Unit I: Introduction: Installation and Alice Navigation

Chapter 6: Setting up the Alice Virtual World

In this chapter, you will learn how to change the properties and positions of objects in the Alice virtual world. You will also explore how to adjust the camera's properties and position to control what the viewer sees in a scene. Through practice with Alice's positioning and design tools, you will develop greater precision in placing, orienting, and arranging objects and the camera to create effective 3D scenes and animations.

Objectives

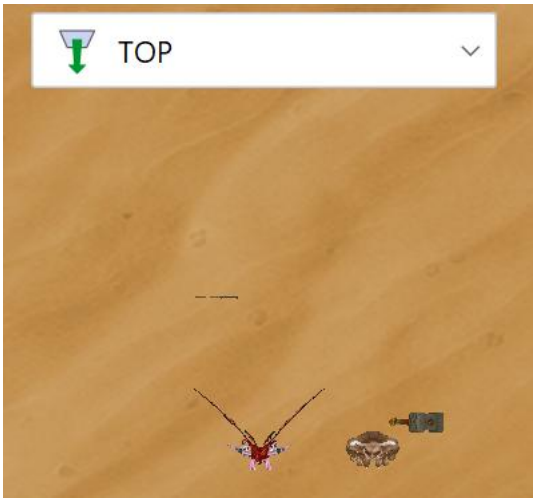
- Use the handles to turn, roll, and move objects.
- View the scene from starting view, layout, top, side, or front.
- Use different camera views to position objects.
- Use one shots to move, turn and roll in design view.
- Be able to assign vehicles to objects.

A Pixie with a Magic Wand and an Ogre with a Hammer

Here is a scene with a pixie holding a wand, and an Ogre holding a hammer. Or are they?

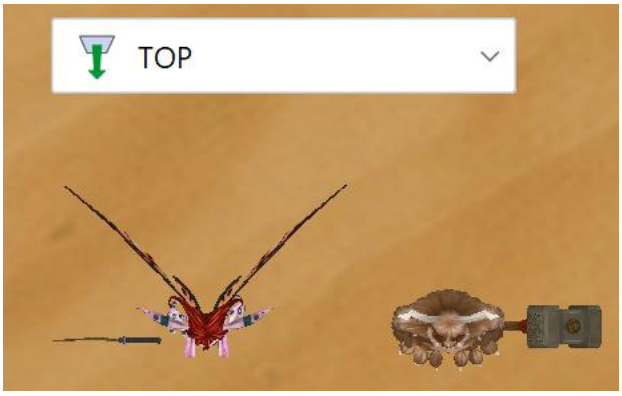
Camera Views

By default, we are viewing the scene from the **Starting Camera View**. Switch to the Top view and you see the image on the left: The wand shows as a thin grey line behind the pixie. The hammer is behind the Ogre, not in his hand. The image on the right is the side view. The magic wand is a dot behind the pixie. You can also see that the hammer is behind the Ogre.



Before you start animating the characters, you need to use all the camera views to make sure that they are actually holding the objects. Then you can make the vehicle for the wand the Pixie's right hand, and the vehicle for the hammer the Ogre's left hand.

Use the handles to adjust the positions from the top, the front, and the side.



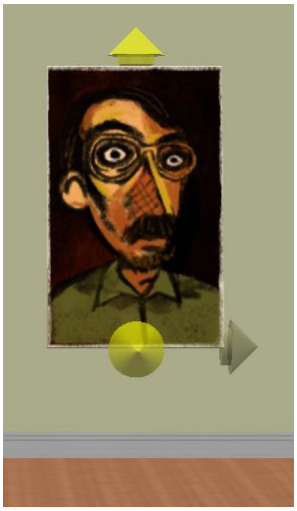
Action

Code

```
public void myFirstMethod() {
    // Pixie and Ogre
    // Programmer : Janet Joy
    doTogether( () -> {
        this.pixie.turnToFace( this.ogre );
    }, () -> {
        this.ogre.turnToFace( this.pixie );
    } );
    this.pixie.say( "Let's go!" );
    this.ogre.say( "Yeah, we better get started." );
    this.pixie.getRightShoulder().turn( TurnDirection.BACKWARD, 0.25 );
    this.ogre.getLeftShoulder().roll( RollDirection.RIGHT, 0.25 );
 }
```

Now, it's back to Setup Scene, because that wand is way too small!

Canvas



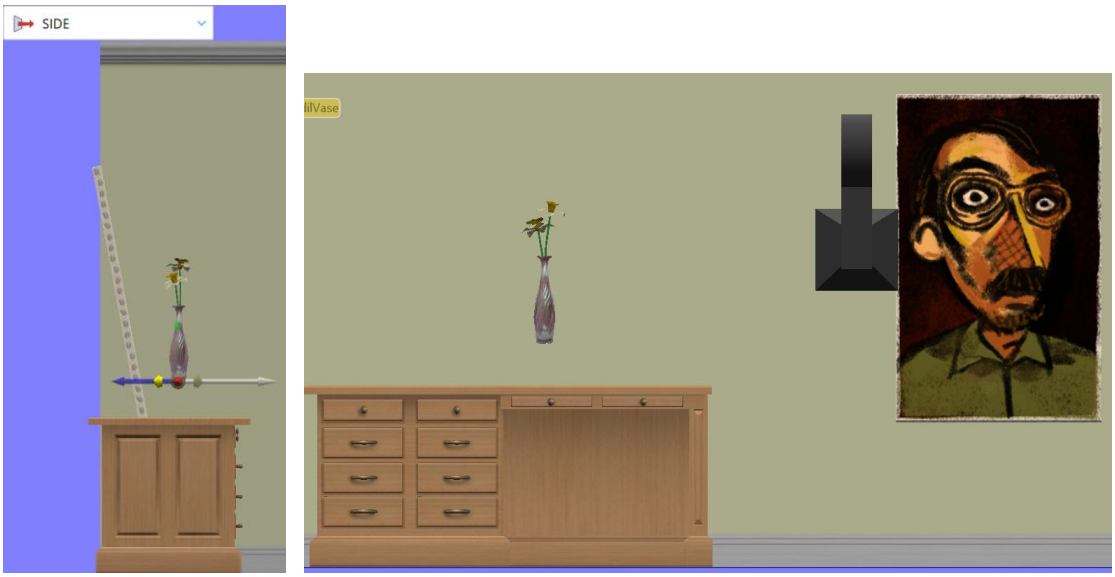
If you search the gallery for **canvas**, you will see several pictures that you can use to decorate a room. After adding it to the scene, select **Resize**, then use the arrow on the top right corner to adjust the size. Next, select **Move** and use the yellow arrow at the top to put the picture a bit higher on the wall. Now use the arrow at the bottom of the canvas to move it back. When it starts to disappear into the wall, move it forward a bit so that it isn't intersecting with the wall. Perfect!

Add a desk and a vase of flowers in the same way.

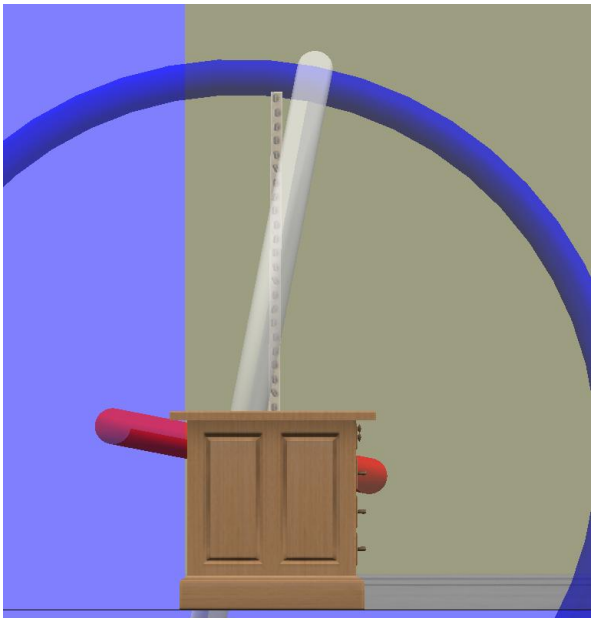
Now, select the other camera views to see how the objects are positioned.

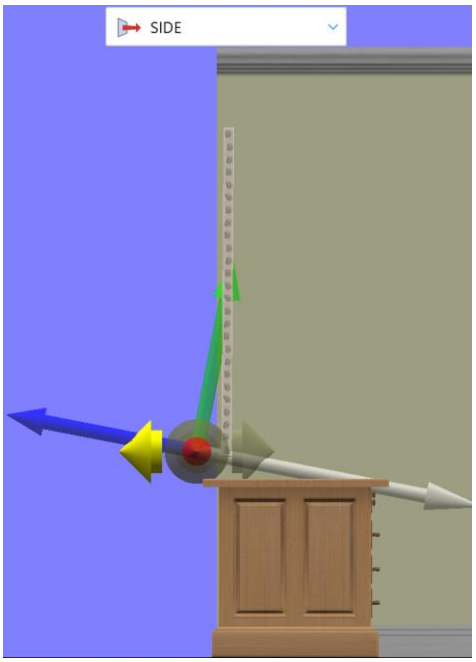
Use Camera Views to Adjust

Now, select the other camera views to see how the objects are positioned. From the side and front views, you can see that the canvas is slanted. The desk is toughing the wall, but the vase is hovering above the desk, not on it. Adjust before proceeding with the rest of the movie.



Use rotation to straighten out the picture, move to put it back against the wall.

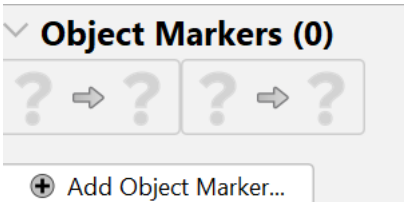




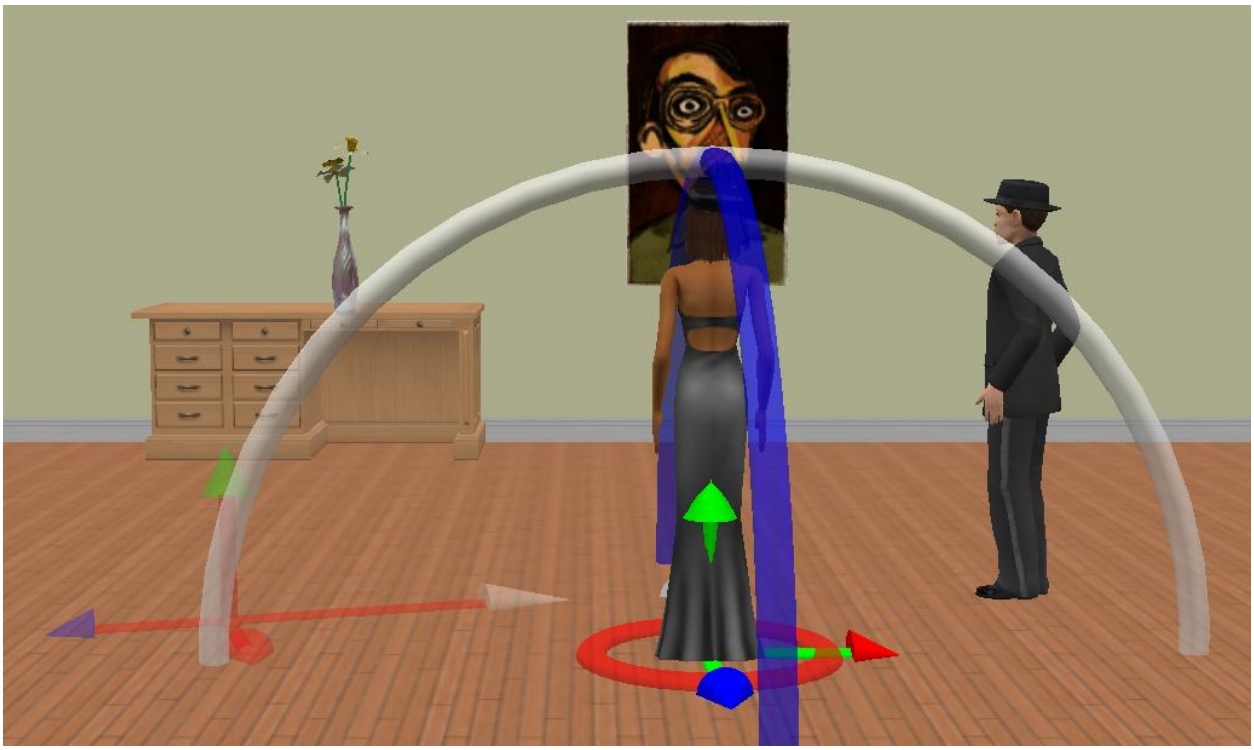
Markers

A man and woman have been added to the scene. The position they are in here is a good position because they are not blocking the vase of flowers or the canvas. We would like to have the woman walk closer to the picture, then go back to the position she is in as shown above. To do this we will add markers.

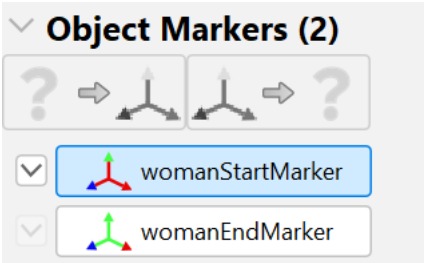
Adding Markers



Select the woman, then from the menu on the right, select Object Markers, Add Object Marker. Name it womanStartMarker. Next, move the woman over to look directly at the canvas. Add another objectMarker , name it womanEndMarker.



You will now see two object markers: Click the womanStartMarker and the woman moves and orients to the marker.



The Code

Go back to Code View and add the code shown below.

```
public void myFirstMethod() {
    // A painting
    // Programmer : Janet Joy
    this.charlie.say( "Is that supposed to be me?" );
    this.maria.moveAndOrientTo( this.womanEndMarker );
    this.maria.say( "No, it doen't look anything like you." );
    this.maria.moveAndOrientTo( this.womanStartMarker );
 }
```

Experiment! Copy this or make up your own story.