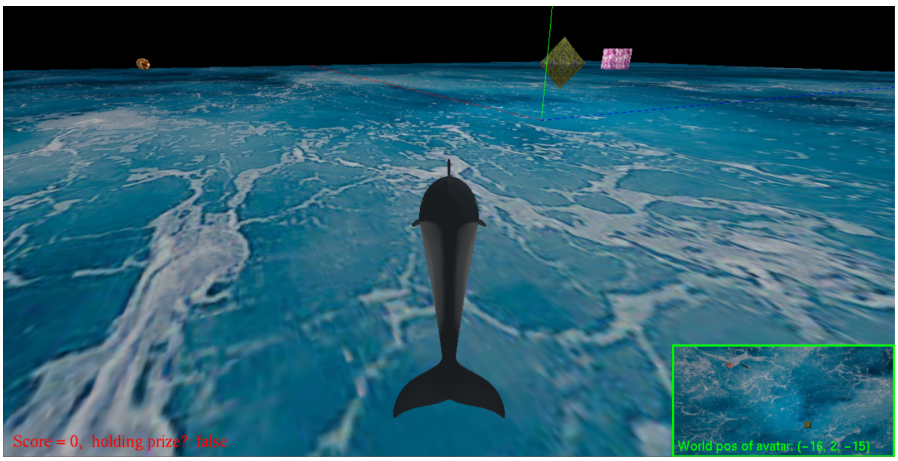
1.

- Lauren Prather
- CSC 165-01
- A2 – Dolphin Adventure 2

2.



3.

- The player must move around using the defined keys/buttons for motion as described in item 4. The orbiting camera can be adjusted using the definitions in item 5, and the second viewport's overhead camera view can be adjusted using the definitions in item 6.
- For this iteration of the game, I have disabled the ability for the dolphin to pitch up and down. Its movement is thus restricted to the x and z directions, and keeps the player on the flat (ground) plane at all times.
- Movement is also restricted in the x and z directions. There are predefined bounds for x and z– both must be within (-100,100). These bounds lie barely beyond the ground plane. When the dolphin reaches those bounds, movement in the direction they are going will be stopped. The player can move in the opposite direction (using forward motion if they were going backwards before or vice versa) to get themselves away from the bounds and able to move in the same direction as before again.
- There are 3 prizes spawned semi-randomly in space for each game (within predefined bounds so that they are not unreasonably difficult from the origin or difficult to locate).
- To collect a prize, the player must be reasonably close to the desired object. After collecting an object, the player must return to the octahedron [the manual object, textured with trees and located at (10,10,10)] and get close to the object. This will "offload" the prize that was picked up, and enable the player to go pick up another object.
- Collecting a prize makes it rotate (or, if the player is winning a specific prize for the second or more time, toggle the rotation on/off). Once a prize is picked up, the manual object will flash between two textures (pebbles and flowers) to remind the player that they must drop the object off there before collecting another. Once the prize is dropped off, the manual object will return to its original texture and a mini version of the prize appears near the manual object (a new mini version only appears after the first time being dropped off for each prize, no matter how many times it is won and returned).
- HUD1 (located in the first viewport) shows the player the number of prizes collected (the score) and whether or not they are able to pick up another object at that time. HUD2 (located in the secondary viewport) shows the world location of the dolphin.

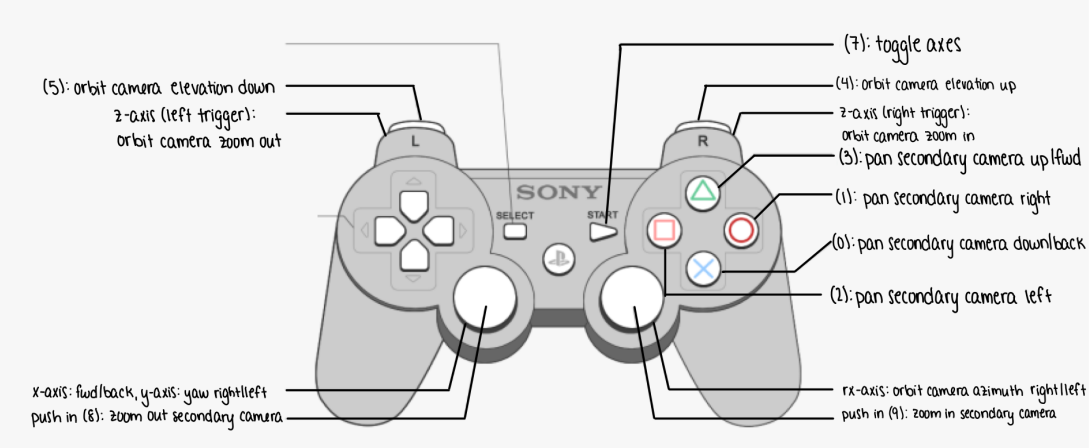
4.

- Keyboard keys: forward- "W", back- "S", right- "D", left- "A", toggle axes- "V"
- Gamepad axes/buttons: forward/back- X axis, right/left: Y axis, toggle axes- button 7
- Since this iteration of the game takes place on a flat (ground) plane, I have chosen to remove the ability to pitch the dolphin up and down. This restricts them from moving in arbitrary 3D directions (a requirement in the assignment document). More on movement restriction is in item 3.

5.
- Keyboard keys: azimuth right- “1”, azimuth left- “3”, radius in- “L”, radius out- “K”, elevation up- “P”, elevation down- “O”
- Gamepad axes/buttons: azimuth- RX axis, radius in/out- Z axis (right and left triggers) elevation up- button 5, elevation down- button 4

6.
- Keyboard keys: zoom in- “0”, zoom out- “8”, pan right- “H”, pan left- “F”, pan up/forward- “T”, pan down/back- “G”
- Gamepad buttons: zoom in- button 9, zoom out- button 8, pan right- button 1, pan left- button 2, pan up/forward- button 3, pan down/back- button 0

For items 4-6 above, a controller button mapping diagram is shown here:



7.
- Rotation controller (given): each time a player properly collects a prize, rotation is toggled on/off.
- Custom controller (named PratherController): when a prize has been collected, the custom object will flash between two textures (pebbles and flowers) on a timer, and once that prize is returned (dropped off) to the custom object, its texture returns to the original (forest). This happens every time a prize is collected and returned.

8.
- All objects are hung off the root of the scene graph except 3 mini prizes. These mini prizes are children of/hung off the parent/custom object (octahedron), and will be shown near the octahedron once the corresponding prize is properly “dropped off” after collection (game effect/implementation discussed more in items 1 and 11).

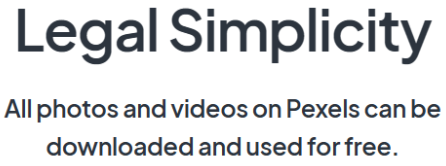
9. (don’t forget to also update the javadocs!)
- Action classes added to the tage.input.action folder include: PitchAction.java, FwdAction.java, YawAction.java, ToggleCamAction.java, and ToggleAxesAction.java.
- Additional action classes added to the tage.input.action folder (for camera actions for the secondary viewport): Vp2PanAction.java and Vp2ZoomAction.java.
- Methods yaw(), pitch(), and fwd() added to both GameObject and Camera classes.
- CameraOrbit3D.java added to the main tage folder. This contains the subclasses OrbitAzimuthAction, OrbitElevationAction, and OrbitRadiusAction.

10.
- None

11.
- Restriction of movement for x and z directions (discussed in item 3). This is a rough implementation.

12.

- Dolphin_HighPolyUV.png taken from distributed examples
- brick1.jpg made by me
- Images taken from pexels.com are freely available to use. License: https://www.pexels.com/license/



- ➔ wood1.jpg texture https://www.pexels.com/photo/brown-firewood-128639/
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