

Learning Guide

Construct a Building in Unreal Editor for Fortnite

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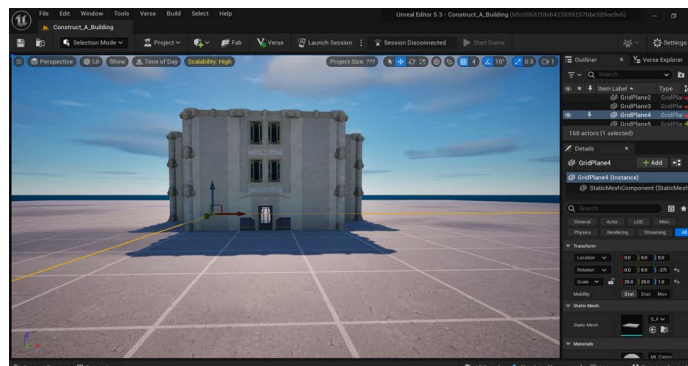
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Video Learning Guide for this Lesson
www.youtube.com/watch?v=_xqtXI9P11c

Introduction

In this Guide, you will learn how to use assets available in the Fortnite library within Unreal Editor for Fortnite (UEFN) to construct a building for use in a Fortnite experience. The Guide will help you locate building assets (such as walls, windows, and doors) and use grid snapping, object transformation tools, and replication functions to position your assets. By the end of this lesson, you should have the skills to construct an original building using assets you choose.



Prior Knowledge Check

<p>To successfully complete this lesson, you should:</p> <ul style="list-style-type: none"><input type="checkbox"/> be familiar with the basics of the UEFN User Interface and moving around in UEFN	<p>Resources:</p> <ul style="list-style-type: none">• Unreal Editor for Fortnite User Interface Basics
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Step 1: Getting started

Preview

Before you begin constructing your building, it's a good idea to activate the Snap to Grid and Snap Object to a Rotation Grid tools. With these tools activated, your building assets should easily snap in place and line up correctly.

Explore

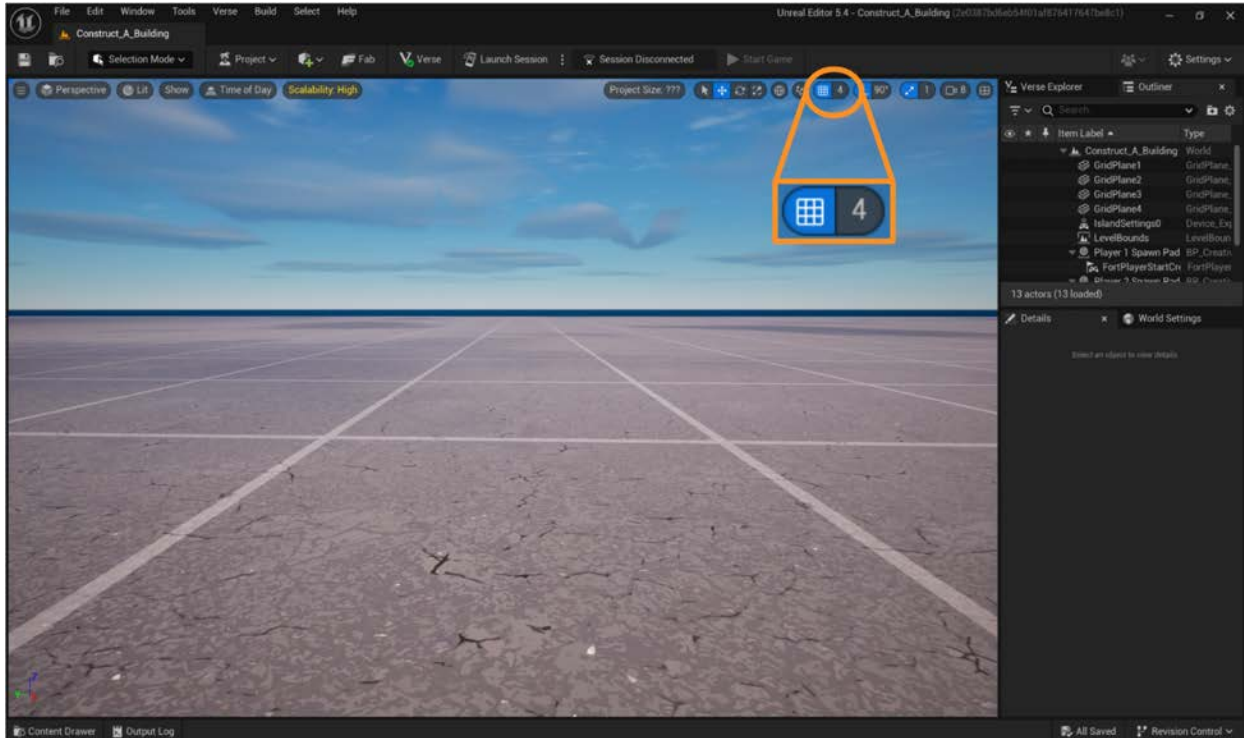
NAVIGATE TO THE AREA WHERE YOU WANT TO BEGIN BUILDING

Open a new or existing project in UEFN, and navigate to the general area where you'd like to begin building. It's a good idea to move away from any Player Spawners so you're not building on top of them.

ENABLE SNAP TO GRID

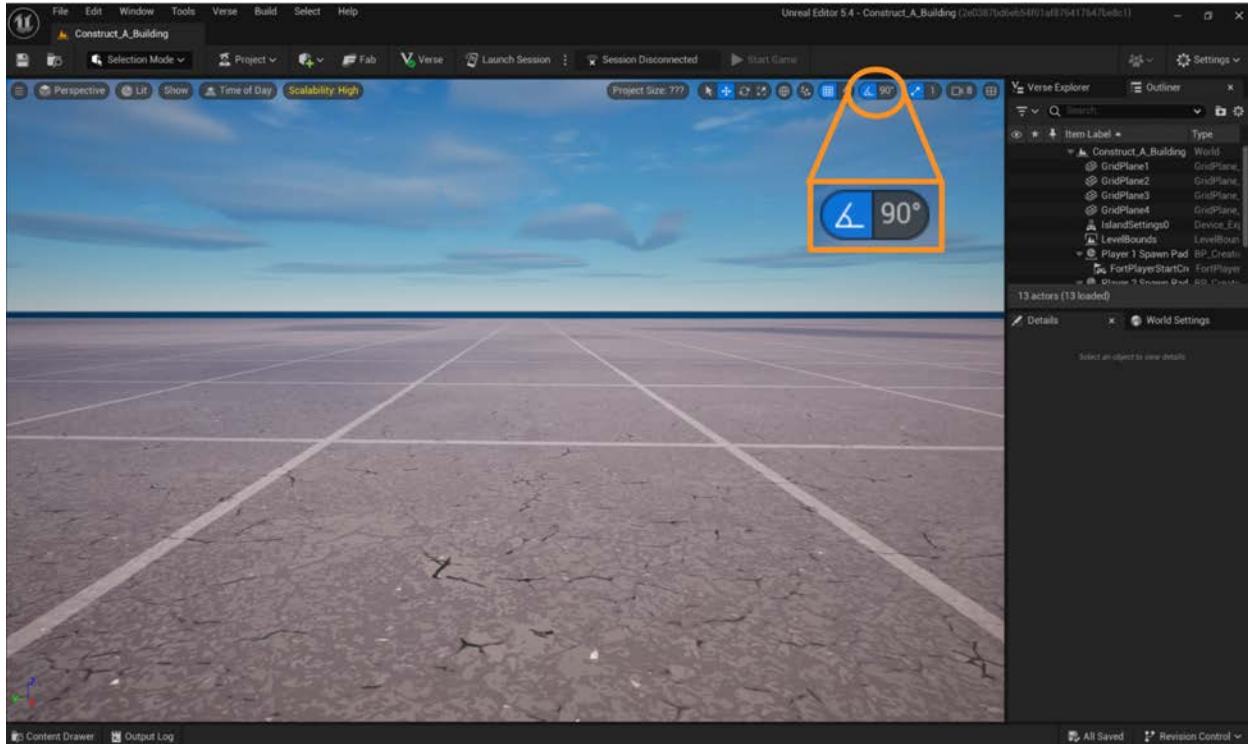
Snap to Grid helps make sure that assets line up and connect to each other by default, and saves the creator from having to make small and possibly inaccurate adjustments to their positions. This is helpful when you want to build something with a lot of straight lines and right angles, such as a building.

Enable Snap to Grid by clicking the grid symbol near the top right of the Viewport. The button will turn blue when activated. Click the button again if you want to deactivate it; it will turn gray when deactivated.



ENABLE SNAP OBJECT TO A ROTATION GRID

Snap Object to a Rotation Grid makes assets rotate at fixed angular increments, which again spares the creator from making a lot of manual adjustments. When constructing a building, it's a good idea to enable Snap Object to a Rotation Grid, and use the default rotation increment of 90 degrees. Click the angle icon next to Snap to Grid to enable Snap Object to a Rotation Grid. The tool is enabled when blue, and disabled when gray.



Self Check

Could you find and enable the Snap to Grid and Snap Object to a Rotation Grid tools?

Step 2: Select your building theme and materials

Preview

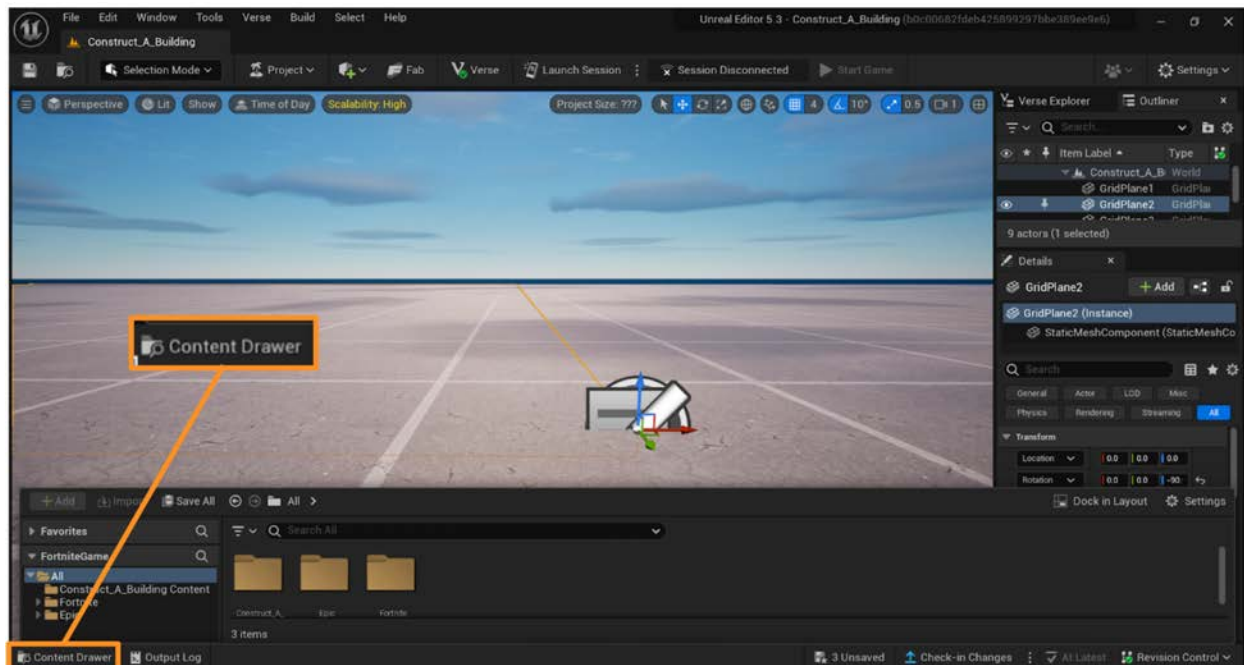
The Fortnite library within UEFN provides hundreds of ready-made building assets that you can drag and drop onto your island to construct your building. There are limitless combinations of building assets you can choose from to make your building unique. When you're just getting started, it may be a good idea to choose assets with the same theme or from only one or two subfolders, as related assets are made to fit together easily. As you get more experience, use your creativity to design buildings with different shapes, materials, decorative features, and themes.

Follow these steps to choose the assets you'd like to use to construct your building. You can always add, change, or omit assets later.

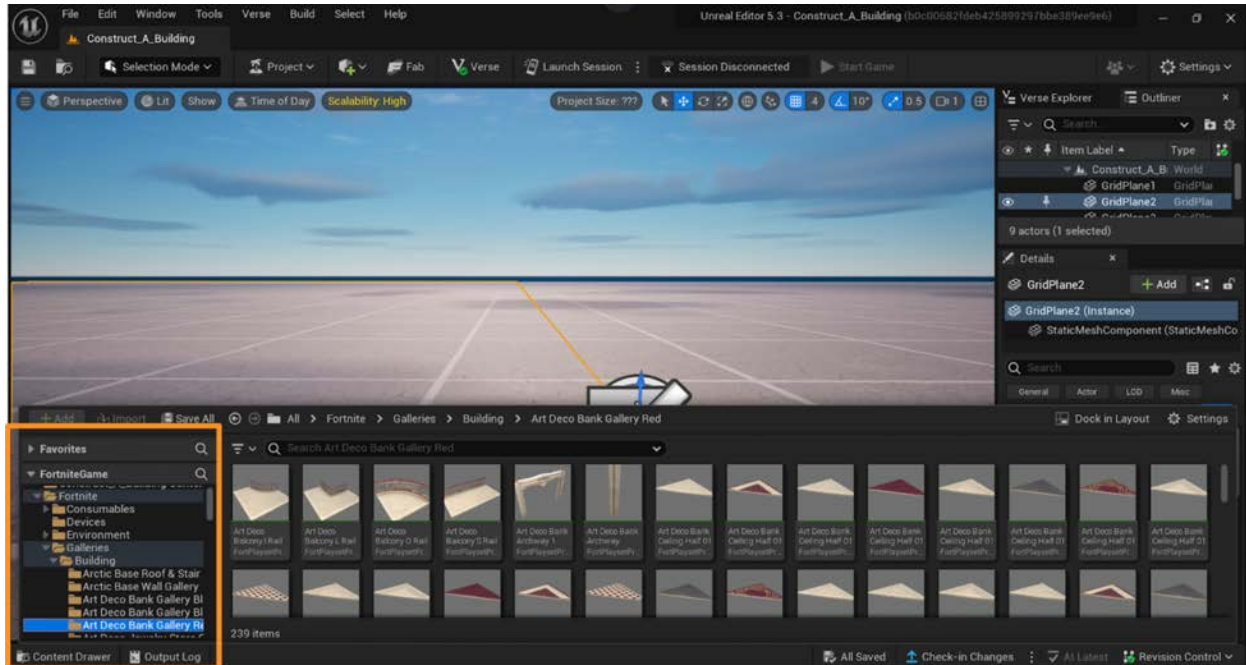
Explore

LOCATE THE BUILDING ASSETS IN THE CONTENT DRAWER AND SELECT YOUR THEME(S)

Click on the **Content Drawer** in the lower left corner of the User Interface. This will open a dialog box that allows you to search for and select assets that can be added to your project.



To choose the assets you will use to construct your building, locate the **Fortnite** → **Galleries** → **Building** folder. Double click on any sub-folder to explore the assets within it. For example, you can choose the “Art Deco Bank Gallery Red” folder to see a collection of stylistically-similar assets including walls, windows, doors, ceiling tiles, and floor tiles. Choose a theme or themes that you’d like to use for your building.



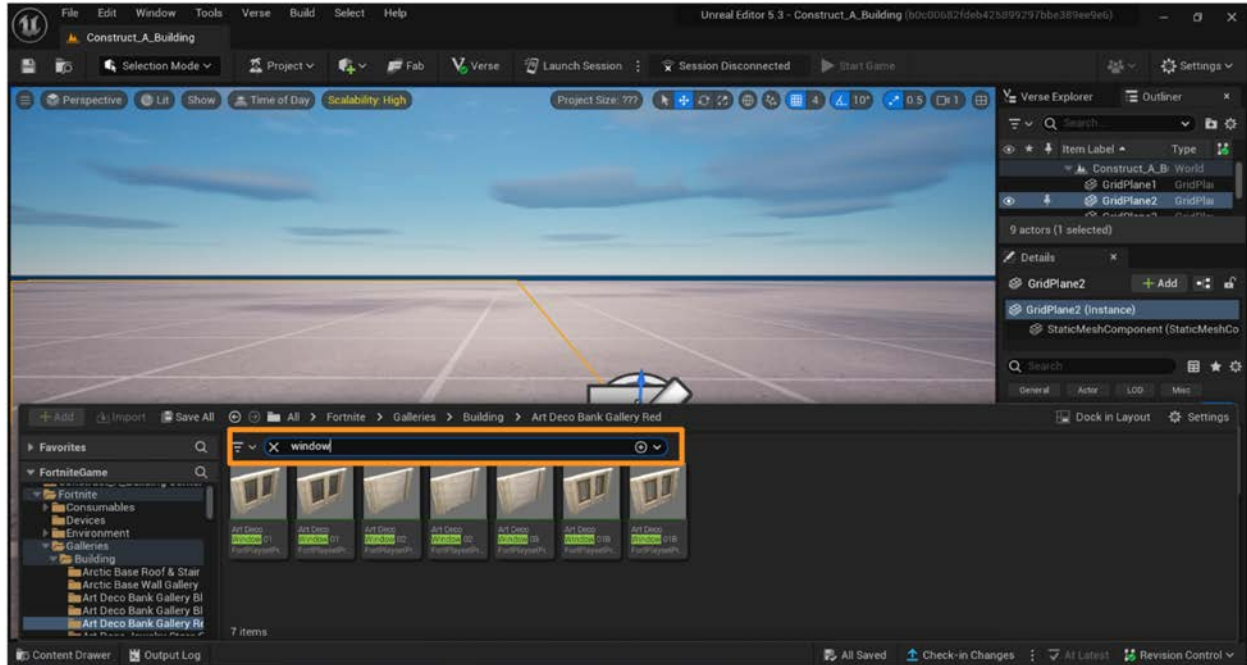
BRING BUILDING MATERIALS ONTO YOUR ISLAND

Within your selected subfolder(s) in the **Fortnite** → **Galleries** → **Building** folder, locate one or more of each of the following types of assets:

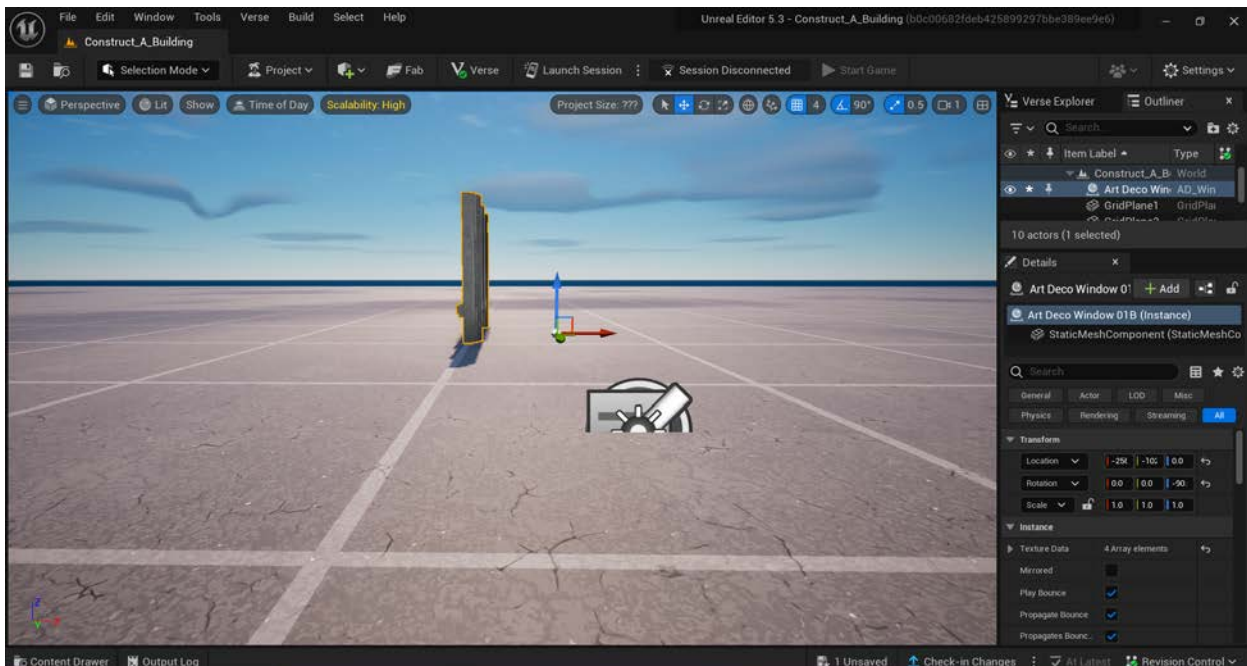
- Wall
- Door
- Floor
- Window
- Ceiling

You can search for assets by scrolling through the thumbnail images in the Content Drawer, or by typing a search term into the **Search Box**.

Note that not every folder will contain all of these asset types - depending on the theme you choose, you may need to select assets from multiple folders.



Click and drag the assets you'd like to use onto your island from the Content Drawer. You only need to bring each asset onto your island once - you can replicate them later.



Self Check

Could you locate at least one of each type of asset and drag your selections onto your island?

Step 3: Create your building's outline

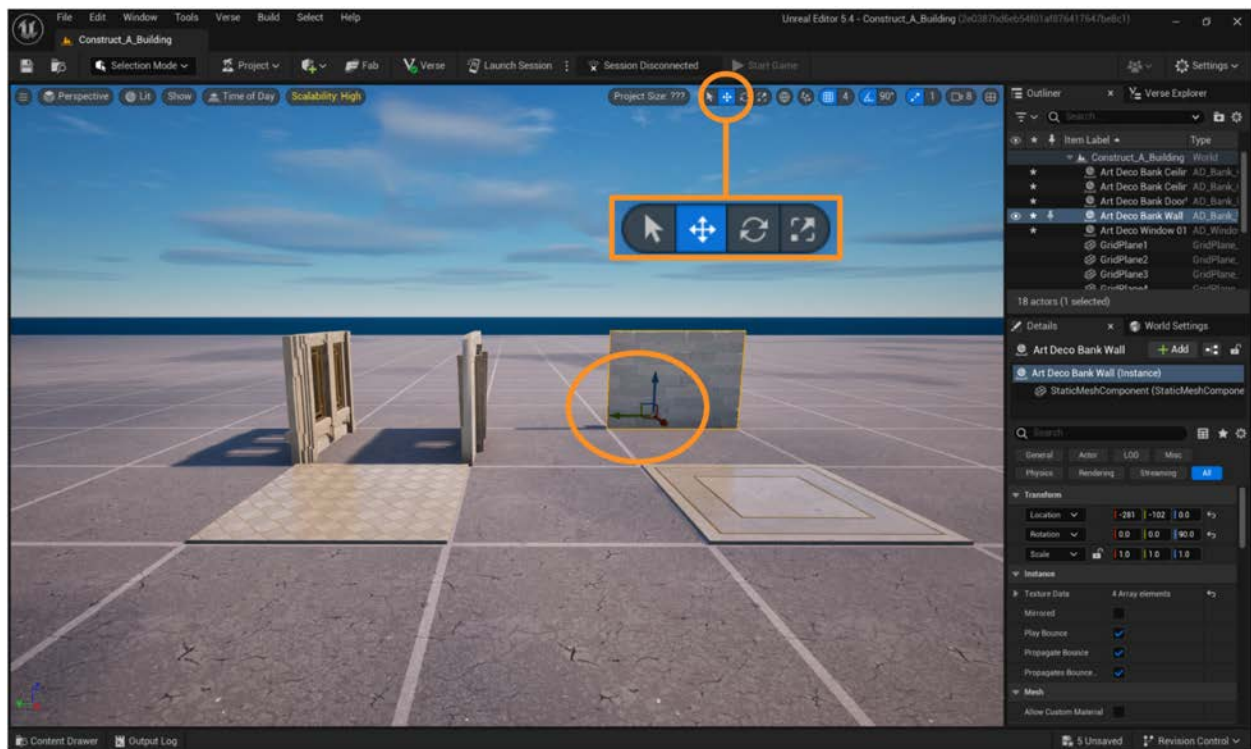
Preview

It's a good idea to create an outline for your building before you begin adding floors, ceilings, windows, and decorative features. This will help ensure that your building has the overall shape you want and that all building assets line up the way you want them to. This section will discuss some shortcuts to help you replicate assets to create your outline quickly.

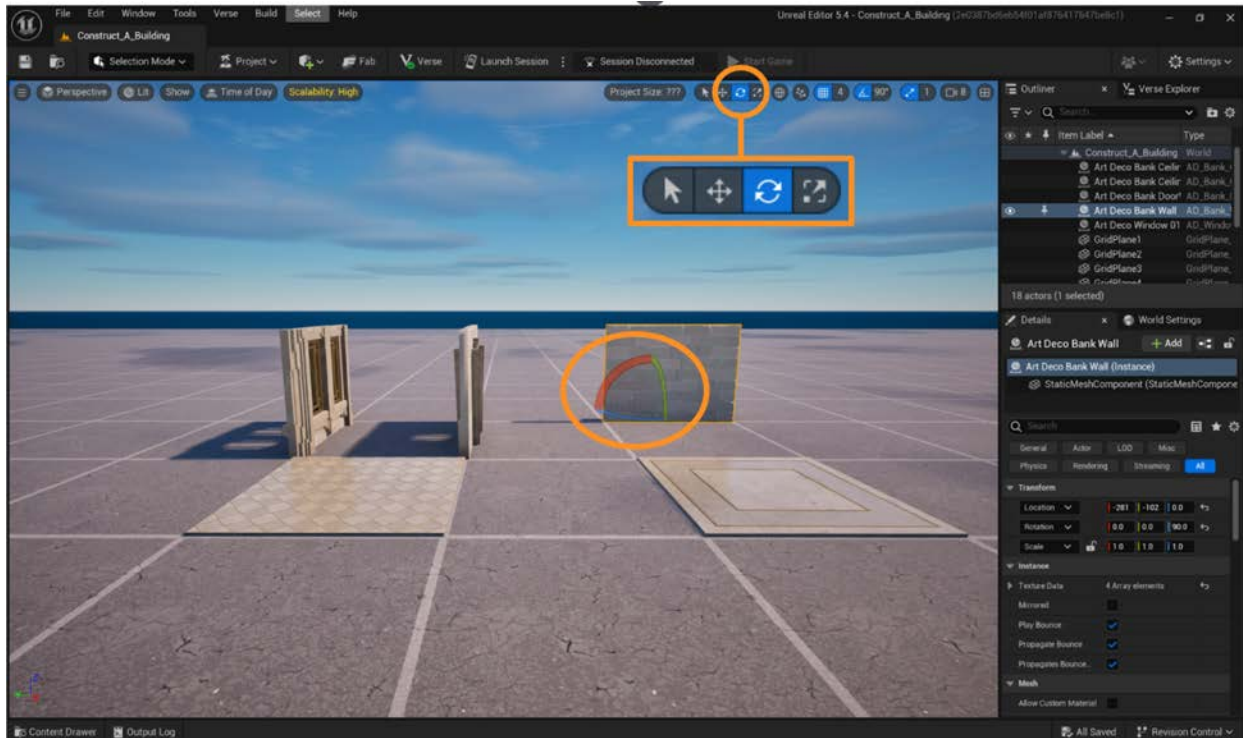
Explore

GET FAMILIAR WITH THE TRANSLATE AND ROTATE GIZMOS

The **Translate gizmo** allows you to move assets along the X, Y, and Z axes - left and right, up and down, and forward and backwards. Select the asset you'd like to move by clicking on it. Access the gizmo in the top right of the Viewport, and click on it to activate it. You should see a tool with three different color arrows appear in front of the selected asset. Click and drag each of the arrows to see how it moves the asset.

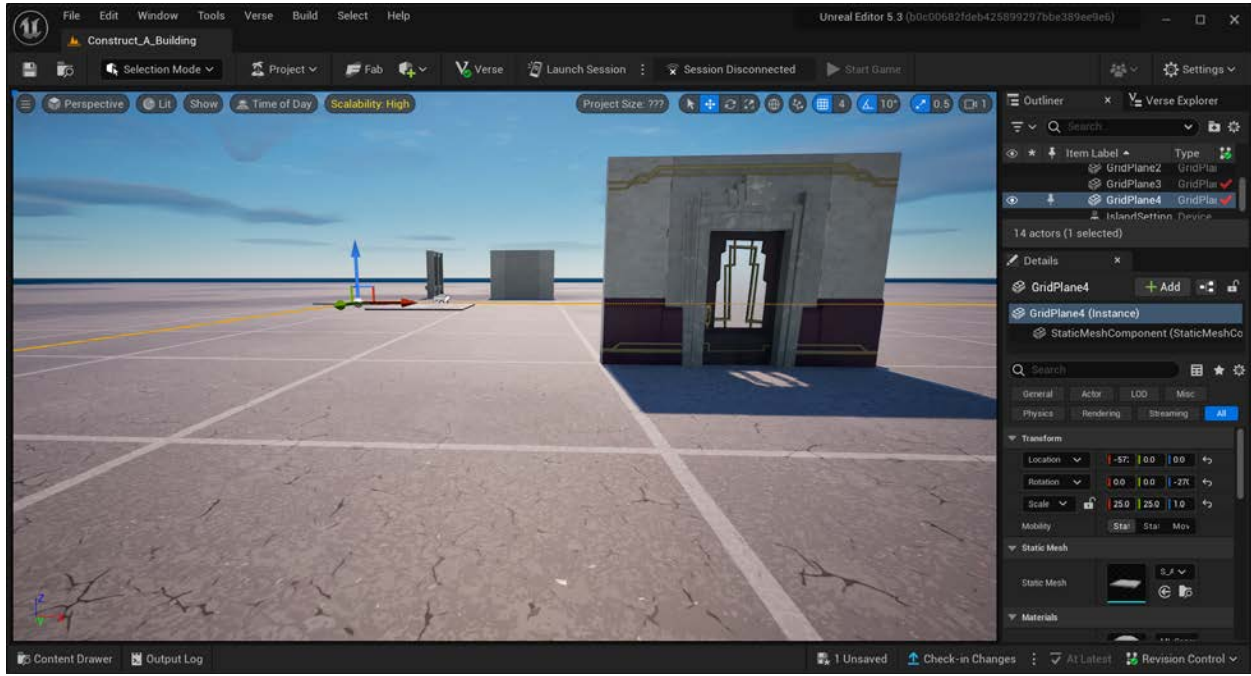


The **Rotate gizmo** is used to rotate assets in any direction. Select the asset you'd like to rotate, and then access the Rotate gizmo next to the Translate gizmo by clicking the button in the toolbar. A tool should appear in front of the selected asset. Click and drag each handle to see how it rotates the asset.

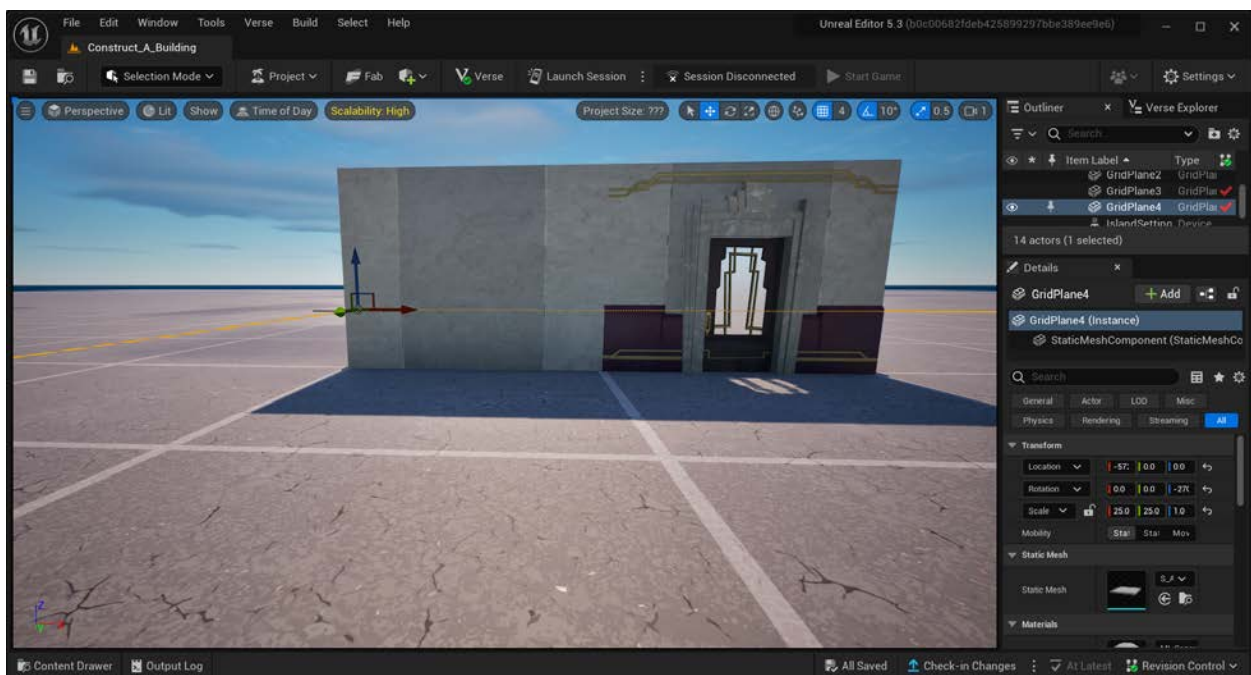


PLACE AND REPLICATE BUILDING ASSETS

Begin putting your assets in place to create your building's outline. First, locate the door and use the Translate and Rotate gizmos to place it where you want.

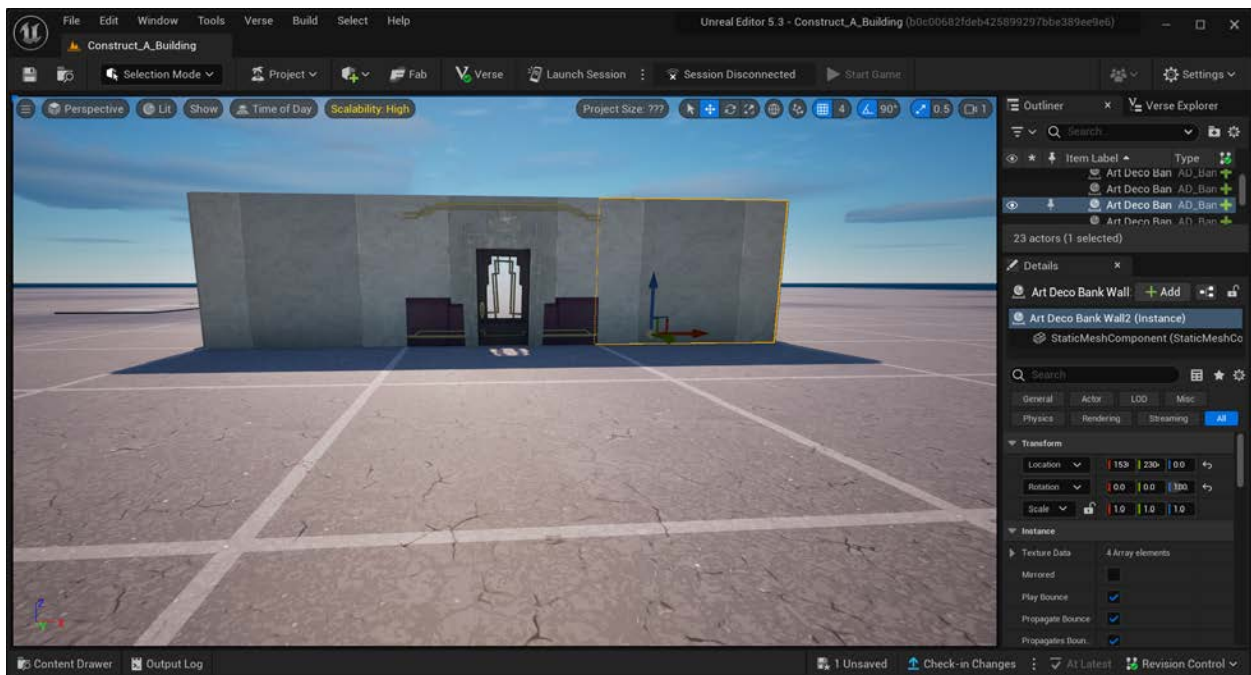


Next, locate the wall asset, and place it next to the door.



You can now replicate the wall asset as many times as you want in order to complete the outline of the first floor of your building. There are different ways to replicate an asset, including:

1. **Use copy and paste.** With an asset selected, hit the <Ctrl> key and the <C> key on your keyboard at the same time. This copies the asset to a “clipboard.” Hitting the <Ctrl> key and the <V> key at the same time pastes the asset from the clipboard onto the island. When the asset is pasted, it will be placed on top of the original. Use the Translate gizmo to move the copy to a new location of your choice.
2. **Use <Alt> plus click and drag.** With an asset selected, hold down the <Alt> key on your keyboard. Using your mouse, place the cursor over the arrow of the Translate gizmo that indicates the direction that you wish to go with your copied asset (up/down, left/right, or forward/back). With the <Alt> key still depressed, hold down the left mouse button and drag the asset to the desired location. When the left mouse button is released, a copy of the selected asset should snap to the grid in the new location.

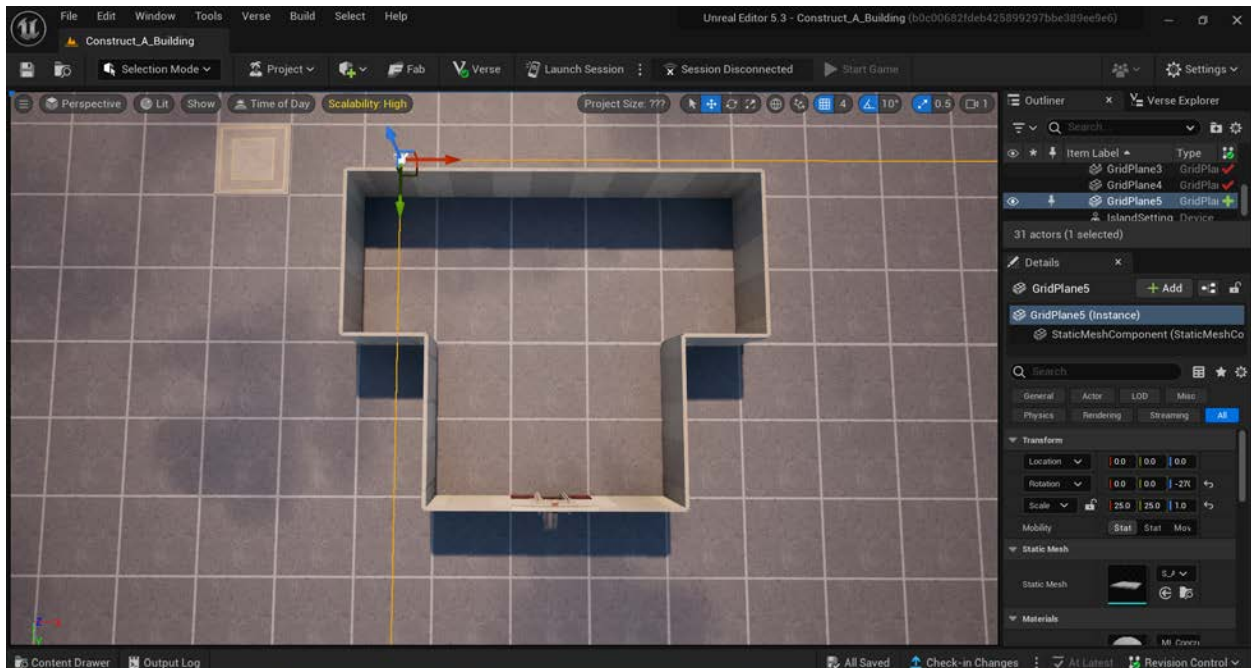


Continue replicating walls and placing them using the Translate and Rotate gizmos until you have an outline for your building. You can make the building any shape you want.

CHECK YOUR WORK

As you are creating your outline, and once you are done, it's a good idea to check your work before you proceed with constructing your building. This will help make sure that all assets are positioned the way you want them before you add more complexity and it becomes more challenging to make adjustments.

Navigate around the perimeter of your building to make sure that everything appears as you want it to. It's also a good idea to check your building from above.



Self Check

Does your building outline appear as you wish? Were you able to view your building from different perspectives to make sure?

Step 4: Add a floor to your building

Preview

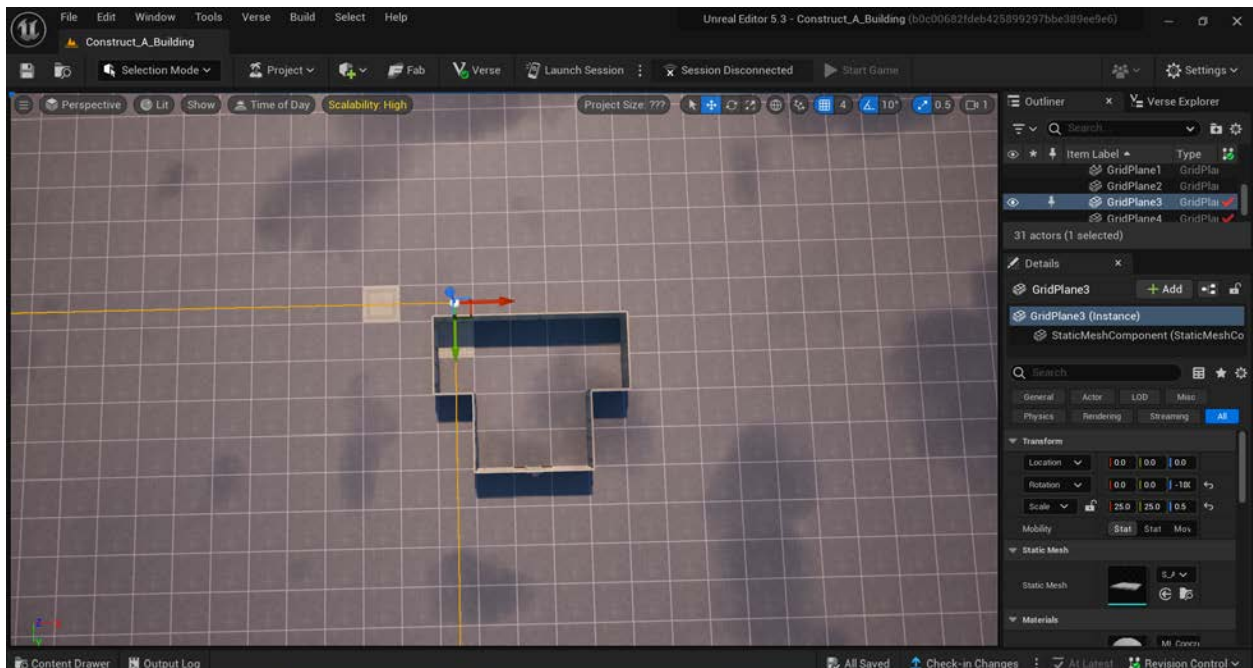
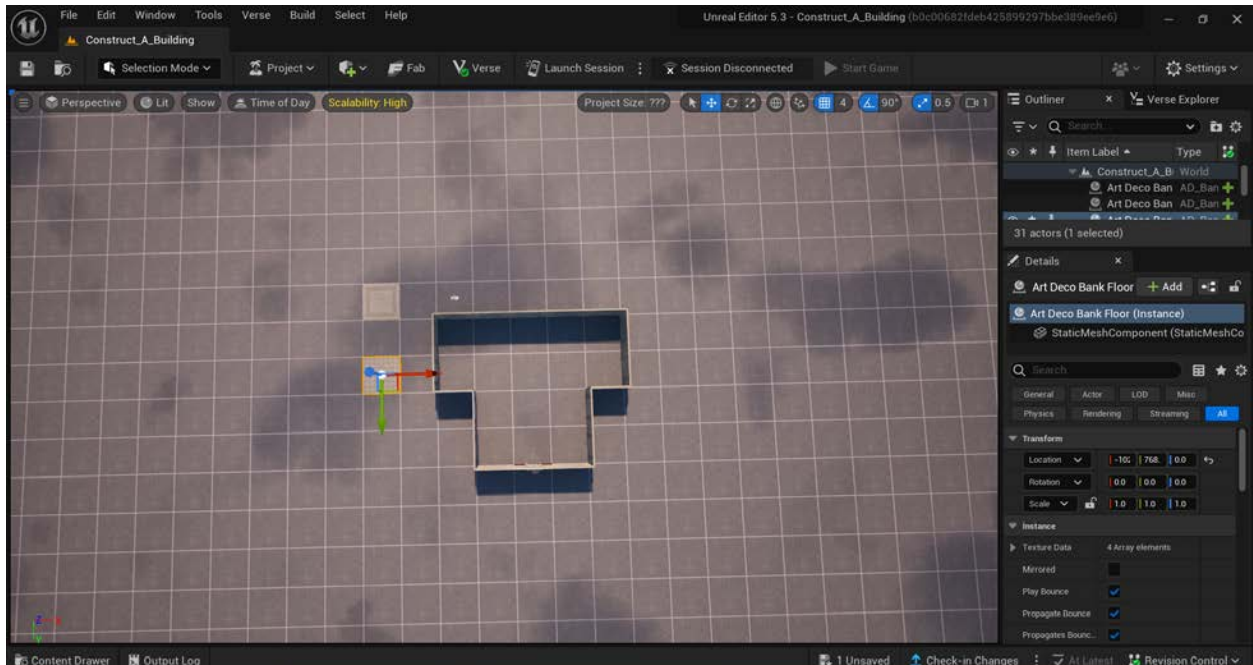
You can now add a floor to your building. This process can be simple and quick using the asset replication strategies described in Step 3.

Explore

Follow these guidelines to add a floor to your building.

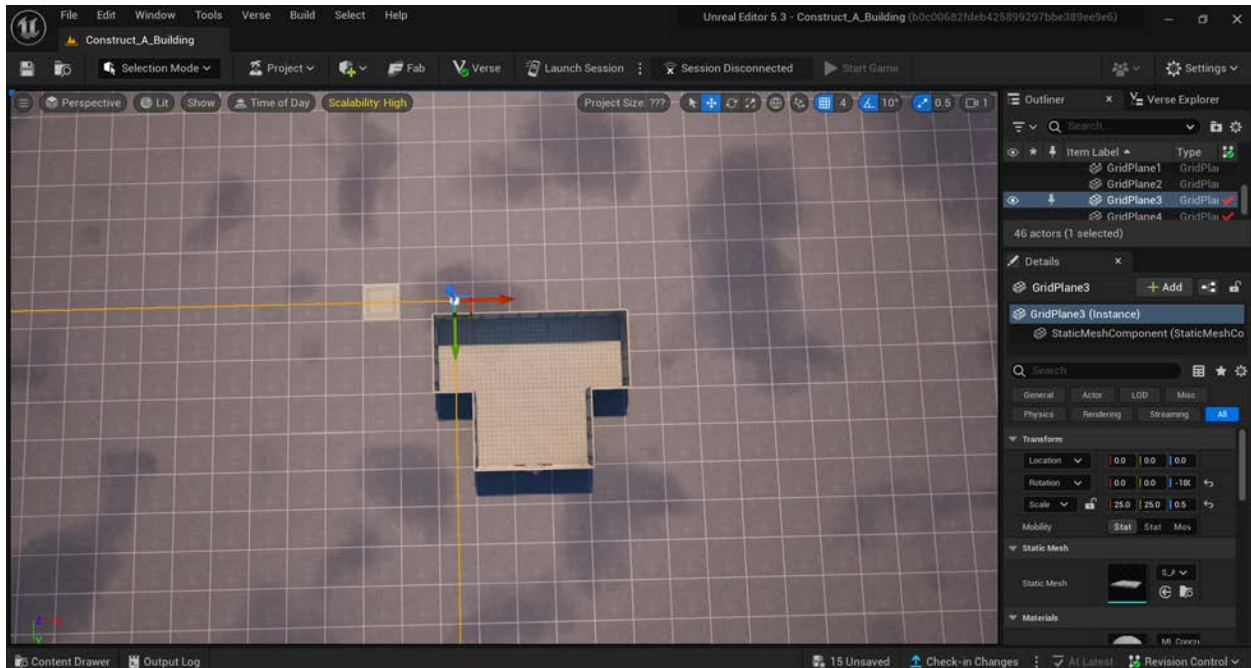
DRAG A FLOOR ASSET INTO PLACE

Locate the floor tile asset you chose from the Content Drawer previously, or choose one and drag it onto your island now. Use the Translate gizmo to drag the floor asset into one corner of the ground inside your building. This may be easiest to do if you are looking at your building from above.



REPLICATE AND POSITION FLOOR ASSETS TO COVER THE GROUND INSIDE YOUR BUILDING

Replicate the floor asset as many times as needed to cover the ground inside your building. You can replicate the asset by using copy/paste or <Alt> plus click and drag, and then using the Translate gizmo to place the replicated assets where you want them to be.



Self Check

Does your building have a floor that covers the entire ground inside the outline?

Step 5: Add stories to your building (optional)

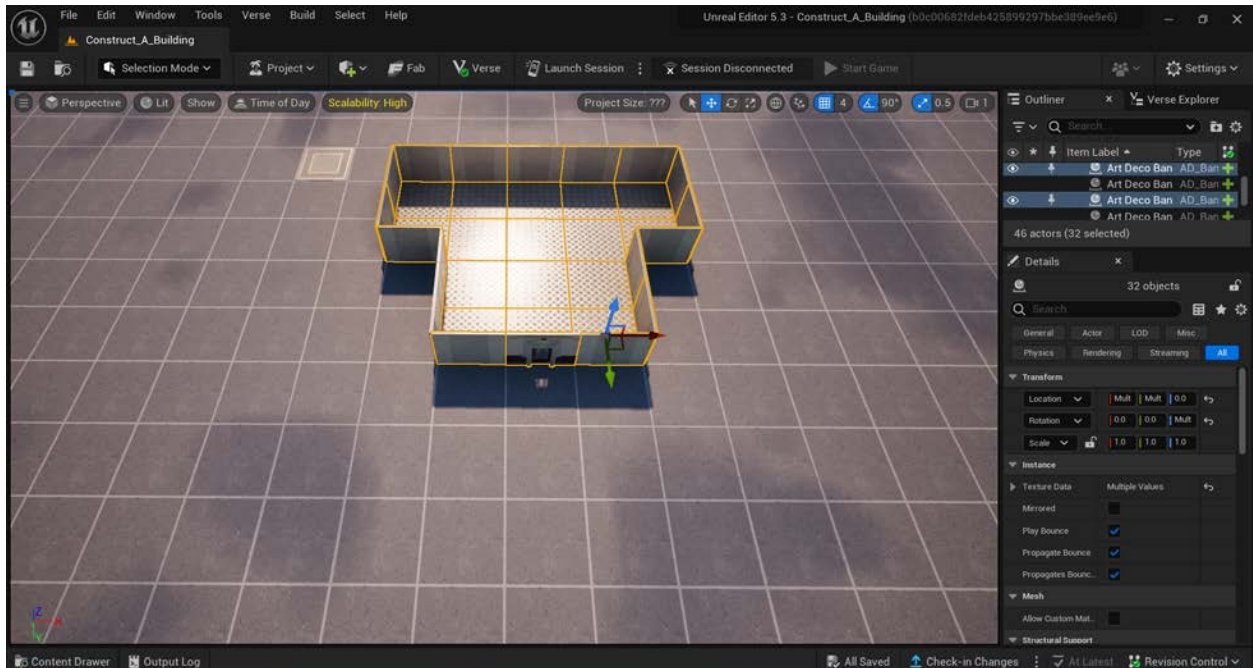
Preview

You may wish to have a building that has multiple stories. If you do, you can add stories quickly by selecting all assets at once and then replicating them and positioning them on top of the original ones. If you want to construct a building that has only one story, you can skip this step.

Explore

SELECT AND COPY ALL ASSETS IN YOUR BUILDING

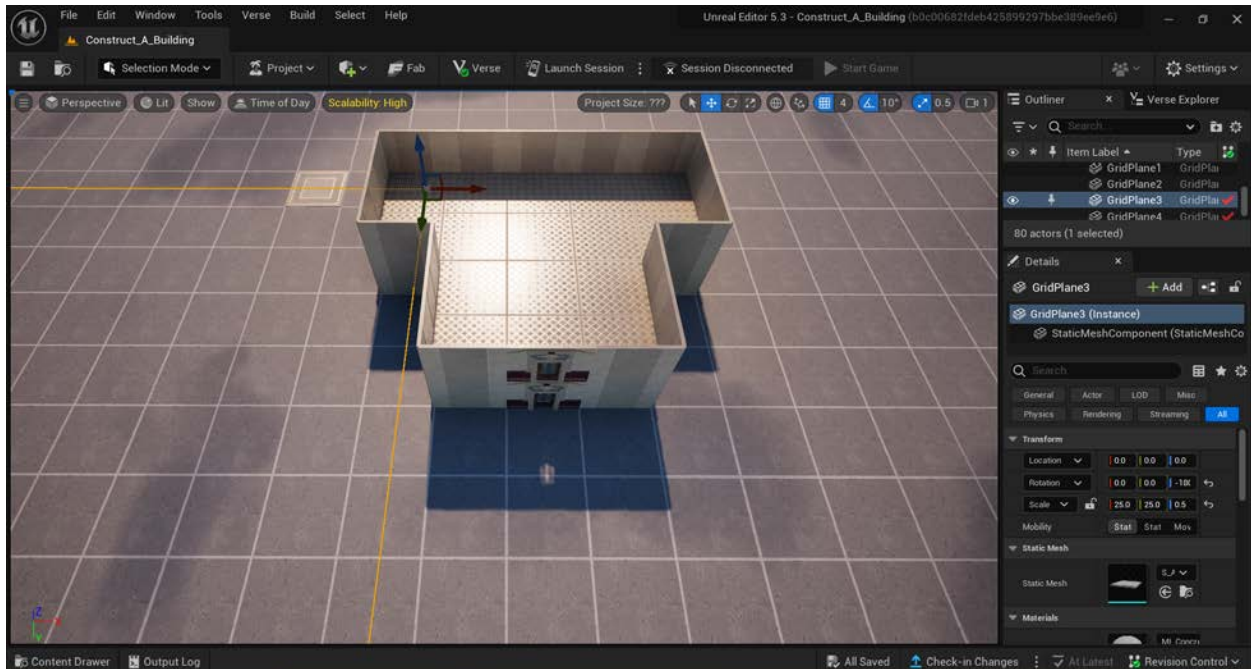
To add a story to your building, first be sure that you don't already have any assets selected by pressing the "Escape" key. Next, select all of the door, wall, and floor assets you've already placed. You can select all of these assets at once by holding down the <Shift> key and left clicking on each asset one at a time with your mouse. Each selected asset should be outlined in orange.



To copy the group of selected assets, hit the <Ctrl> key and the <C> key on your keyboard at the same time. This will create a copy of the entire building, superimposed on top of the original. You can also use <Alt> plus click and drag.

USE THE TRANSLATE GIZMO TO RELOCATE THE COPIED STORY

With all building assets still selected, use the Translate gizmo to drag the copied group of assets upward. Place them on top of the original. They should snap into place. Repeat this process for as many stories as you'd like your building to have.



Self Check

If you are constructing a building with multiple stories, were you able to easily and quickly add the number of additional stories you wanted?

Step 6: Add a ceiling

Preview

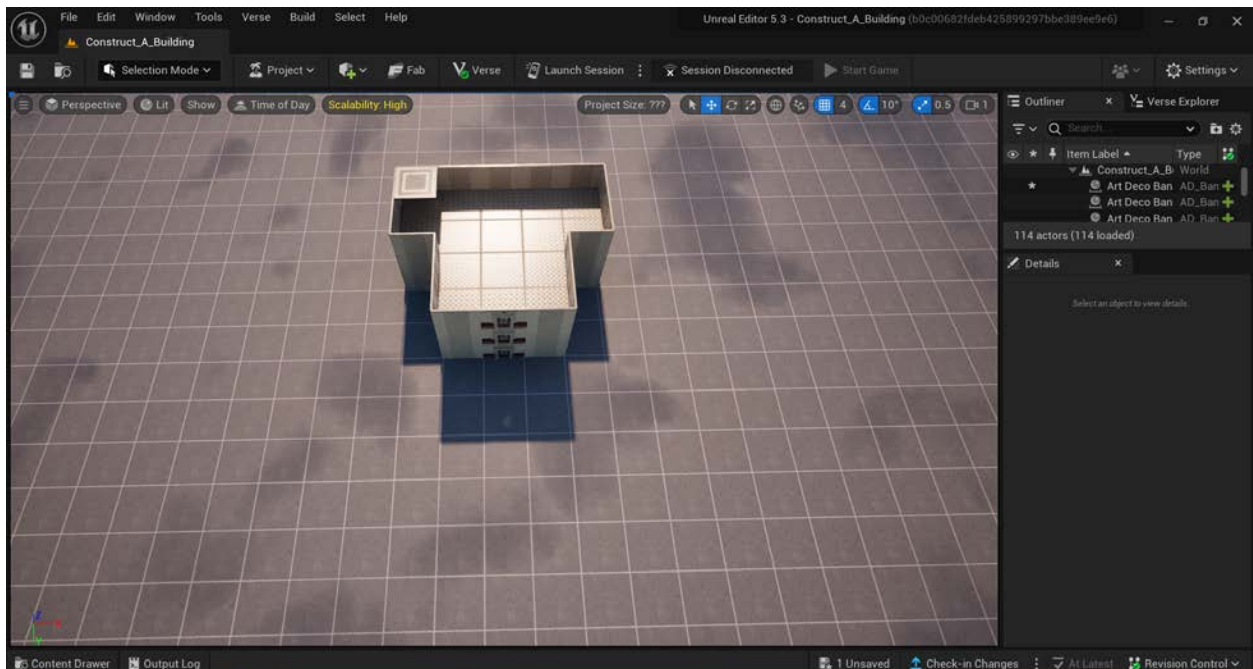
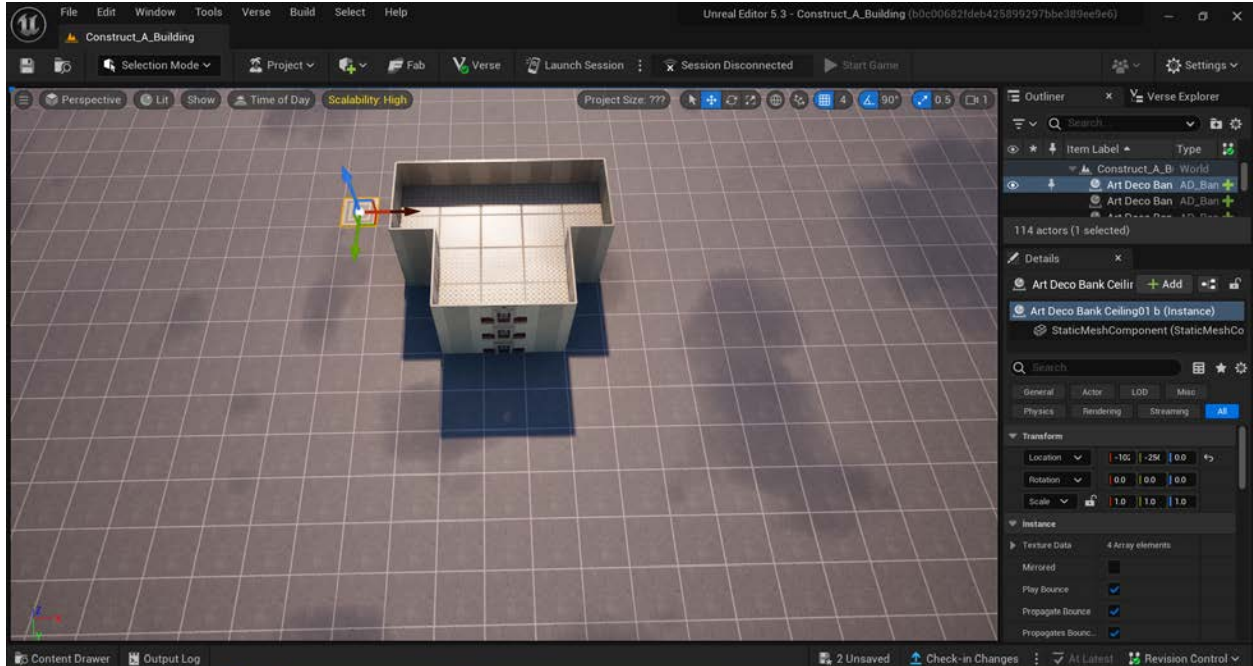
Placing ceiling tile assets is similar to placing floor tile assets. As you build your skills, you may wish to add roof assets as well to create a more unique-looking building. For the purpose of this Guide, you will add ceiling tiles that will function as a roof.

Explore

Follow these guidelines to add a ceiling to your building.

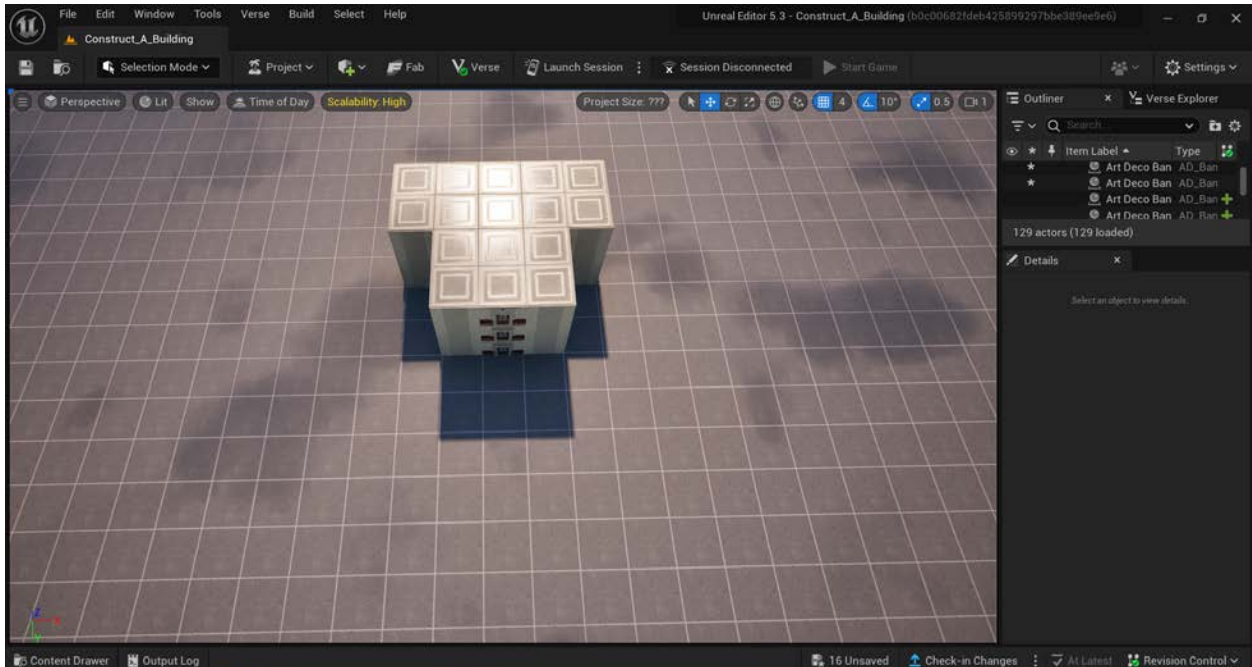
DRAG A CEILING TILE ASSET INTO PLACE

Locate the ceiling tile asset you chose from the Content Drawer, or choose one and drag it onto your island now. Use the Translate gizmo to drag the asset into one corner of the opening at the top of your building. This may be easiest to do if you are looking at the building from above.



REPLICATE AND POSITION CEILING ASSETS TO COVER THE OPEN AREA AT THE TOP OF YOUR BUILDING

Replicate the ceiling asset as many times as needed to cover the opening at the top of your building. You can replicate the asset by using copy/paste (<Ctrl> + <C> and <Ctrl> + <V>) or <Alt> plus click and drag, and then using the Translate gizmo to place the replicated assets where you want them to be.



Self Check

Does your building have a ceiling that covers the entire top of the building?

Step 7: Add windows

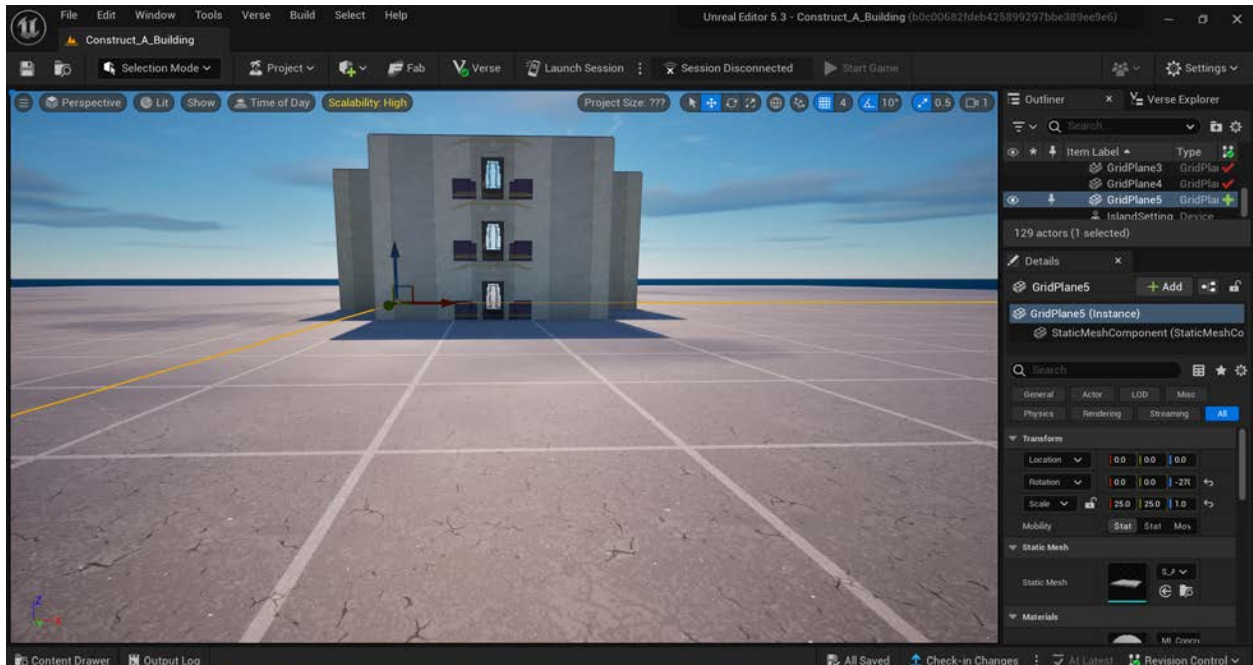
Preview

Windows can be added to your building by deleting wall or door assets and replacing them with windows. You can choose windows with different styles if you wish; all assets in the same subfolders within UEFN are meant to fit together easily. You can follow the same procedure if you'd like to change any asset to a different type - for example, if you'd like to replace a door asset with a wall asset.

Explore

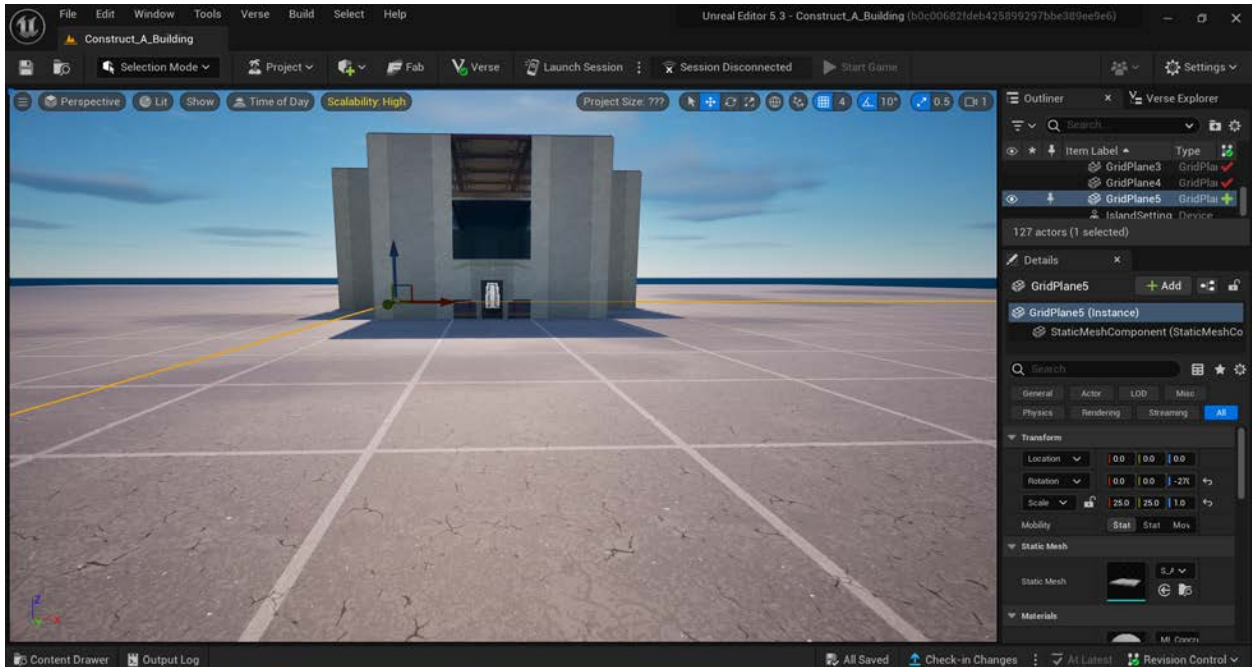
RETURN TO A “HEAD ON” PERSPECTIVE OF YOUR BUILDING

It will be easiest to add windows in your desired locations if you are looking at the different sides of your building head on. Hold down the right mouse button to change your viewing angle. While still holding the right mouse button, use the W, A, S, D, Q, and E keys to change your position until you are facing the building in the direction you want.



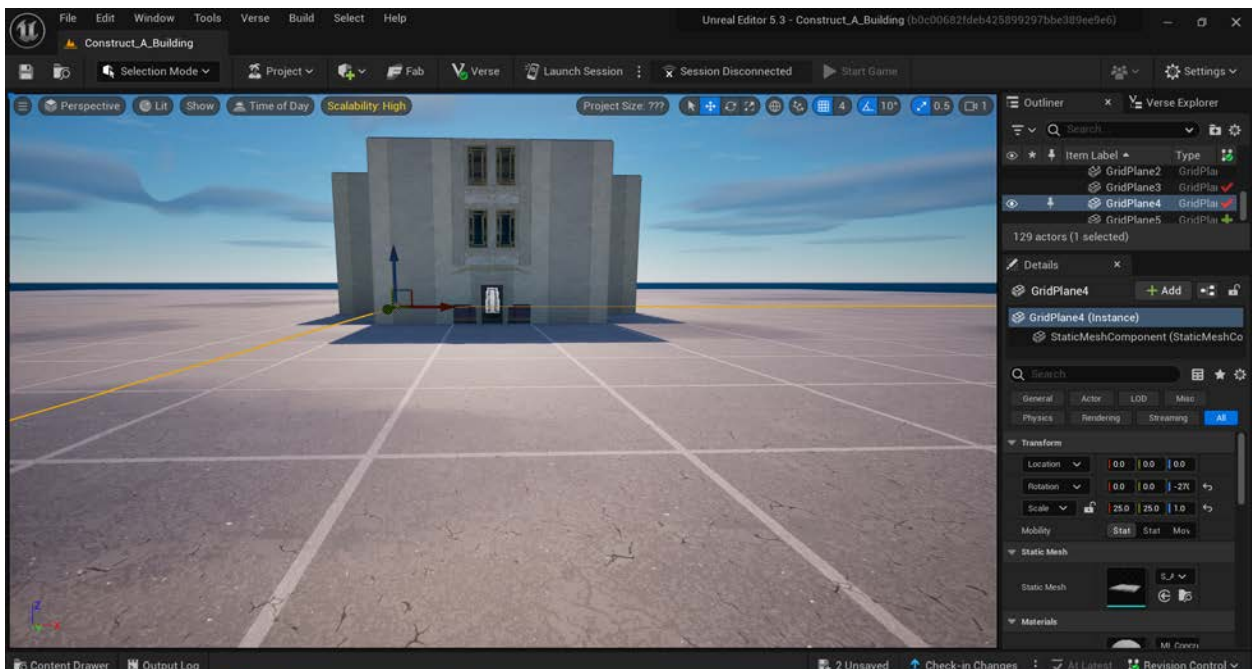
DELETE OTHER ASSETS WHERE YOU WANT TO PLACE WINDOWS

Choose wall and door assets that you want to replace with windows by clicking each asset to select it, and then hitting the <Delete> key on your keyboard. You should see holes in the side of your building where you deleted assets.



REPLICATE AND PLACE WINDOWS

Select the window asset you chose earlier by clicking on it, or choose new or additional window assets from the Content Drawer. Use the Translate and Rotate gizmos, as needed, to place windows in each empty space on the outside of your building. You can replicate window assets by using copy/paste or <Alt> plus click and drag.



Self Check

Could you place windows everywhere that you wanted to?

Step 8: Add exterior trim and pillars

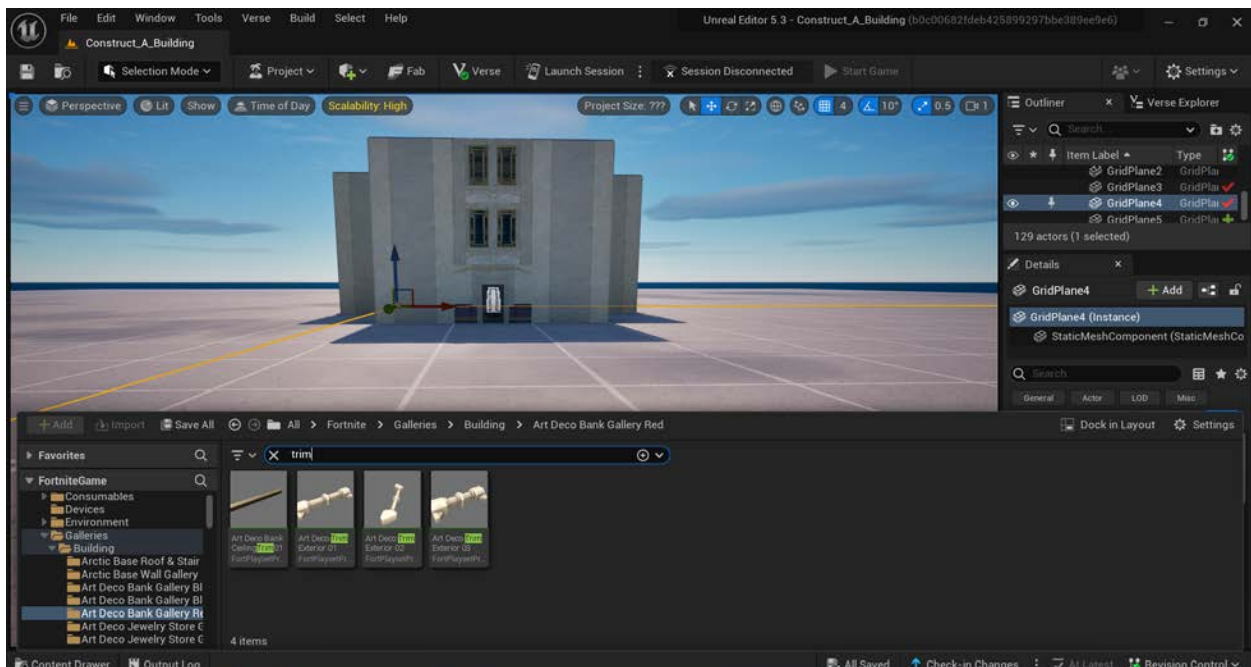
Preview

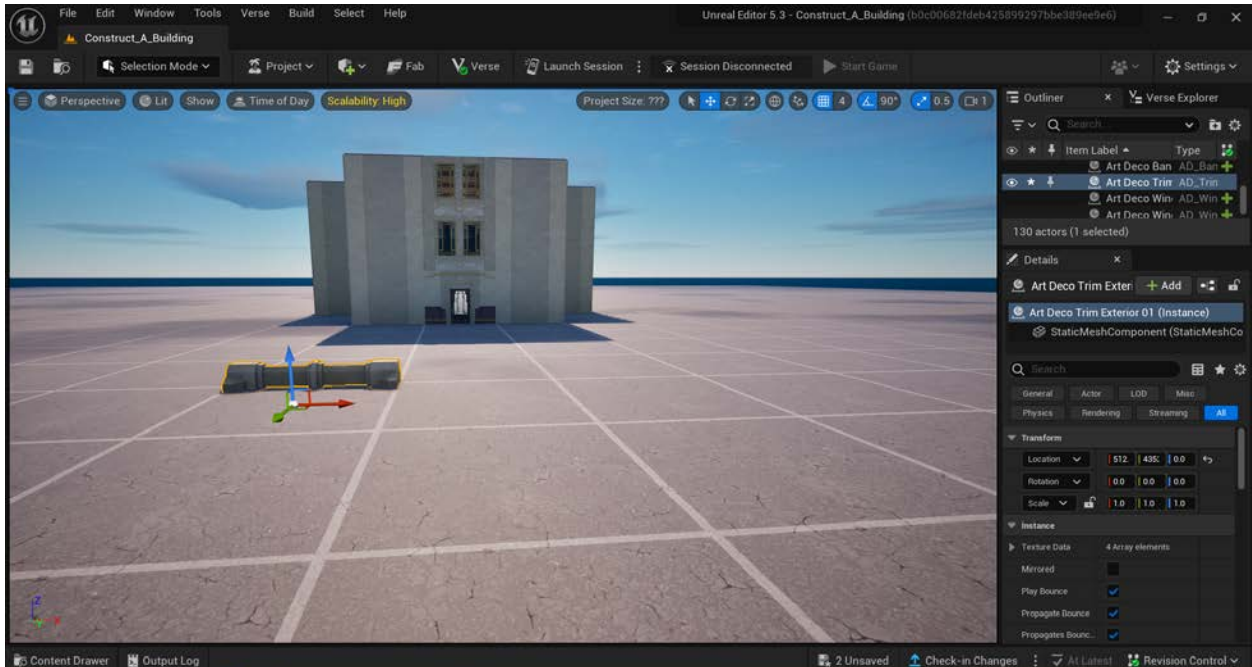
Adding exterior trim, pillars, and other details can help make your building more visually appealing. They can be added using the asset replication and placement skills you've been practicing so far. Note that not every "Buildings" subfolder in the Fortnite library includes trim and pillars, but you may find other types of assets that can also make your building look interesting and appealing. Explore the folders to see the kinds of decorative details you may wish to add to your building.

Explore

SELECT TRIM AND PILLAR ASSETS

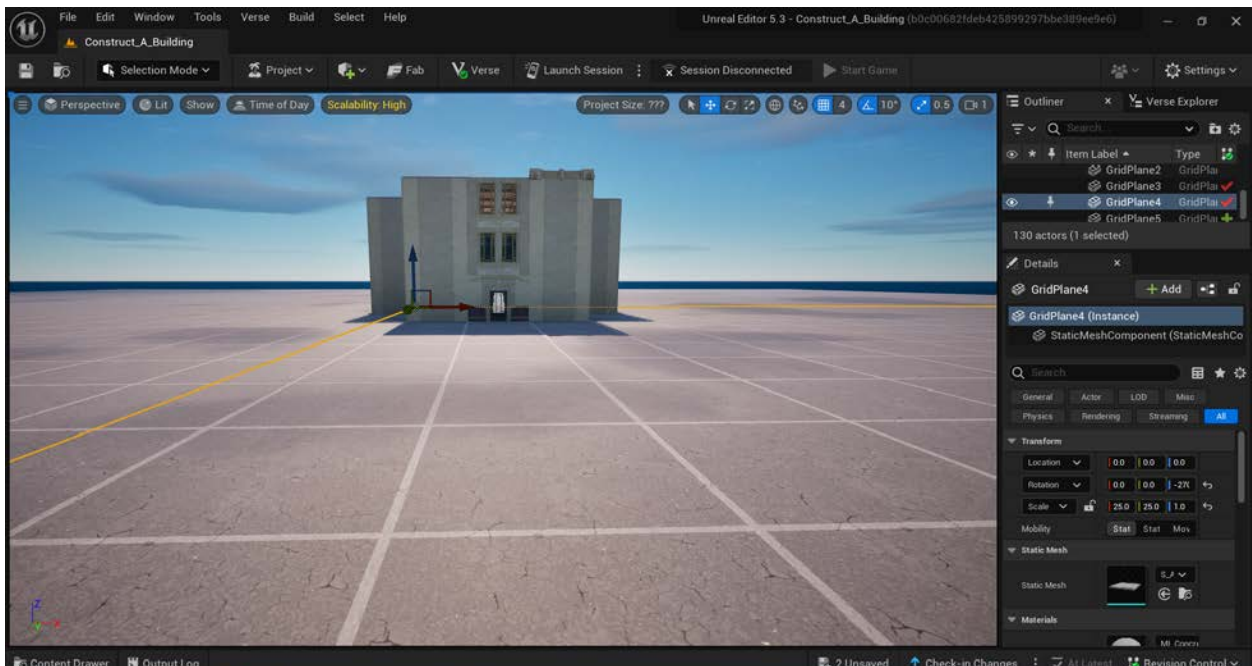
In the Content Drawer, access your selected subfolder in the **Fortnite** → **Galleries** → **Building** folder, or explore other folders if you wish. Type "trim" in the search bar, locate at least one trim asset you'd like to use, and click and drag it to drop it on your island. Then, type "pillar" in the search bar and do the same.

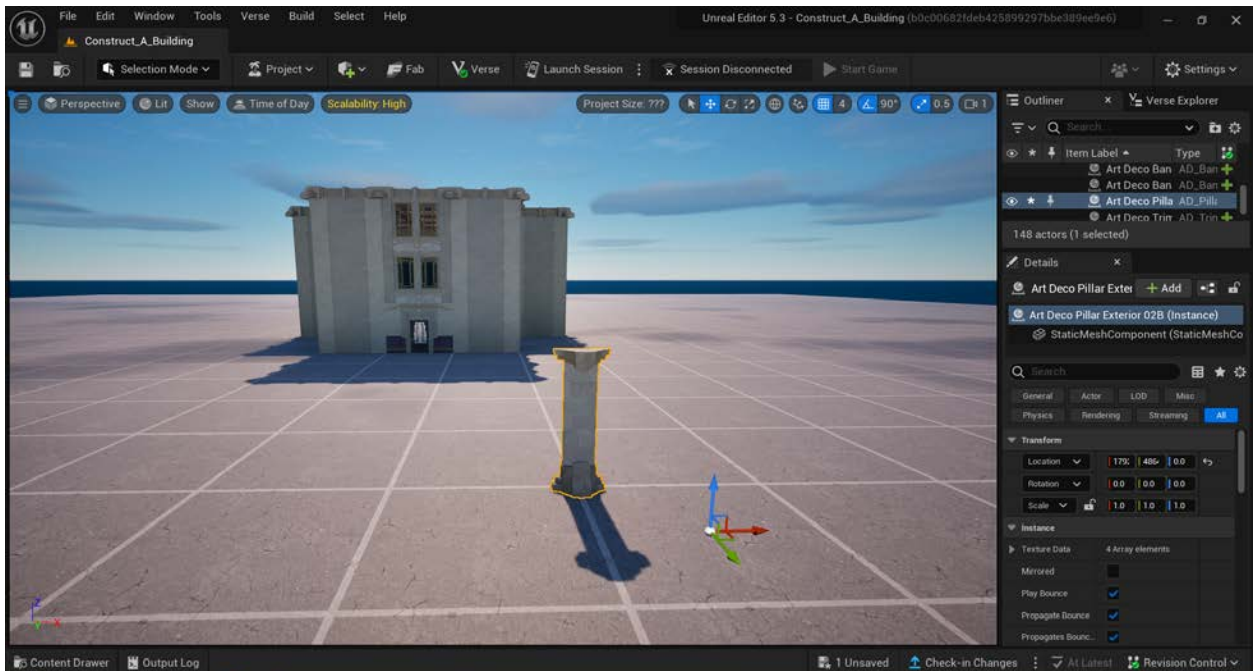
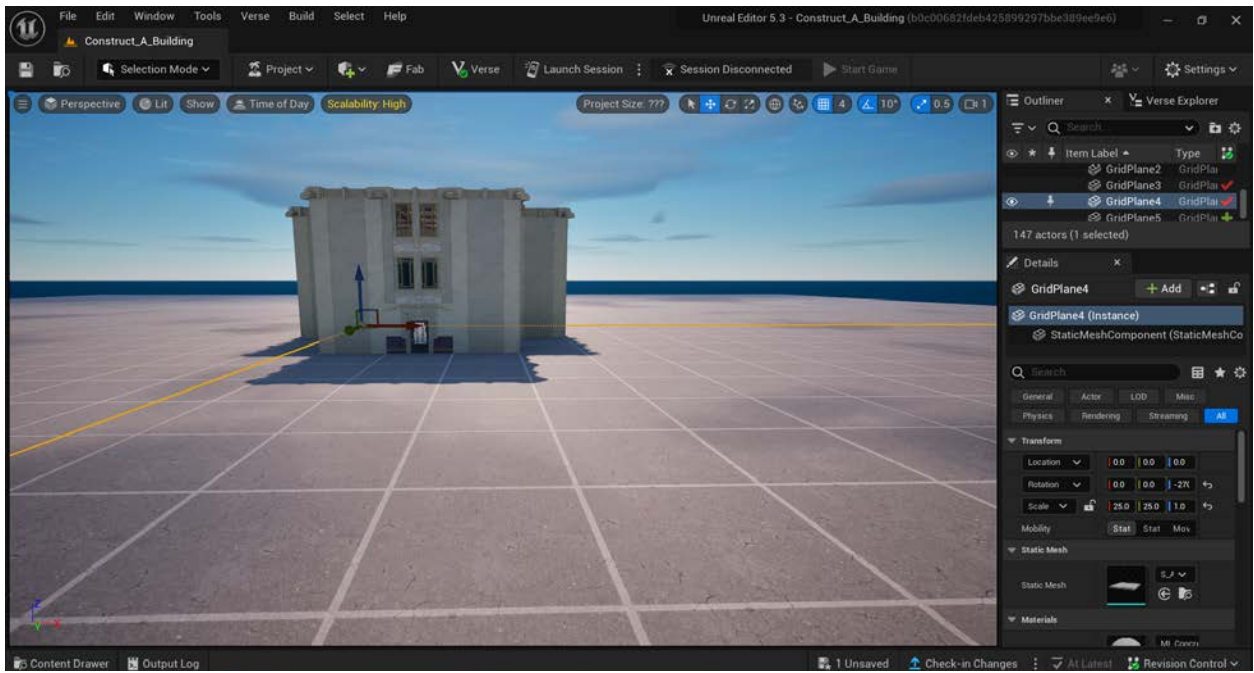


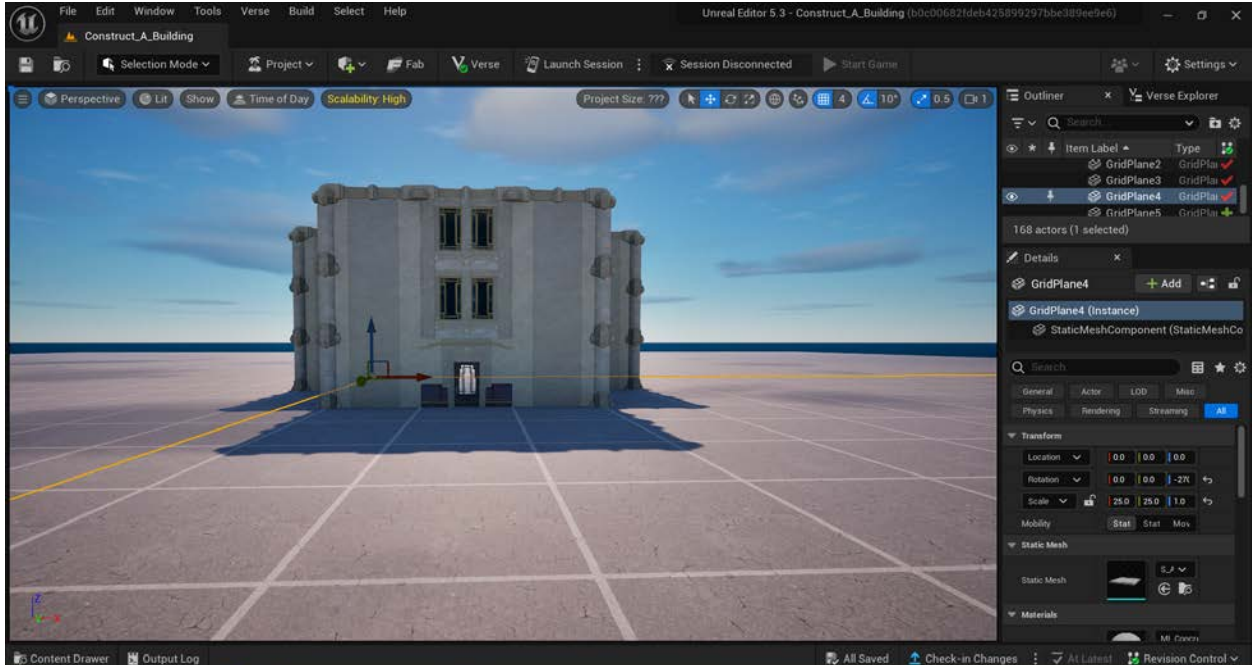


REPLICATE AND PLACE TRIM AND PILLAR ASSETS

Use the strategies discussed earlier (copy/paste or <Alt> plus click and drag) to replicate your trim and pillar assets. Use the Translate and Rotate gizmos, as needed, to place trim and pillars on your building. You will likely need to navigate around and/or look down at your building to place these assets as you wish. Use right click and drag to change your viewing angle, and right click plus the W, A, S, D, Q, and E keys to change your position.







Self Check

Could you locate and add trim, pillars, or other decorative details of your choosing to your building?

Step 9: Add interior stairs (optional)

Preview

If your building has multiple stories, you will likely want to add interior stairs to allow the player to move between stories. You may also wish to add protective assets, such as partial walls or railings, to prevent the player from falling.

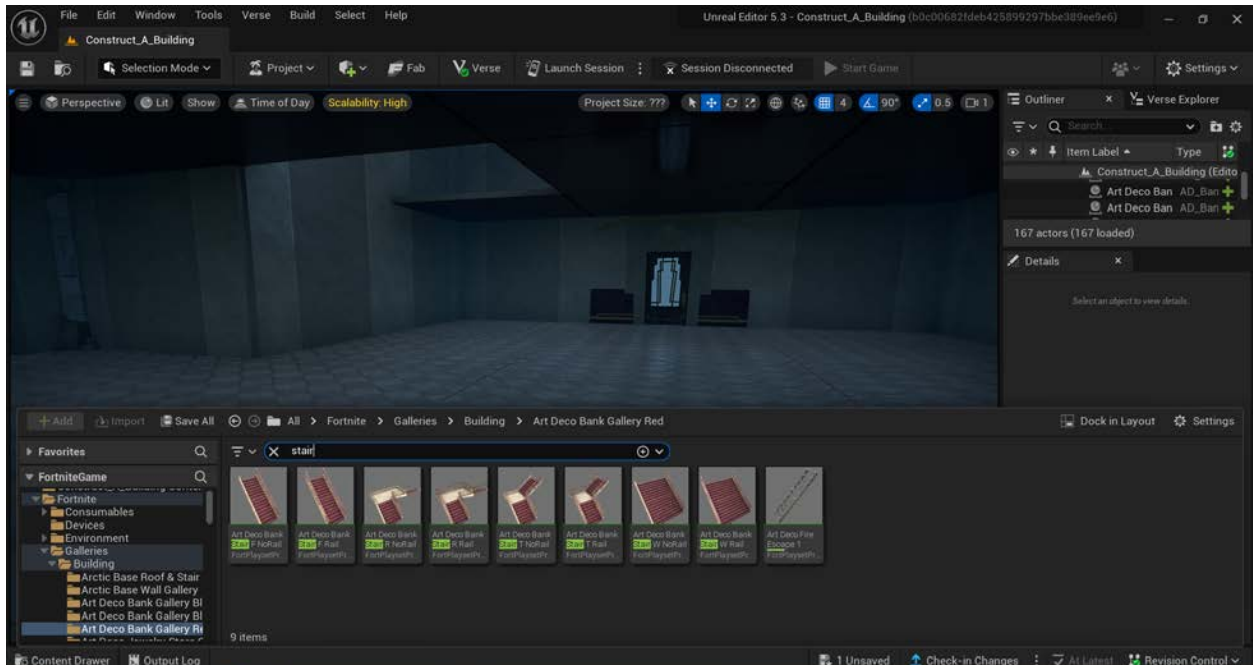
Explore

CHOOSE A LOCATION FOR YOUR STAIRS AND SELECT A STAIR ASSET

Navigate into the inside of your building on the ground floor. You can do this by using the scroll wheel on your mouse to zoom in. When you zoom in far enough, you will jump to the inside of the building. Alternatively, hold either mouse button down and use the W key to move forward into your building. Identify a location where you'd like to place your stairs.

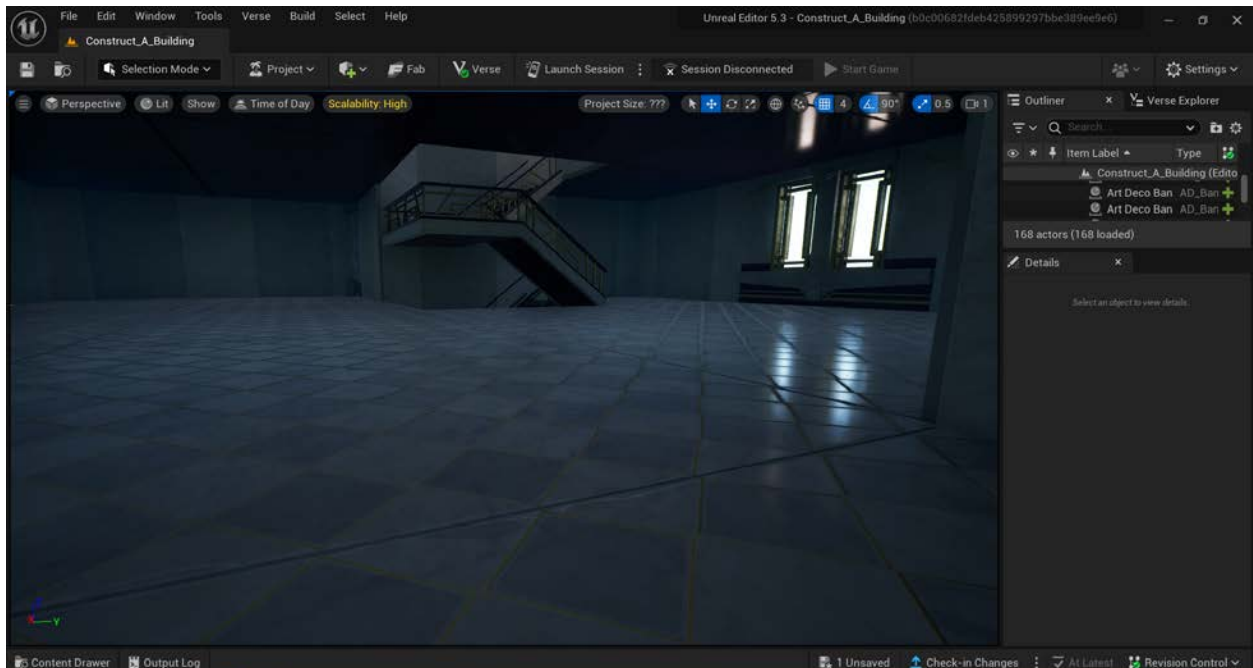
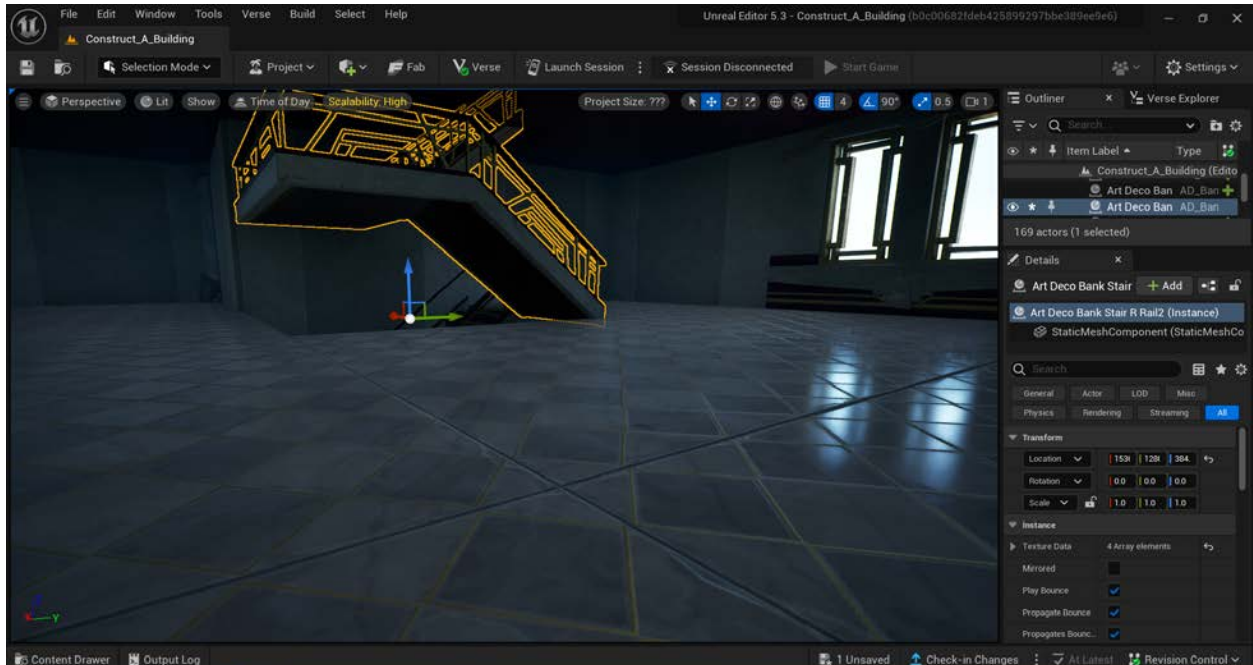
Select a ceiling asset (actually a floor asset of the second story) and delete it by clicking the <Delete> key on your keyboard.

Access the subfolder you've been using to construct your building, and type "Stair" in the search box, or choose another subfolder if your selected folder doesn't contain stairs you'd like to use. Choose a stair asset, and click and drag it onto your island.



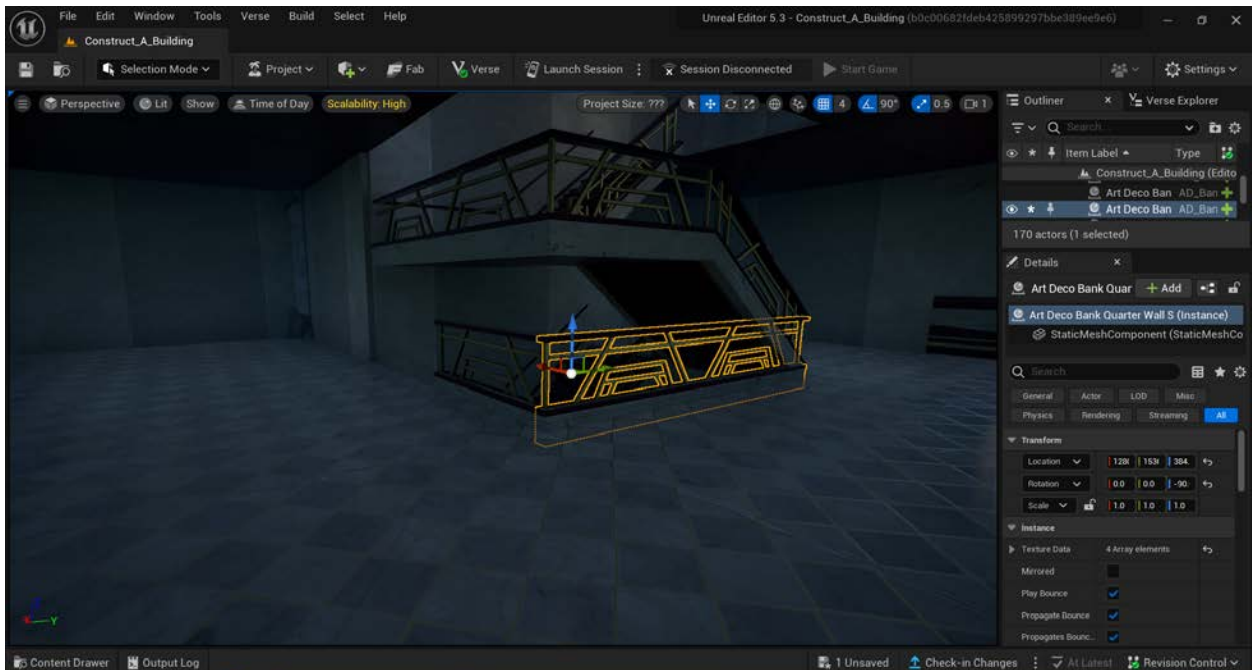
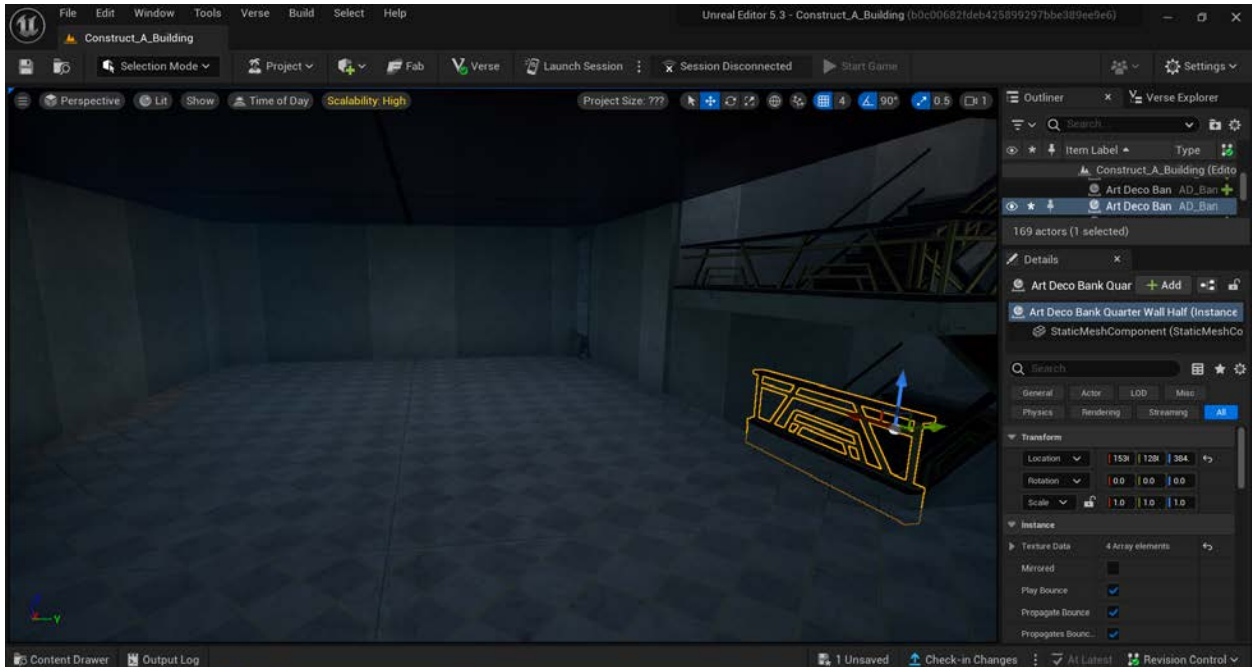
PLACE YOUR STAIRS

Select the stairs and use the Translate and Rotate gizmos, as needed, to move them to the desired location. Follow the same procedure for adding additional stairs to make all of the floors of your building accessible.



ADD PROTECTIVE ASSETS

Notice that there is an open area on each set of stairs that could allow a player to fall from one floor to the floor below. To prevent this, you can add a protective asset. In the Content Drawer, search for “Quarter Wall,” “Half Wall,” or “Rail.” Choose the asset you’d like to use, and use the Translate and Rotate gizmos, as needed, to place the asset in any gaps at the top of the stairs.



Self Check

Could you add stairs and protective assets in the locations of your choosing?

Lesson Closure

Demonstration of Learning

You constructed a complete building in UEFN using assets available in the Fortnite library. All assets are positioned as you wish and your building appears as you want it to.

Exploration Opportunities

The possibilities for creating buildings in UEFN are nearly limitless. As you build your skills, you can experiment with different building sizes, shapes, and configurations. You can also combine assets from different subfolders with different themes to create a truly unique building. Once your basic building is complete, you can add additional decorative assets such as furniture, plants, and light features to create a more dynamic experience. Explore the assets available within different folders in the Fortnite library or in the Fab Marketplace, or import your own!