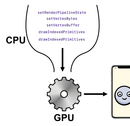
3 The Rendering Pipeline

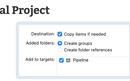
The GPU and CPU

Differences between CPU and GPU



CPU sending commands to GPU

The Metal Project



Adding the file to the project

Initial SwiftUI View

The Renderer Class

Initialization

Create these outside the render loop

Create the Mesh

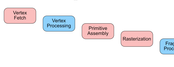
Set Up the Metal Library

Create the Pipeline State

Render Frames

Drawing

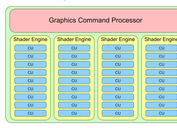
The Render Pipeline



The render pipeline

1 - Vertex Fetch

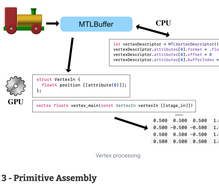
2 - Vertex Processing



AMD GPU architecture

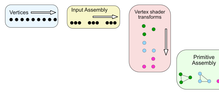
The PowerVR GPU

Creating a Vertex Shader

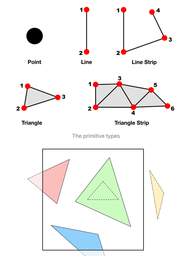


Vertex processing

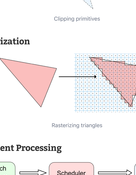
3 - Primitive Assembly



Primitive assembly

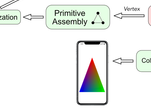


The primitive types



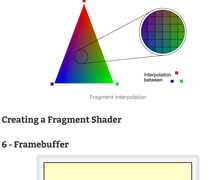
Clipping primitives

4 - Rasterization

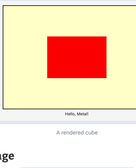


Rasterizing triangles

5 - Fragment Processing



Fragment Processing



Fragment interpolation

Creating a Fragment Shader

6 - Framebuffer

A rendered cube

Challenge

Challenge result