

E-Portfolio/Blog (Production Diary)

Module Code: ACCA4039

Module Name: Academic &
Professional Development

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03/10/2025 lesson

As this was my first lesson, I focused on learning the foundation, tools and workflows in Autodesk Maya. The aim was to become familiar with navigation, basic modelling tools and transforming objects.

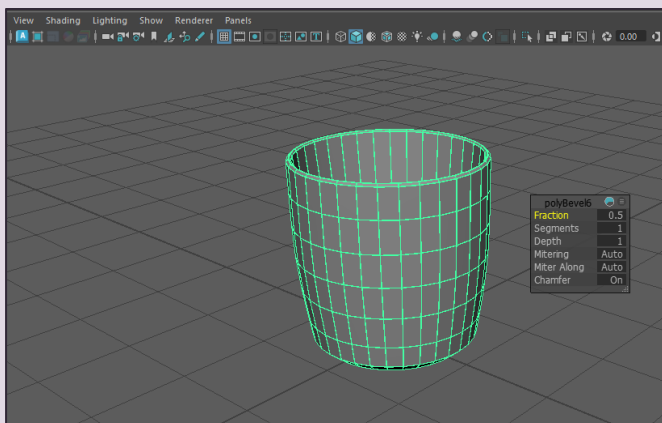
I followed an interactive tutorial to learn Maya controls. After previously using Blender, I found it hard as the controls were completely different to how I was used to.

We explored different transformations:

- Scaling
- Rotating
- Moving
- Camera Movement

I learned how to use the tools by adding basic shapes to the workspace and using the extrusion and bevel tool to mess around with the shapes. Extrusion adds depth and new geometry by stretching selected faces, edges, or vertices, while bevelling rounds off sharp edges by creating new faces for smoother transitions.

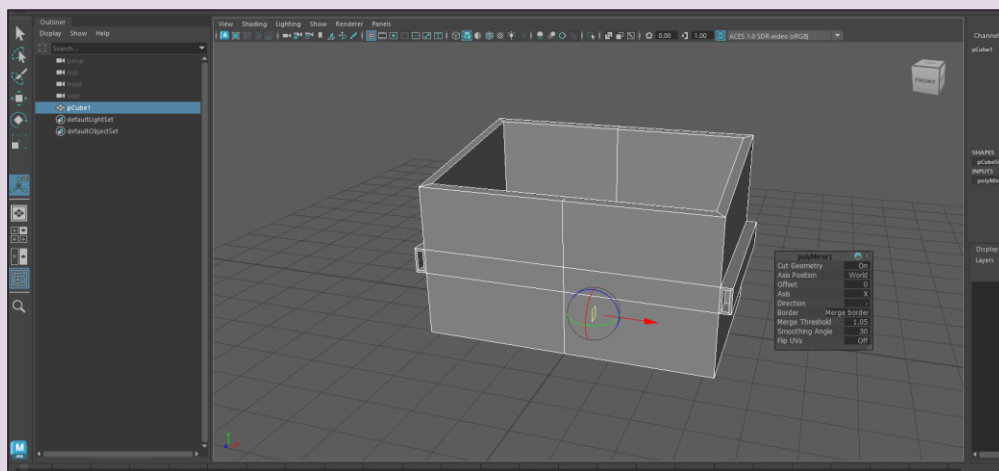
At the end of the session, I made a simple cup from a cylinder, adjusting its proportions, adding a bevel to the rim and extruding the top faces downwards to form the inside of the cup. This experience really boosted my understanding of how bevels and extrusions work together and made me more confident in using Maya's tools.



While modelling the cup, I faced some challenges switching from Blender's interface and key bindings to those in Maya. Luckily, I found a website that helped me learn the different shortcuts, making it easier to get around. It's important to go over familiar skills in a new software environment to stay adaptable as a 3D artist. Thanks to the website [1] and my tutor's help, I quickly became more confident in navigating and working with basic tools in Maya.

10/10/2025 lesson

The task for this lesson was to model a dumpster using Maya's shape modelling tools. I began with a simple cube and progressively shaped it by adding new geometry through extrusion and edge insertion to add lines, which then I could use extrusion to pull only certain points I chose. This allowed me to build the main body of the dumpster while keeping the shape clean and manageable. I also experimented with bevelling certain edges to soften hard corners more, which made the model look more realistic. Throughout the process. By the end of the lesson, I had made a solid base structure for the dumpster, giving me a clearer understanding of how basic modelling tools can be combined to create more complex objects.

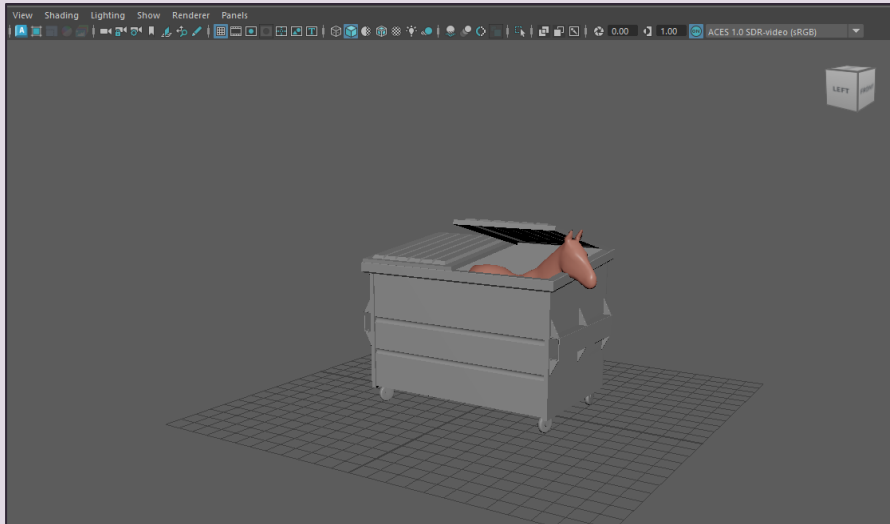


Tools I used to create the dumpster:

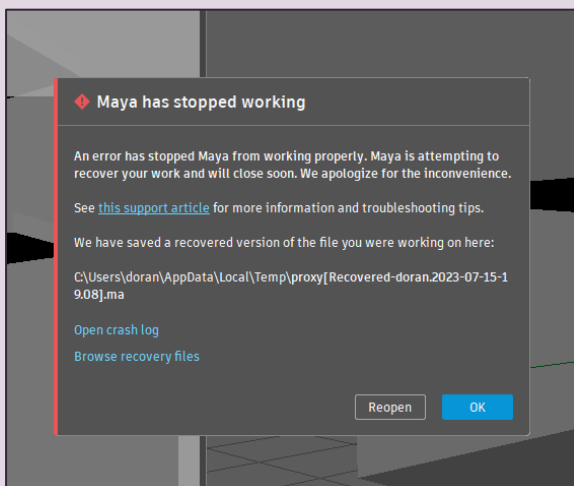
- Bevel
- Extrude
- Move
- Rotate
- Scale
- Insert Edge
- Mirror
- Object selection
- Vertex selection

- Edge selection
- Face selection

I added an extra cube section using extrusion to extend the shape, then slanted the top by selecting an edge in F10 mode and moving it with the W key. After shaping the upper section, I used F11 to rotate the faces back into a flat position and refine the overall form. From there, I continued adjusting the geometry to match the basic structure of a dumpster.



While working on my dumpster model, Maya unexpectedly crashed and I realised that I didn't save my progress. I attempted to recover the model file, but I wasn't successful, so I had to restart the model from the beginning. Although this was frustrating, rebuilding the model helped me find a clearer and more efficient approach, allowing me to correct earlier mistakes and work faster the second time.



This mistake reminded me of the importance of saving regularly and keeping backups of my work. Restarting also helped me understand the modelling steps more deeply, as

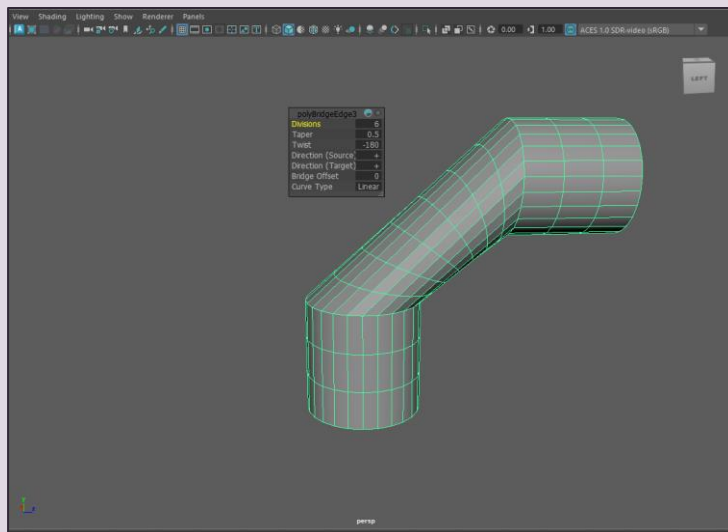
repeating the process reinforced the techniques that had learnt.

17/10/2025 lesson

This session focused on learning how to combine objects, bridge geometry and fix n-gons [2] in a model. I practiced merging separate shapes using the combine tool and then cleaned up the mesh by removing unnecessary faces. I also learned how to bridge faces correctly and use tools like the slice tool to remove n-gons. This helped me understand how important clean geometry is for creating stable and editable models.

Heres a bullet point process on how I managed to do it:

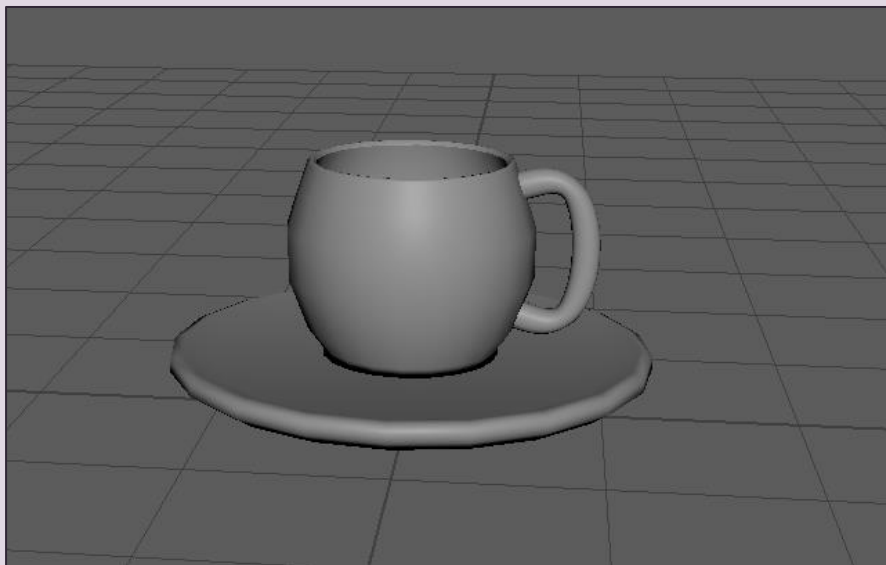
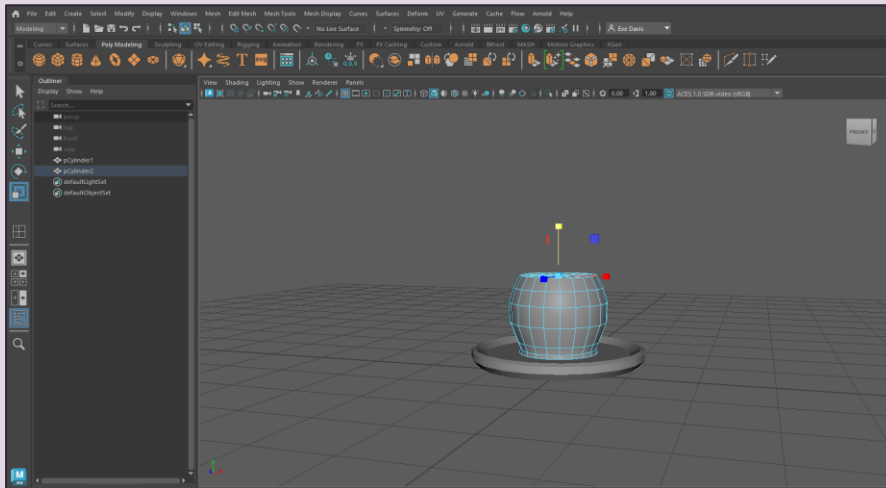
- Inserted two cylinders and positioned them at different angles.
- Combined the objects via Combine.
- Used Fill to remove top/bottom faces when needed.
- Highlighted and deleted unnecessary faces to prep for bridging.
- Created a bridge between selected faces.
- Learned that n-gons (5+ sides) [2] can cause issues when editing surfaces.
- Used the Slice tool to add edge loops and fix problematic issues.



One of the main challenges I faced was linking surfaces due to n-gons. These non-quad faces made it tricky to create a smooth bridge. The fix I found [3] was to add supporting edges using the slice tool, which turned the n-gons into quads. This method led to a tidier and more manageable result. I came to understand that maintaining a quad based topology significantly boosts control during the modelling process. Quads make it easier to manipulate surfaces and achieve clean deformations. Plus combining and refining geometry is essential for getting models ready for more detailing.

17/10/2025 lesson

In this lesson, we explored the soft select tool, which is a modelling feature that allows for gradual control of vertex movement. The main goal was to create a cup and saucer, focusing on crafting smooth, controlled shapes. This exercise underscored the importance of precision, making subtle adjustments, and the need to maintain good topology while shaping curved surfaces. By the end of the lesson, the aim was to create a simple but realistic cup and plate while becoming skilled in using the soft select tool.



Heres a list in order of what I did to get to my result:

- Created a plate, started with a polygon disk.
- Extruded edges outward to create a lip.
- Adjusted the top and bottom edges to shape the form.
- Created a cup, started from a cylinder.
- Used a multi cut tool to add even segments.
- Soft select used to shape form by pulling in/out geometry.
- Offset upper section to create the rim.

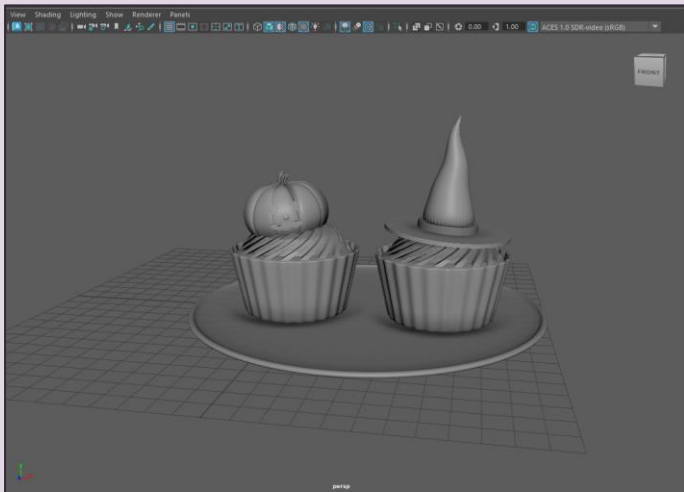
- Scaled inside faces to create interior depth.

Shaping and smoothing the curves on the plate turned out to be quite a challenge when I was manually adjusting the vertices, often leading to uneven surfaces. Using soft select made it easier to gradually affect nearby vertices, which helped in achieving a more natural and consistent curve.

I found that soft select is a crucial tool for organic modelling, enabling accurate and delicate adjustments. Plus, getting the hang of shortcuts like B really boosted my workflow efficiency, making the process of shaping the models faster and more controlled.

30/10/2025 lesson

This lesson focused on creating a Halloween themed 3D model in Maya, with the main task being to design and create a spooky model. The aim was not only to practise essential modelling tools but also explore how materials, deformers and shape manipulation can be combined to create more visually interesting assets. The lesson helped strengthen my understanding of Maya's workflow and gave me the opportunity to experiment with techniques I haven't tried yet, particularly when I was shaping the cupcakes cream.



I began by revisiting Maya's navigation controls and workspace setup to get comfortable working in the viewport, especially:

- Scaling
- Rotating
- Moving
- Camera Navigation

After I inserted the polygons needed, I started modelling the cupcake liner. Using extrude and bevel, I shaped the liner, creating a ridged structure around the base. Next, I moved on to creating the cream. I built a basic form using extrusion and bevel techniques to build a cone, but to give it a more natural swirl I applied a lattice deformer; by adjusting and twisting the lattice, I was able to form a spiral shape that looked much more like real cupcake cream.

Once the modelling was complete, I prepared the shapes for texturing and attempted to apply materials to each part of the model.



One of the main challenges I faced was applying the materials correctly. I struggled to assign them to the right sections, and the materials didn't appear how I expected at first. To fix this, I first tried to play around with it myself but that didn't solve it, so I searched online and found a helpful video [4] that clearly explained how to assign and manage materials in Maya, including how to use the Hyper shade properly. Following the steps this allowed me to solve the issue and finish texturing my model.

This lesson helped me understand how different modelling tools can work together to create both hard surface and organic shapes. Using the lattice deformer was especially useful in helping make the cream. I also improved my confidence in using Maya's materials.

14/11/2025 lesson

This lesson I had was introducing me to the core tools and workflow of Adobe Substance 3D Painter. The goal was to become familiar with the UI, understand how the painting system works, and learn how to apply high quality textures to a 3D model.

I followed as my tutor was walking us through the basics on painting a barrel, and exploring key features of the software including:

- Layer based texturing
- Masking and smart materials
- Brush painting and projection tools

- Material properties such as roughness, metallic and height

After the tutorial I was given the horror prompt for my barrel and I used my knowledge from the tutorial to apply realistic surface details and experimented with different texture maps to achieve a more HD, professional finish.



Initially I struggled with navigating the UI and locating certain tools. I luckily found an online guide [5] that explained the interface more clearly, which helped improve my workflow and overall navigation.

I gained experience in a new texturing pipeline, expanding my skills beyond modelling software. I have also built quite a confidence in painting and detailing 3D assets at a high quality and developed a stronger understanding of how textures bring models to be more realistic.

Bibliography

- [1]“Maya Keyboard Shortcuts, Hotkeys & Commands Guide | Autodesk,” *www.autodesk.com*. <https://www.autodesk.com/shortcuts/maya#>
- [2]“Tris, Quads, and N-Gons in Your 3D Model,” *3D Modeling Resources*. <https://resources.turbosquid.com/training/modeling/tris-quads-n-gons/>
- [3]3D BlendMix, “One Click Fix for Your Topology – Convert Ngons Into Quads in Blender,” *YouTube*, Jun. 12, 2025. <https://www.youtube.com/watch?v=jtIbV4BCnzE> (accessed Dec. 07, 2025).

- [4]Uhr, "Maya: Hypershade Basics," *YouTube*, May 30, 2018.
<https://www.youtube.com/watch?v=peuVIN1H9Rs>
- [5]"Substance Painter UI-Controls (In 3 Minutes)," [www.youtube.com](https://www.youtube.com/watch?v=42UOGkxUKNo).
<https://www.youtube.com/watch?v=42UOGkxUKNo>