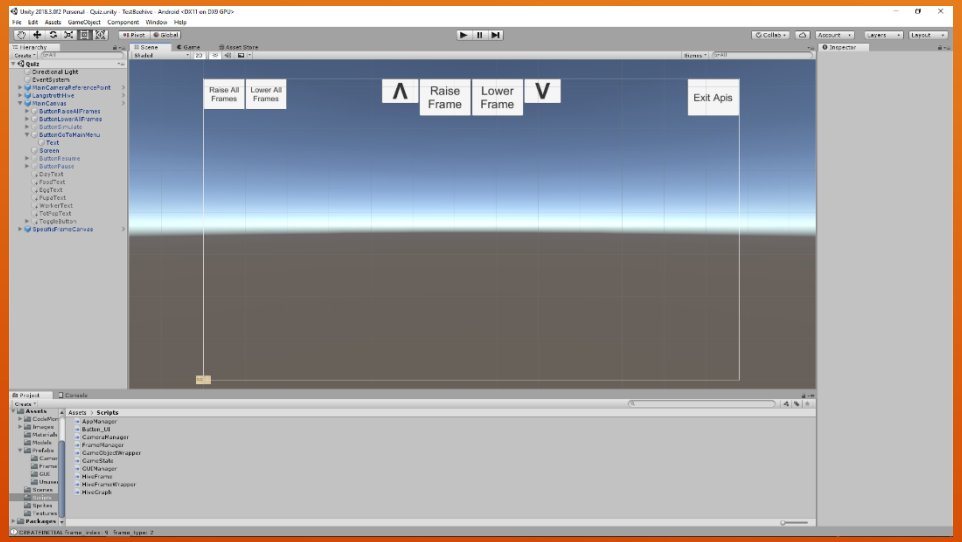


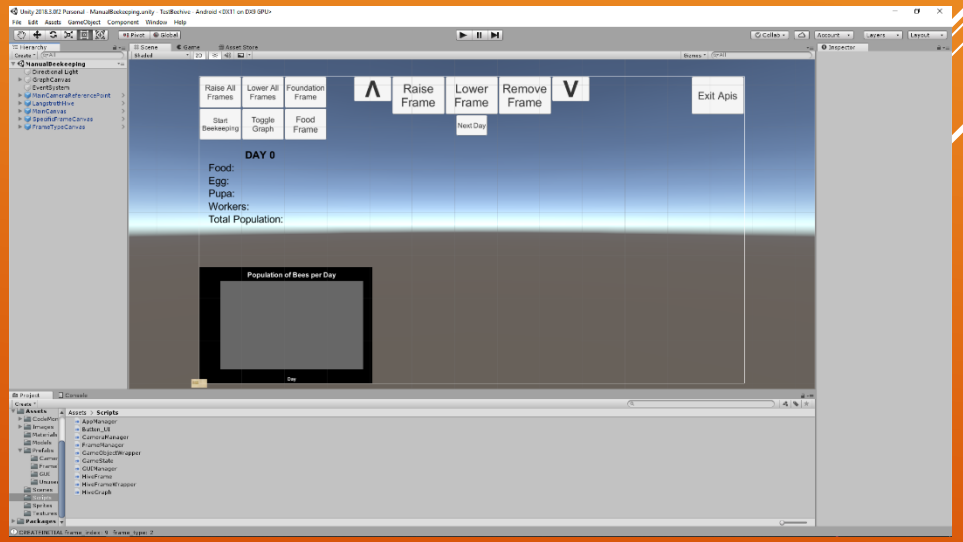


User Interface

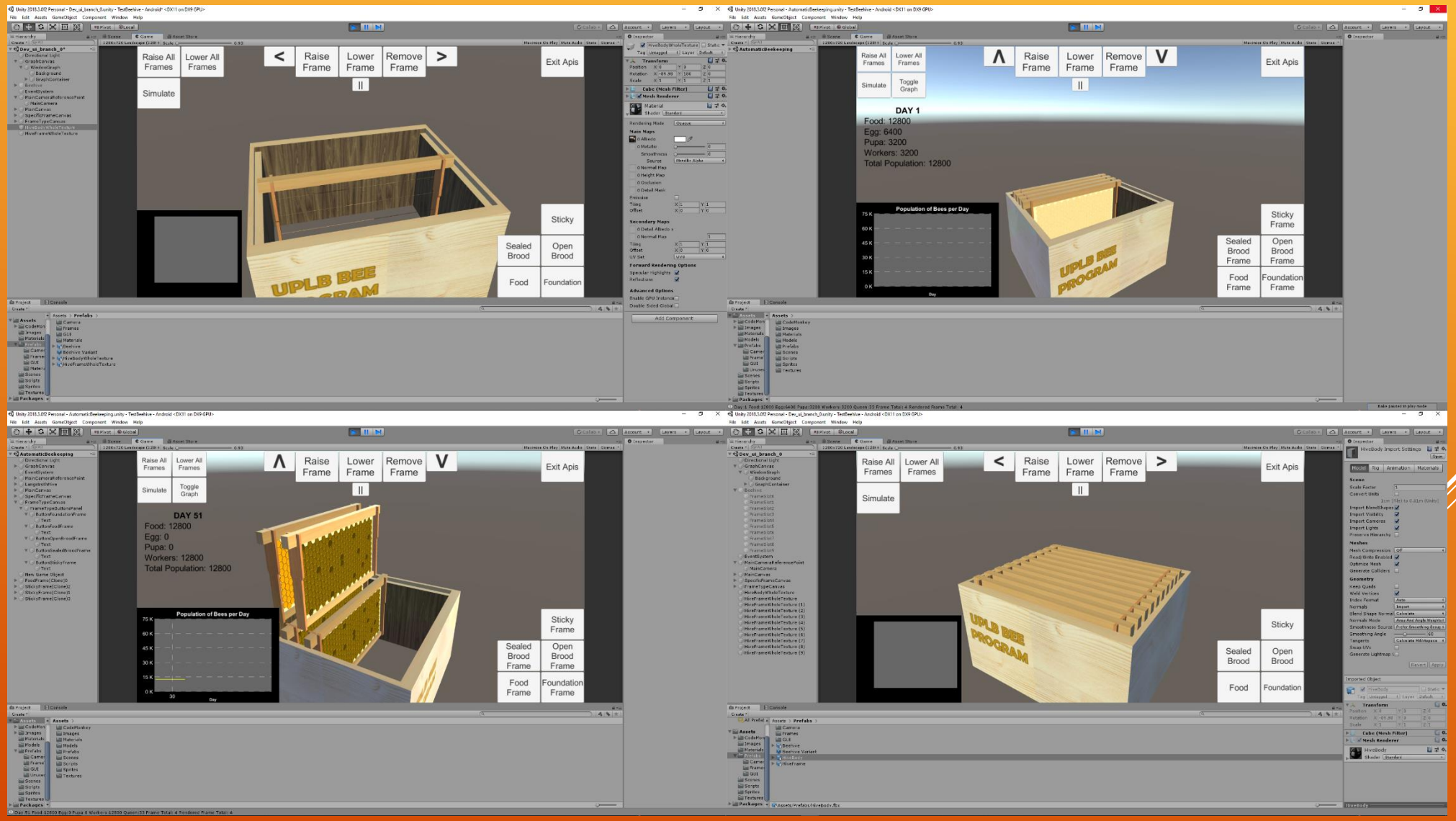




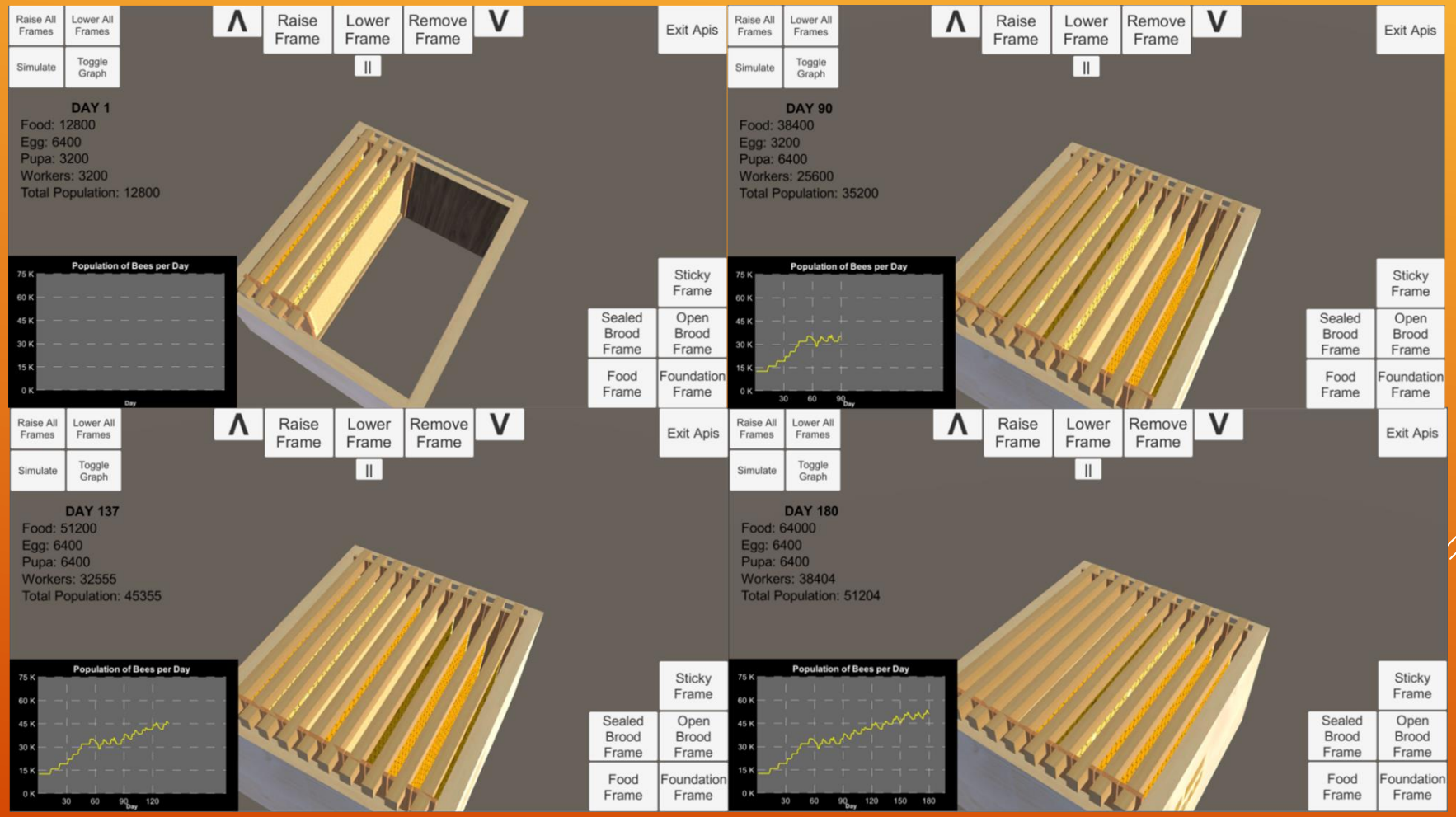




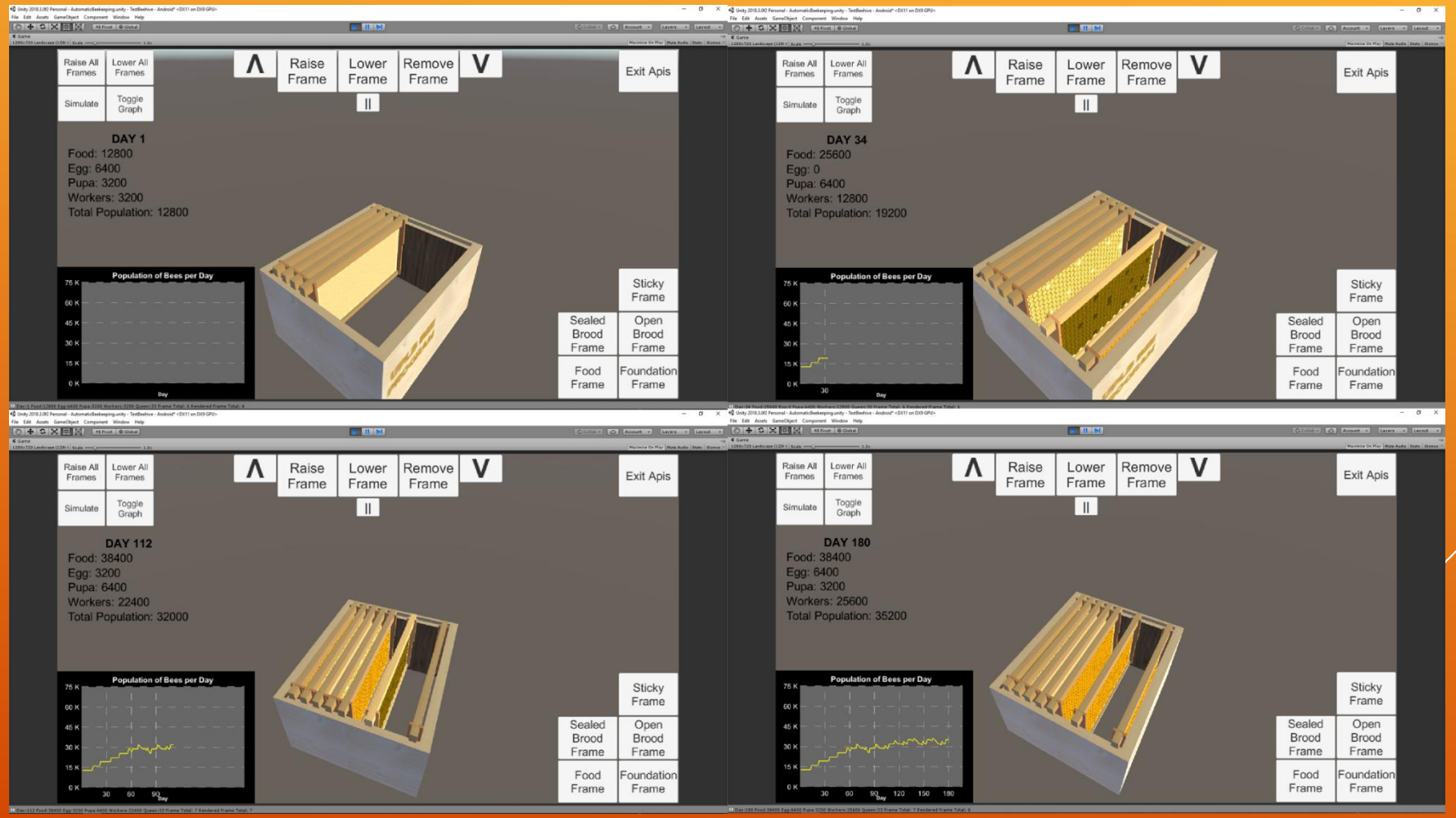
Development using Unity



Proper Beehive Management Simulation



Improper Beehive Management Simulation



REFERENCES

Clarino, M. D. (2013). 3D seasonal beehive management simulation (undergraduate special problem). University of the Philippines Los Baños, Laguna, Philippines

Serrano, K. J. V. (2011). Computer simulation tool for the proper bee hive management training module (undergraduate special problem). University of the Philippines Los Baños, Laguna, Philippines.