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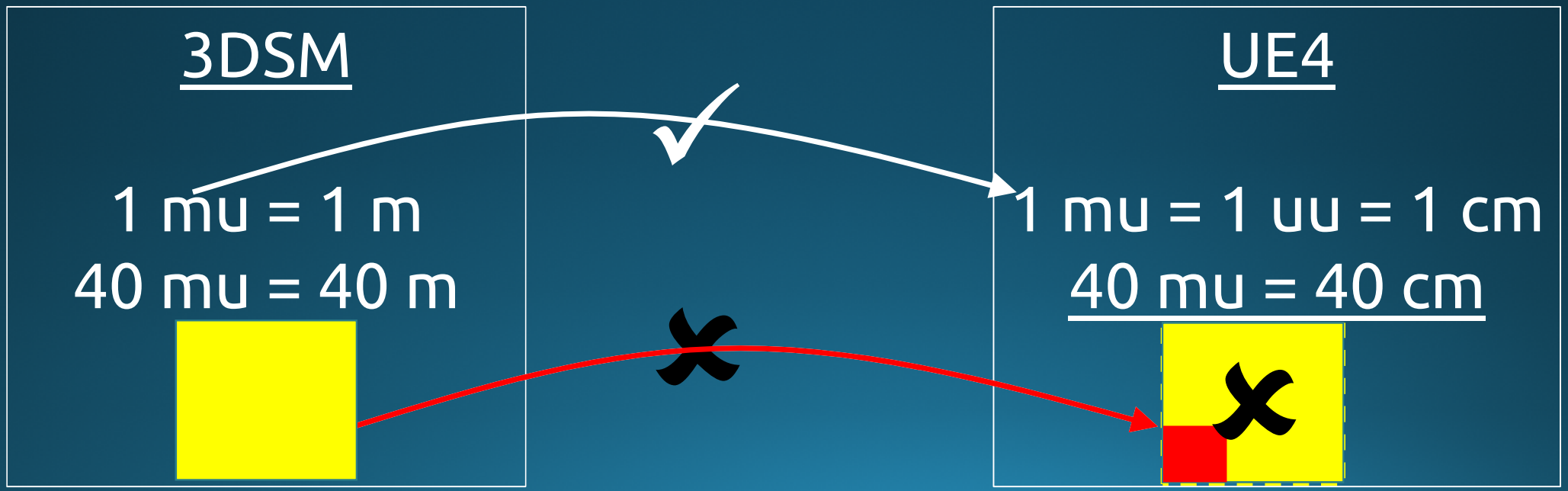
UE4: Importing from 3DSM

Units

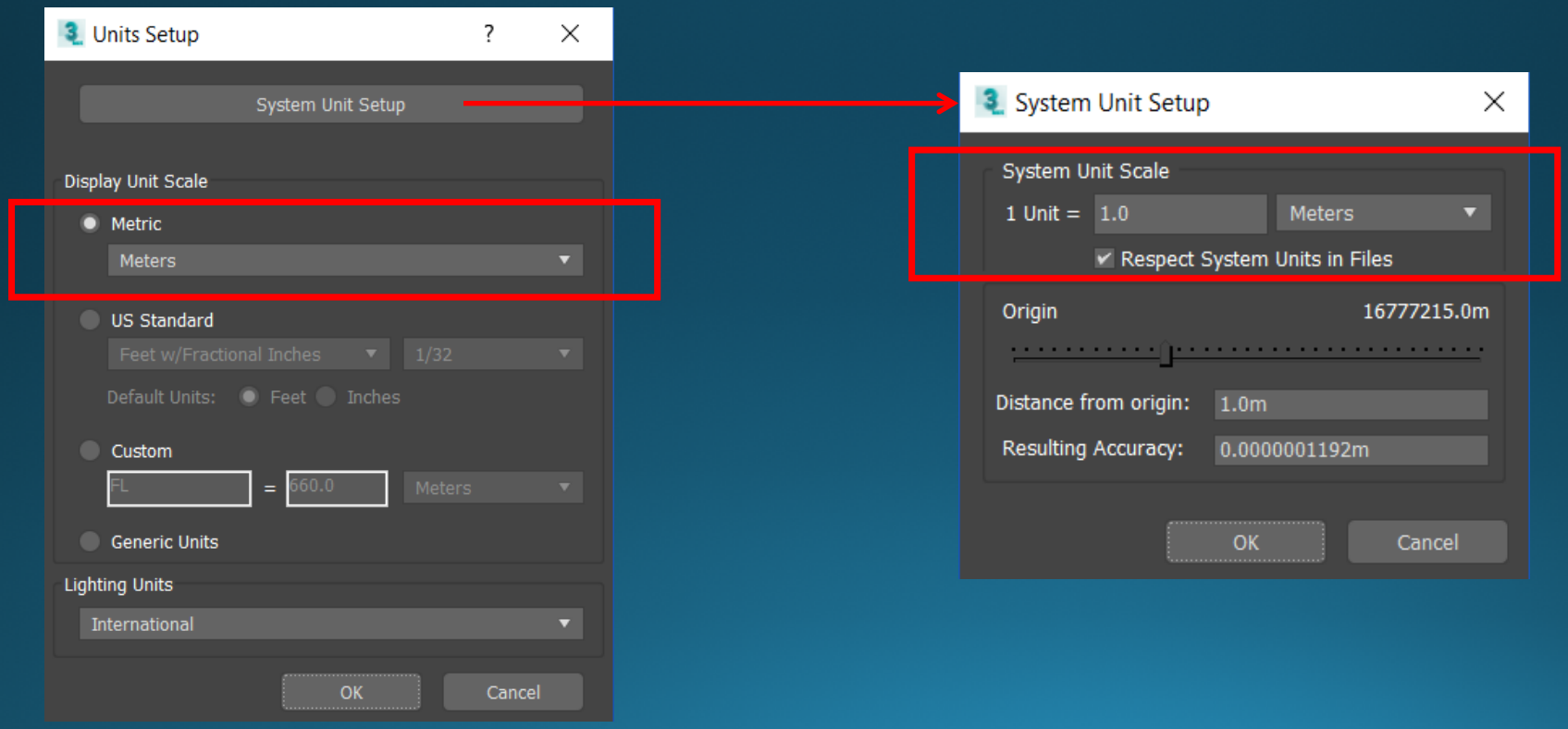
- mu = 1 3D Studio Max unit
- uu = 1 Unreal Engine 4 unit

1 mu = 1 uu = 1cm

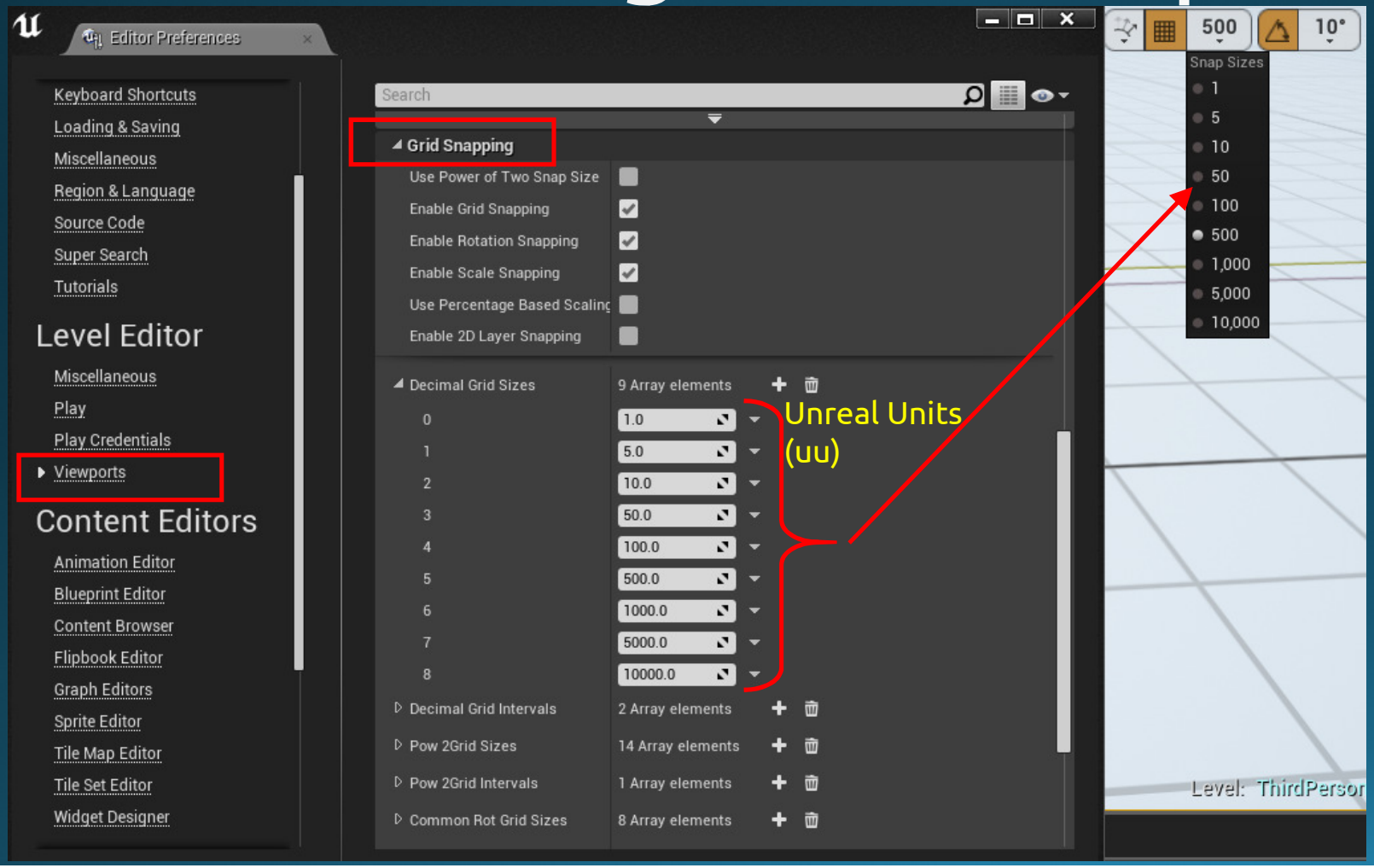


In 3DSM

- Menu: Customize | Units Setup



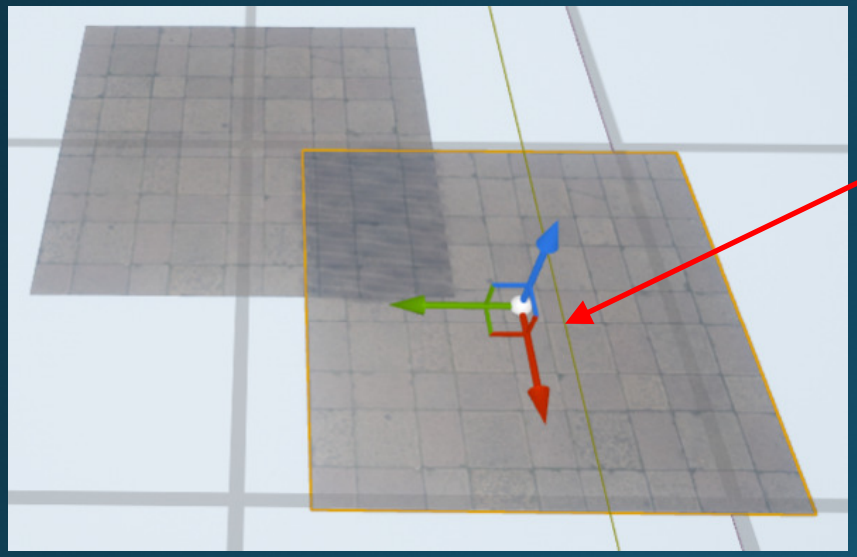
UE4: Change Grid Snap Distances



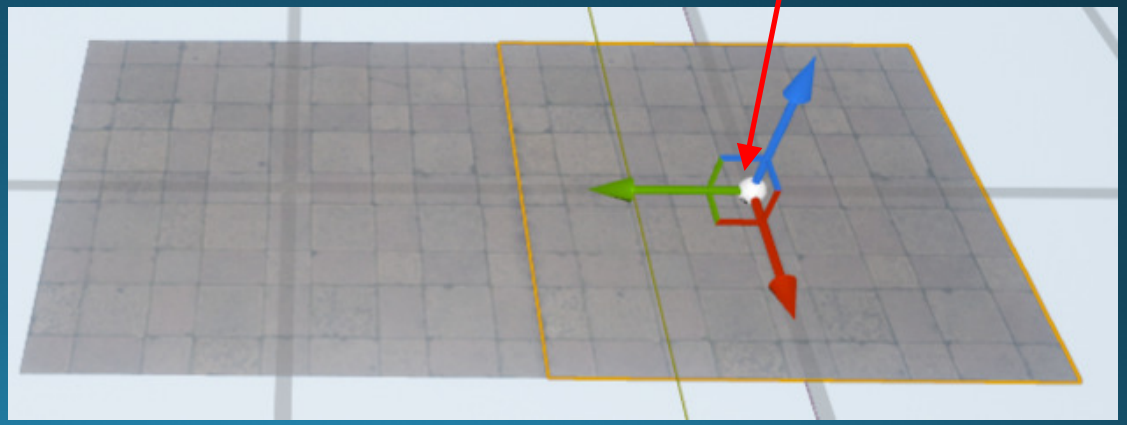
Example

- If tiles are set at 800uu x 800uu (8m x 8m)
- Set grid snapping to units of 800uu

Reset Grid Actor Snapping

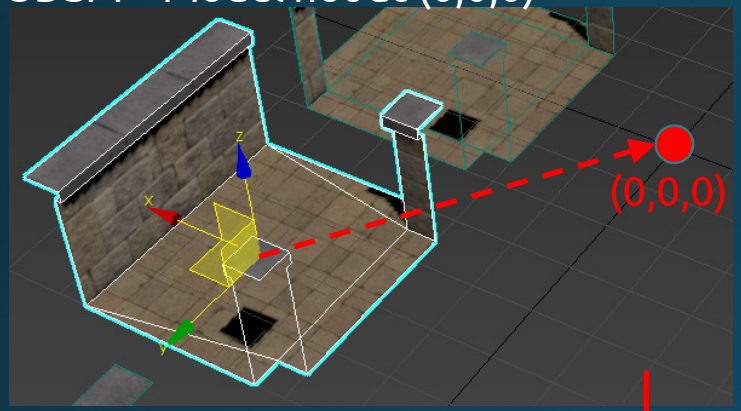


Right click on actor
- Transform | Snap Align | Snap Origin to Grid

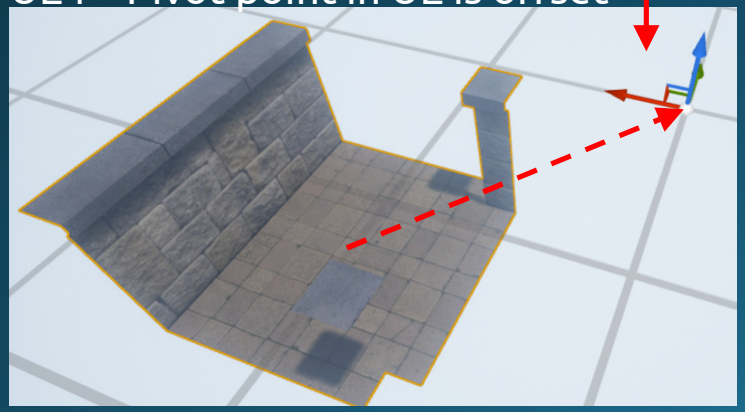


Export from 3DSM - 1

3DSM – Model not at (0,0,0)

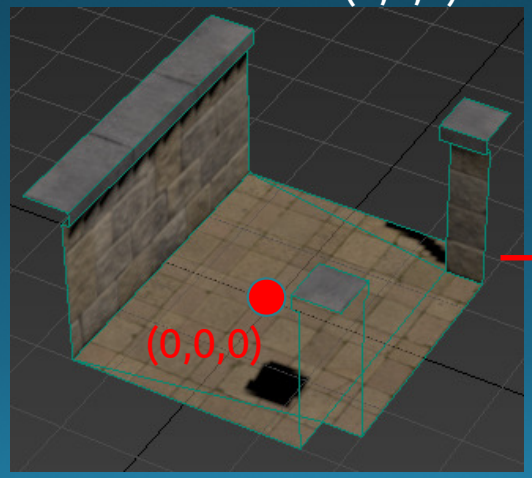


UE4 – Pivot point in UE is offset

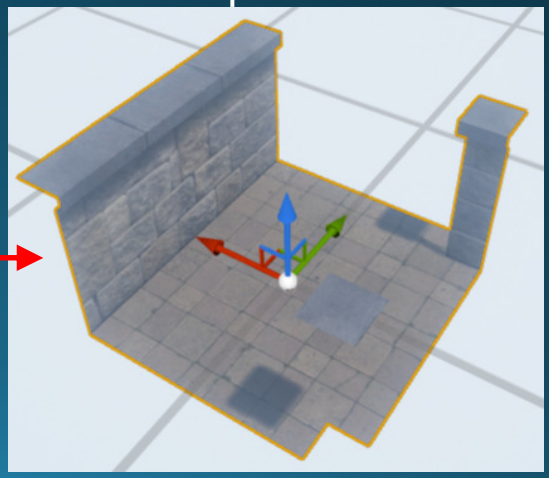


- First step:
  - Centre pivot point of model at (0,0,0).
  - If you do not do this, the pivot point of the model will be offset when you import it into UE4.

3DSM – Model at (0,0,0)



UE4 – Pivot point at centre

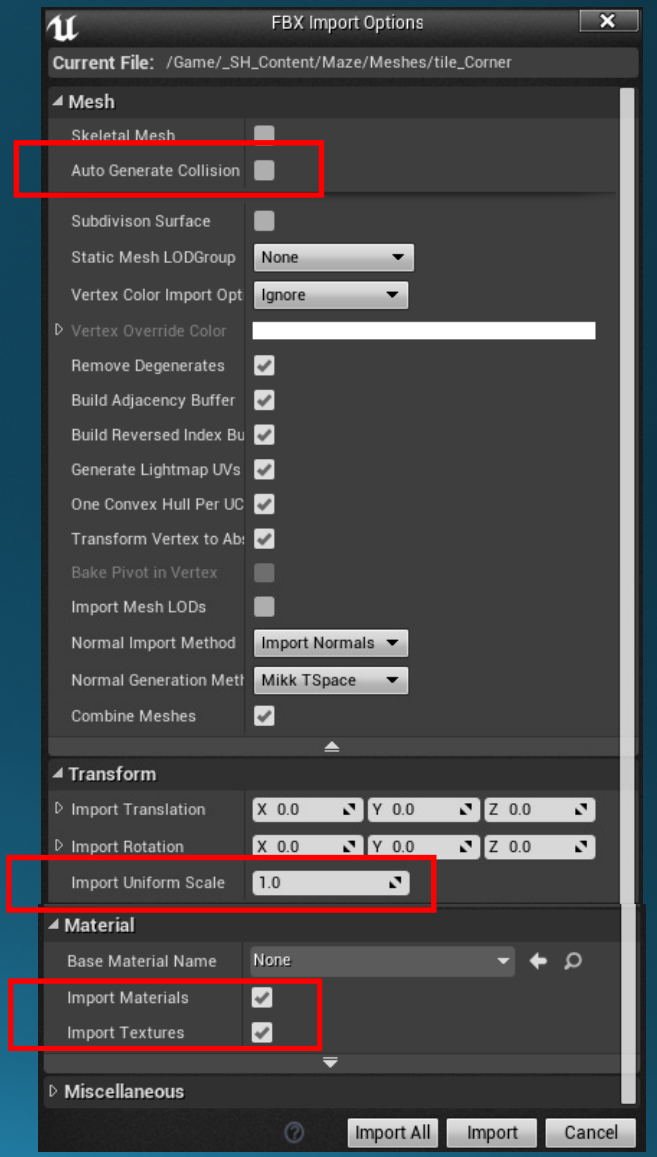


Export from 3DSM - 2

- Select the model to be exported.
- File () | Export | Export Selected.
  - Use consistent naming conventions.
- On the FBX Export window, got to Include | Geometry and select ‘Smoothing Groups’ and ‘Triangulate’.
- Click OK.

Import into UE4

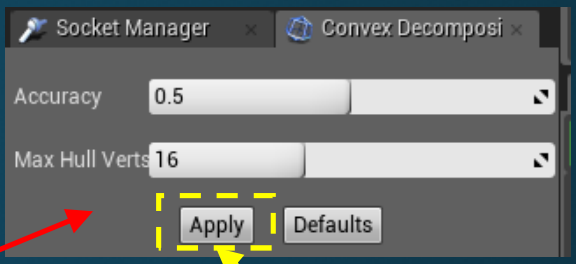
- In Content Browser, navigate to the required folder.
- Select Import and find the .fbx file
- Disable ‘Auto Generate Collision’.
- Adjust ‘Import Scale Factor’ if necessary.
- Select ‘Import Materials’ and ‘Import Textures’.
- Select ‘Import All’.
  - Any associated Texture will be imported
  - A basic material created for and applied to the model.



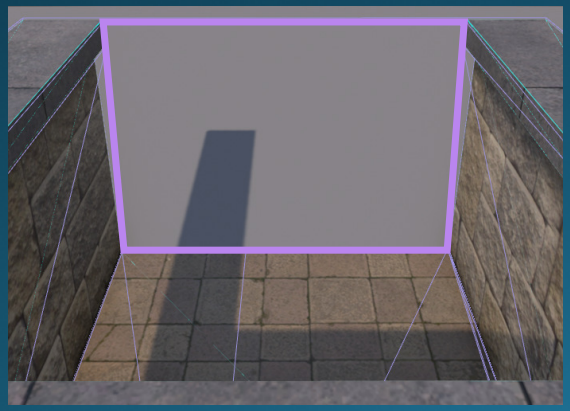
Collision Mesh

- Double click mesh to open ‘Mesh Editor’.
  - Select ‘Collision’ then ‘Auto Convex Collision’.
  - Adjust settings, in ‘Convex Decomposition’ tab.
- Click the collision icon 

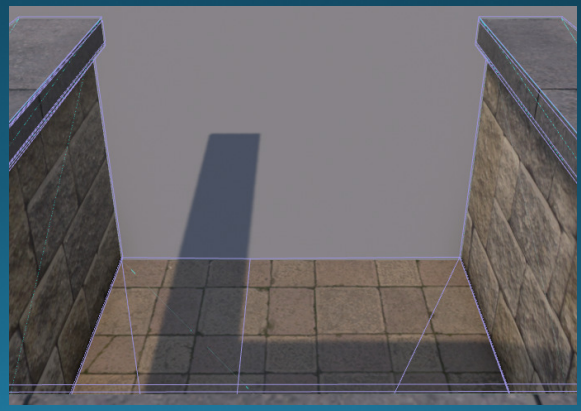
to display the collision shape
  - check it matches the model.



Do not forget to press APPLY



Accuracy = 0.5



Accuracy = 1.0

Further Reading

- FBX Static Mesh Pipeline https://goo.gl/upg9OH

- For more robust collision detection. The collision mesh can be built in 3D Studio Max, and exported with the model into the FBX file.
  - A summary of the process: https://goo.gl/XaSfvv
  - A more detailed tutorial: https://goo.gl/NkhzKX

Task

1. Export a single tile from your 3D modelling assignment.
2. Create a blank ‘Third Person’ Blueprint Project.
3. Import the exported tile into Ue4.
    1. Generate and check the collision geometry.
4. Use this tile to:
    1. Check if you need to apply any ‘import scale factor’ to your tiles.
        - The tiles should be large enough for the default character to run around.
    2. Setup your grid snapping to allow quick manual snap placement of tiles.
5. Import all your tiles into UE4.
    1. Generate and check their collision geometry.
    2. Create a ‘Blueprint Class’ for each mesh.
        - The BP class should contain one ‘Static Mesh’ component for the tile.