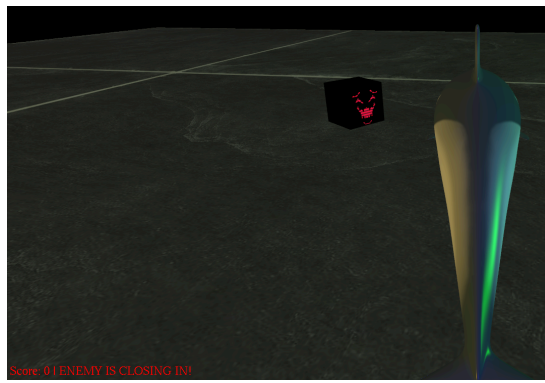
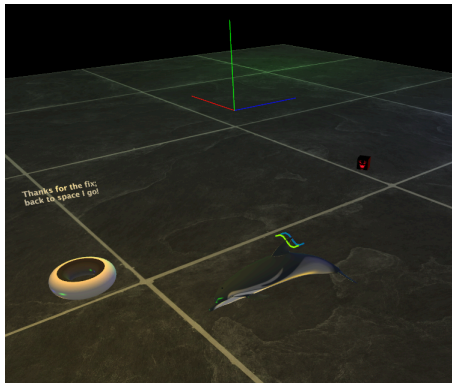
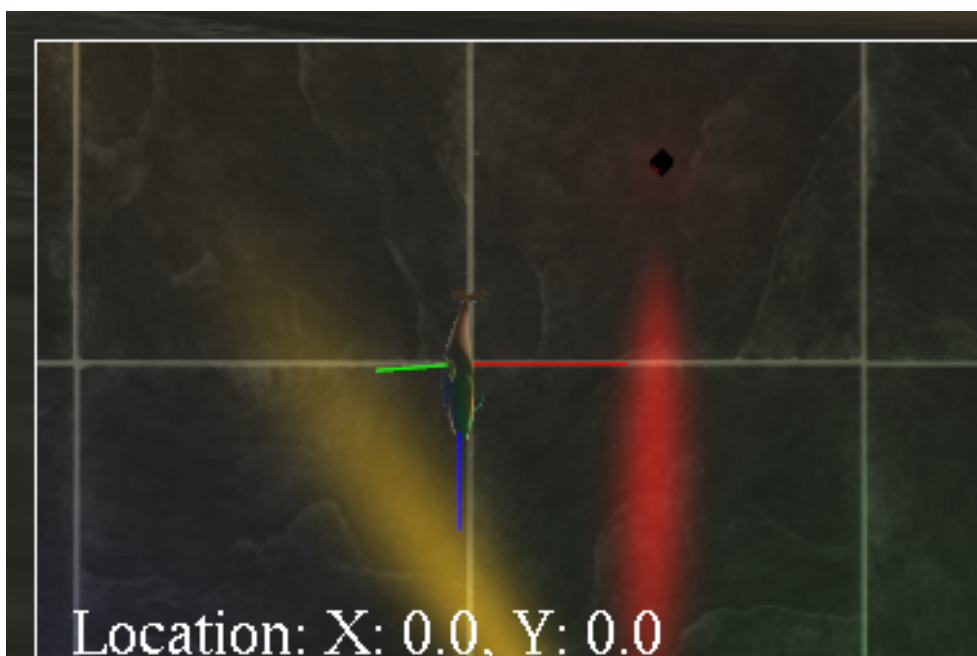
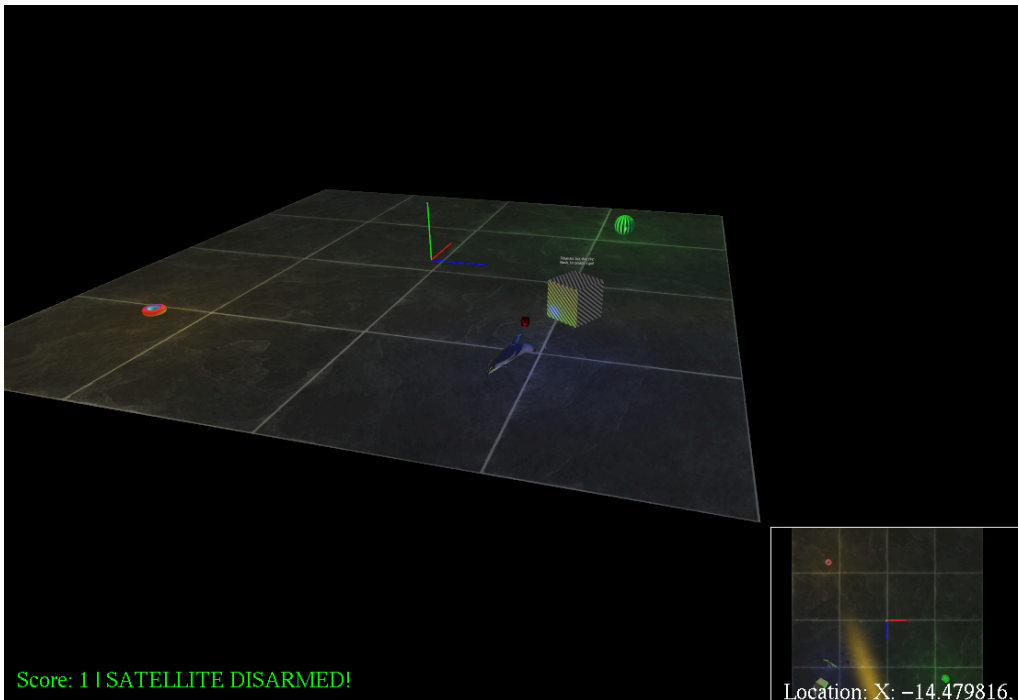


1.) Hunter Brown, Section 02, A2 – Dolphin Mission 2



2.)



3.) Here are the inputs for my game for movement and interaction:

a.) Keyboard

i.) Movement:

- (1) W: move forward
- (2) S: move backward
- (3) A: Pan to the left (yaw left)
- (4) D: Pan to the right (yaw right)
- (5) Up Arrow: Look up (pitch up)
- (6) Down Arrow: Look down (pitch down)

ii.) Interaction:

- (1) Q: Disables the world Axis lines in the middle
- (2) E: Interact button; use to disarm satellites when close enough

b.) Controller/Gamepad

i.) Left Analog X-Axis: Pan to the left/right (yaw left/right)

ii.) Left Analog Y-Axis: Move forward/backwards

4.) Here are the inputs for my game for Camera Control:

a.) Keyboard:

i.) Main Camera:

- (1) I/K: Adjust Radius value
- (2) J/L: Adjust Azimuth value
- (3) U/O: Zoom in and out (Elevation)

ii.) Minimap:

- (1) T/G: Pan up and down Z axis on minimap
- (2) F/H: Pan left and right X axis on minimap
- (3) R/Y: Zoom in and out Y axis on minimap

b.) Gamepad:

i.) Right Analog X-Axis: Adjust Azimuth value for main cam

ii.) Right Analog Y-Axis: Adjust Radius value for main cam

5.) I have 2 different Node Controllers that I use in my game.

- a.) BobbingController.java: This is a class that is used to move objects up into the sky, specifically the satellites once they are disarmed (they fly back up into space since they're now fixed and safe)!
  - b.) RotationController.java: This is the class that came with TAGE, and one that I also use on the satellites once they are disarmed
- 6.) Here are the specific objects the player picks up after disarming specific satellites:
- a.) Sphere satellite:
    - i.) A green wire is picked up from the SPHERE satellite and placed on the dolphin's back for safe keeping; the parent is changed from the satellite to the dolphin for the object on disarm
    - ii.) A specific object used for dialogue text above the satellite, "spaceText" has their parent changed to the SPHERE satellite when it is disarmed and their rendering is enabled (no longer invisible).
  - b.) Cube satellite:
    - i.) A blue wire is picked up from the CUBE satellite and placed on the dolphin's back for safe keeping; the parent is changed from the satellite to the dolphin for the object on disarm
    - ii.) A specific object used for dialogue text above the satellite, "spaceText" has their parent changed to the CUBE satellite when it is disarmed and their rendering is enabled (no longer invisible).
  - c.) Torus satellite:
    - i.) A red wire is picked up from the TORUS satellite and placed on the dolphin's back for safe keeping; the parent is changed from the satellite to the dolphin for the object on disarm
    - ii.) A specific object used for dialogue text above the satellite, "spaceText" has their parent changed to the TORUS satellite when it is disarmed and their rendering is enabled (no longer invisible).
- 7.) Here are the changes I made to the TAGE engines:
- a.) GameObject class function changes

- i.) yaw() - it now functions as a global yaw instead of a local yaw
  - ii.) pitch() - I adjusted pitch so that it does local pitch
- b.) Added classes:
  - i.) CameraOrbit3D.java - This is a class I made that permits the controlling of a camera such that you can orbit (move) the camera around a particular GameObject by controlling the different azimuth, elevation, and radius values.
  - ii.) CameraMinimap.java - This is a class I made based off of CameraOrbit3D.java (based off provided Orbit Controller code from the book/Canvas files) that specifically allows the player to move a specific camera as if it's a minimap (top-down, can only move along the X and Z axes whilst zooming in and out along the Y axis; it cannot look anywhere else but directly down at all times).
  - iii.) BobbingController.java - (already mentioned and described previously)

8.) I was able to implement every feature.

9a.) Textures:

- a.) The textures that I made:
  - i.) Sphere\_Satellite.png
  - ii.) Sphere\_Close.png
  - iii.) Sphere\_Disarmed.png
  - iv.) Cube\_Satellite.png
  - v.) Cube\_Close.png
  - vi.) Cube\_Disarmed.png
  - vii.) Torus\_Satellite.png
  - viii.) Torus\_Close.png
  - ix.) Torus\_Disarmed.png
  - x.) ManualCube.png
  - xi.) detonated.png
  - xii.) whiteText.png
  - xiii.) wireR.png
  - xiv.) wireG.png

xv.) wireB.png

b.) The textures I did NOT make:

i.) ground.jpg - Source:

<https://www.poliigon.com/texture/square-slate-raw-tile-texture-black/7657> -

Royalty-Free License:

<https://help.poliigon.com/en/articles/8749749-asset-use-licensing>

ii.) Dolphin\_HighPolyUV.jpg - Source: From the book's ancillary files

iii.) Dolphin\_HighPolyUV.png - Source: From the book's ancillary files

iv.) Dolphin\_HighPolyUV\_wireframe.png - Source: From the book's ancillary files

v.) Dolphin\_LowPolyUV\_wireframe.png - Source: From the book's ancillary files

9b.) Models:

a. Models I made:

i. spacetext.obj - made in Blender, faces are triangulated

ii. wire.obj - made in Blender, faces are triangulated

b. Models I did NOT make:

i. dolphinHighPoly.obj - Source: From the book's ancillary files

ii. dolphinLowPoly.obj - Source: From the book's ancillary files

9c.) All other files came with the distributed TAGE examples/textbook (I only added assets to the models and textures folders)

10.) My program works on the ECS-TEKKEN RVR-5029 machine