



UNREAL
ENGINE

Stylized Character Creation in UE4 Mobile Games



Stylized Character Creation in

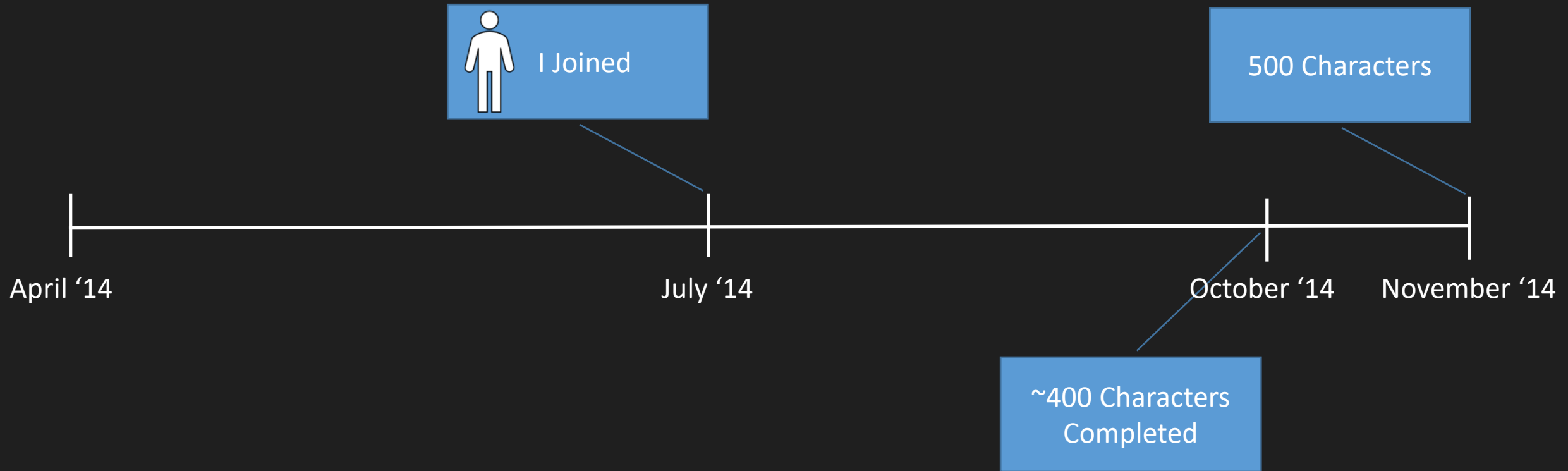
**BATTLE
BREAKERS**



BATTLE BREAKERS

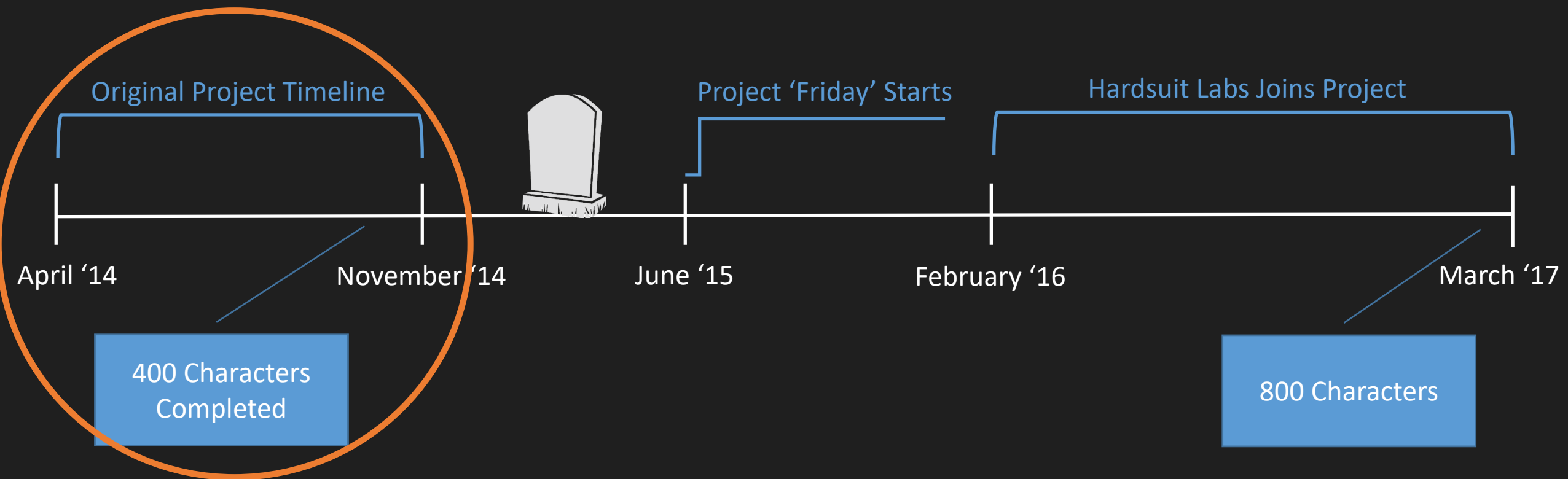


Project Timeline:



* 5.5 characters/day

Project Timeline:



What is a Battle Breakers Character?

- Characters are playable, collectible



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- Characters have tiered variants



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- Characters are playable, collectible
- Characters have tiered variants
- Characters can have elemental variants



What is a Battle Breakers Character?

- Characters are playable, collectible
- Characters have tiered variants
- Characters can have elemental variants
- Same art used for in-game, menus, etc.



Evolution of Battle Breakers Characters:

- Static Portraits
 - **prototyped using Fortnite assets*



Evolution of Battle Breakers Characters:

- Static Portraits
- Chibi Style



Evolution of Battle Breakers Characters:

- Static Portraits
- Chibi Style
- 2.5D High Quality Art

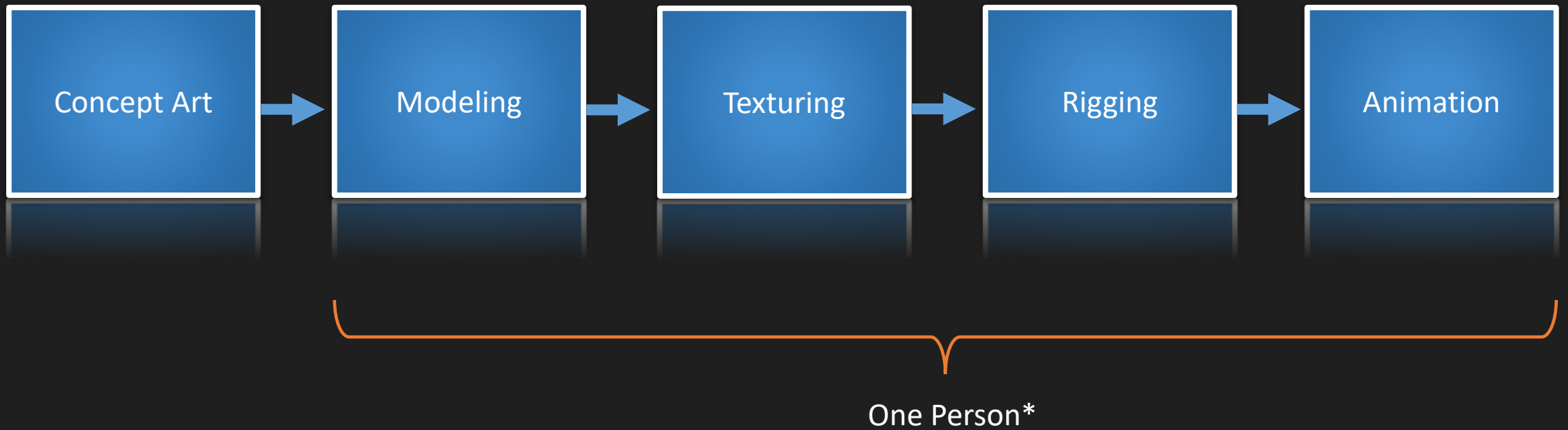


Evolution of Battle Breakers Characters:

- Static Portraits
- Chibi Style
- 2.5D High Quality Art
- Characters Animate



Character Pipeline:



Concept Art:

- Receive hero sketch from concept artist

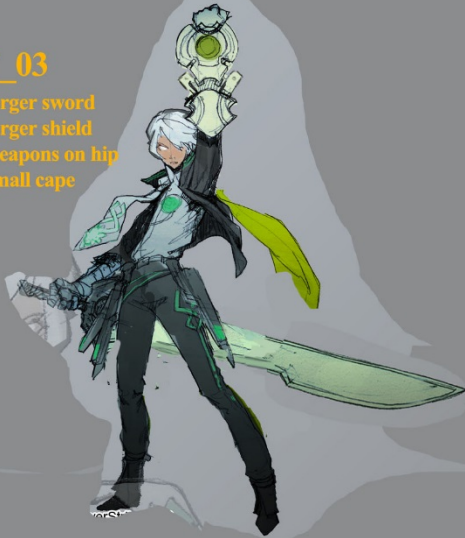
T_02

- smaller shield
- smaller sword
- no cape
- no wpns on hip



T_03

- larger sword
- larger shield
- weapons on hip
- small cape



T_04

- Larger shield
- full cape
- more weapons on hip



T_05

- Full version
- Added effects on shield
- Added glow on sword



Concept Art:

- Paint desired layers



Concept Art:

- Receive final hero art



Modeling:

- Tools Needed:



Modeling:

- First Attempt: Hand-trace 2D artwork



Modeling:

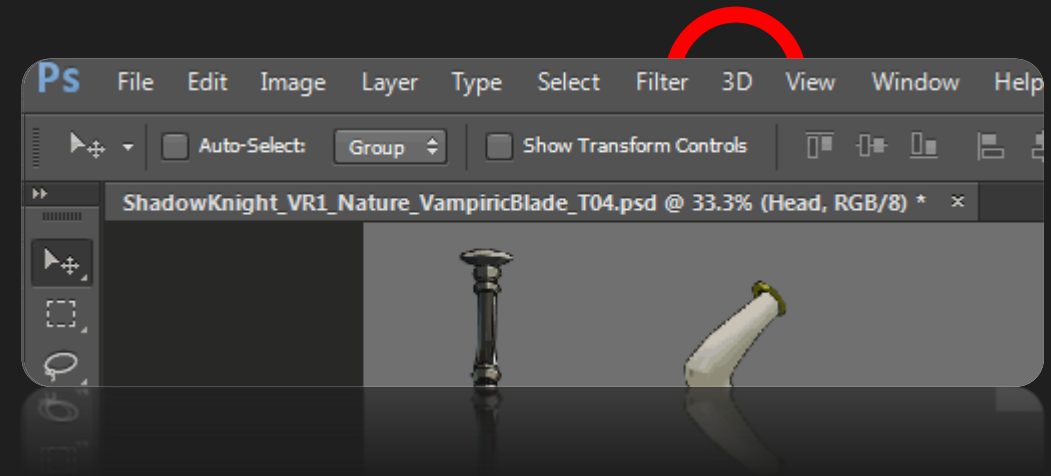
- First Attempt: Hand-trace 2D artwork
- Second Attempt: Splines



front

Modeling:

- First Attempt: Hand-trace 2D artwork
- Second Attempt: Splines
- Third Attempt: Photoshop?



“Modeling” in Photoshop:

- Spread out layers into non-overlapping islands



“Modeling” in Photoshop:

- Spread out layers into non-overlapping islands
- Select negative space with magic wand tool



“Modeling” in Photoshop:

- Spread out layers into non-overlapping islands
- Select negative space with magic wand tool
- Invert Selection
- In a new layer, paint bucket selection in black



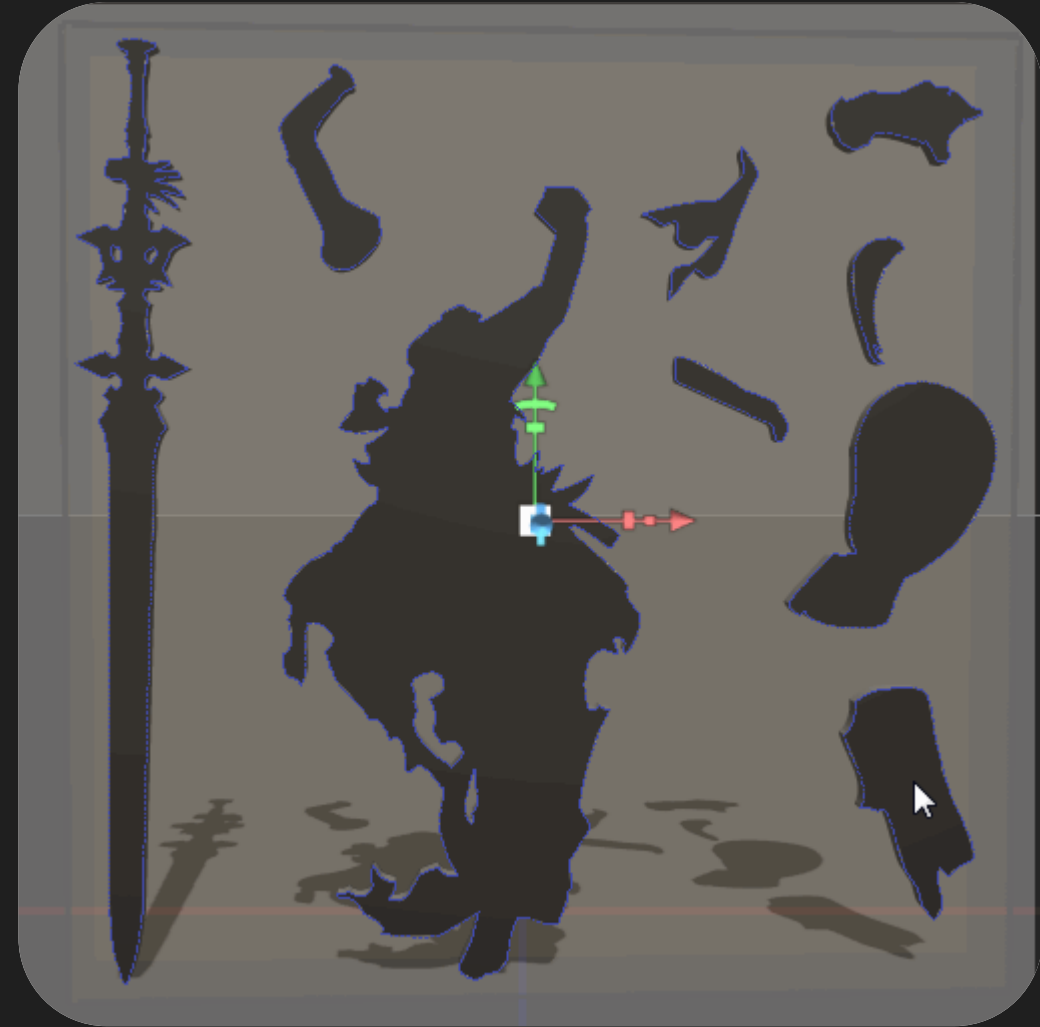
“Modeling” in Photoshop:

- Spread out layers into non-overlapping islands
- Select negative space with magic wand tool
- Invert Selection
- In a new layer, paint bucket selection in black
- Under 3D menu, New 3D Extrusion from Selected Layer



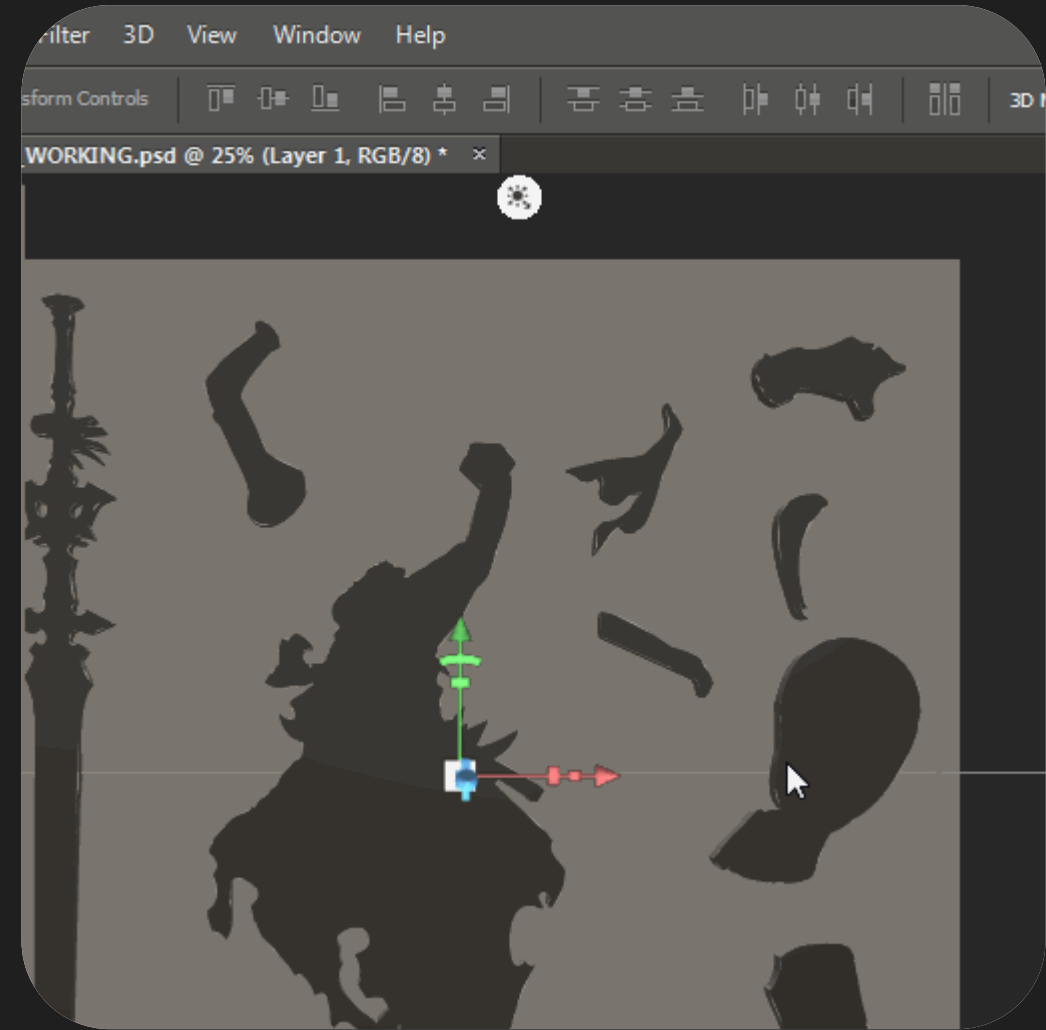
“Modeling” in Photoshop:

- Simplify Mesh



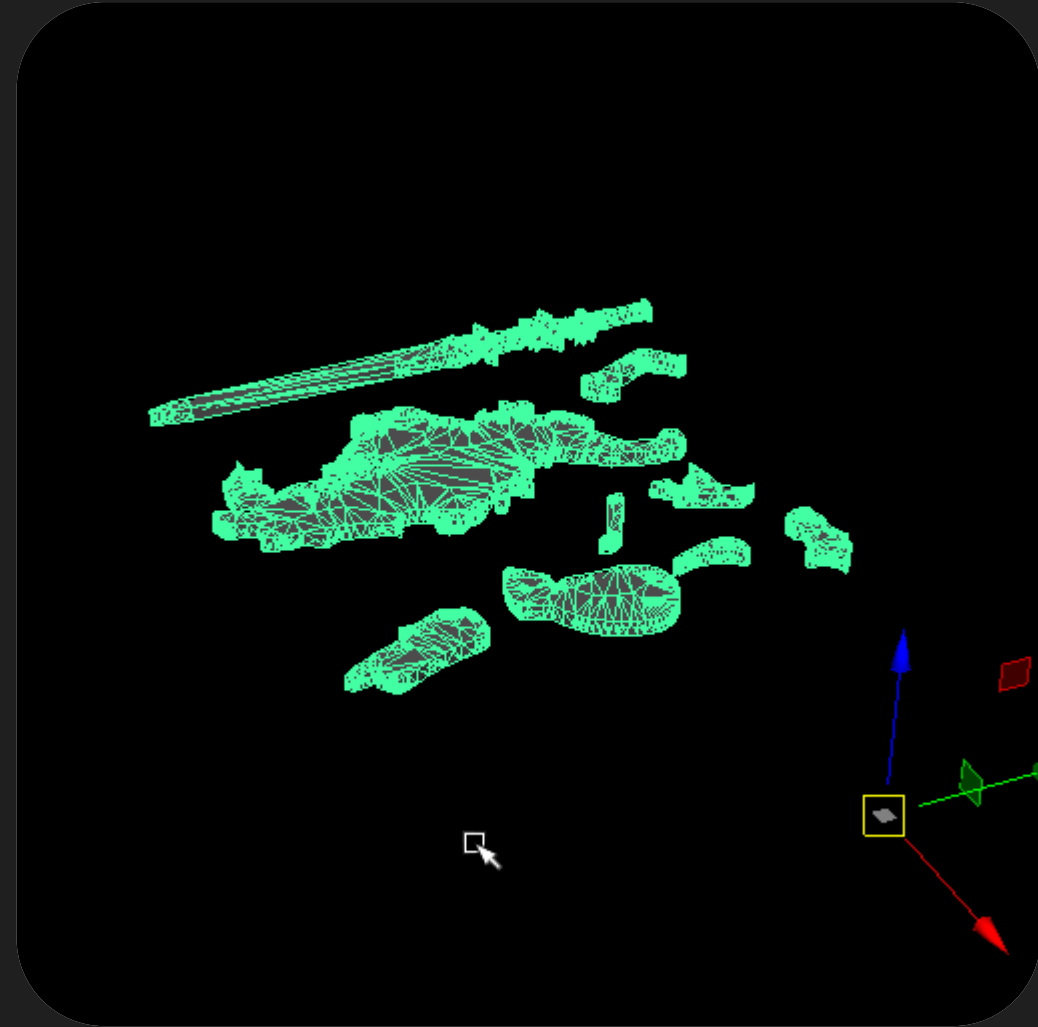
“Modeling” in Photoshop:

- Simplify Mesh
- Bring into DCC application



“Modeling” in Photoshop:

- Simplify Mesh
- Bring into DCC application
- Scale and Position



“Modeling” in Photoshop:

- Simplify Mesh
- Bring into DCC application
- Scale and Position
- Remove back faces



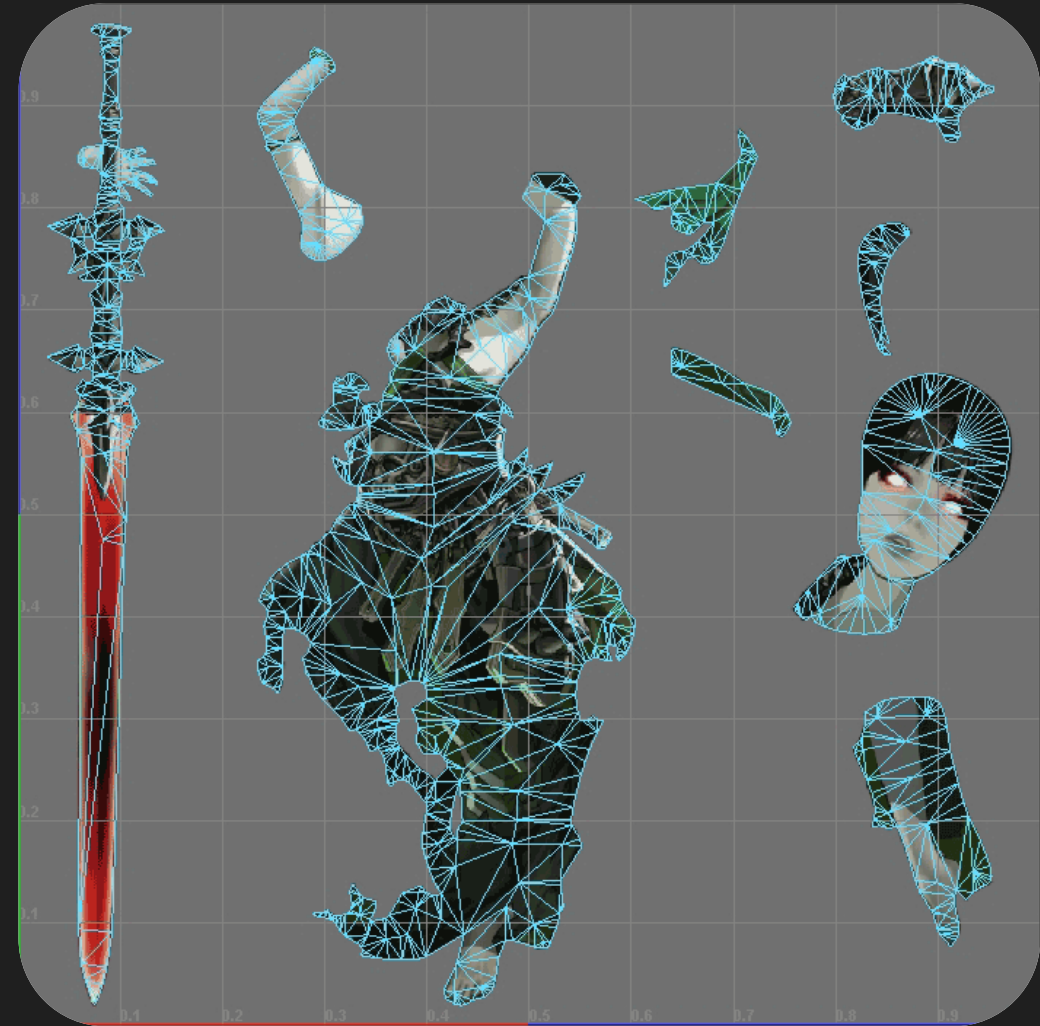
Texturing:

- Tweak UVs to fit texture



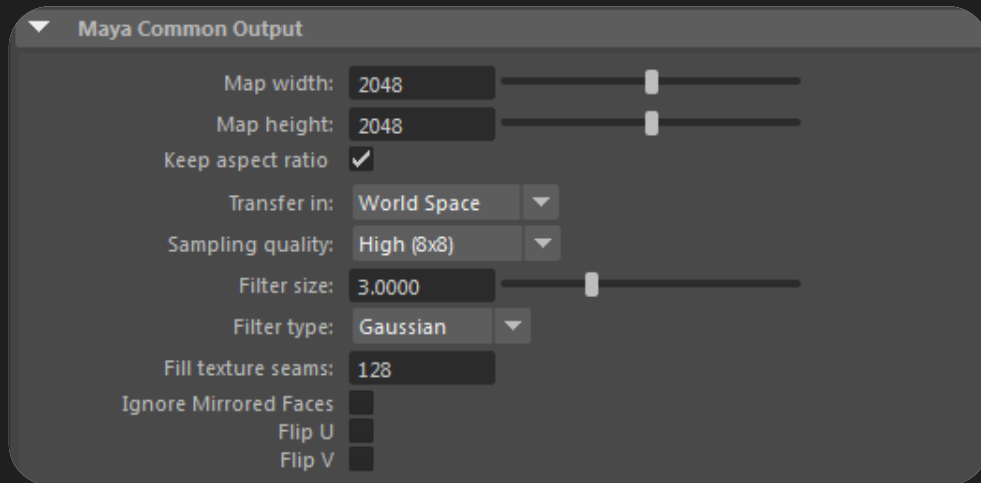
Texturing:

- Tweak UVs to fit texture
- Duplicate Mesh
- Optimize UVs on duplicate



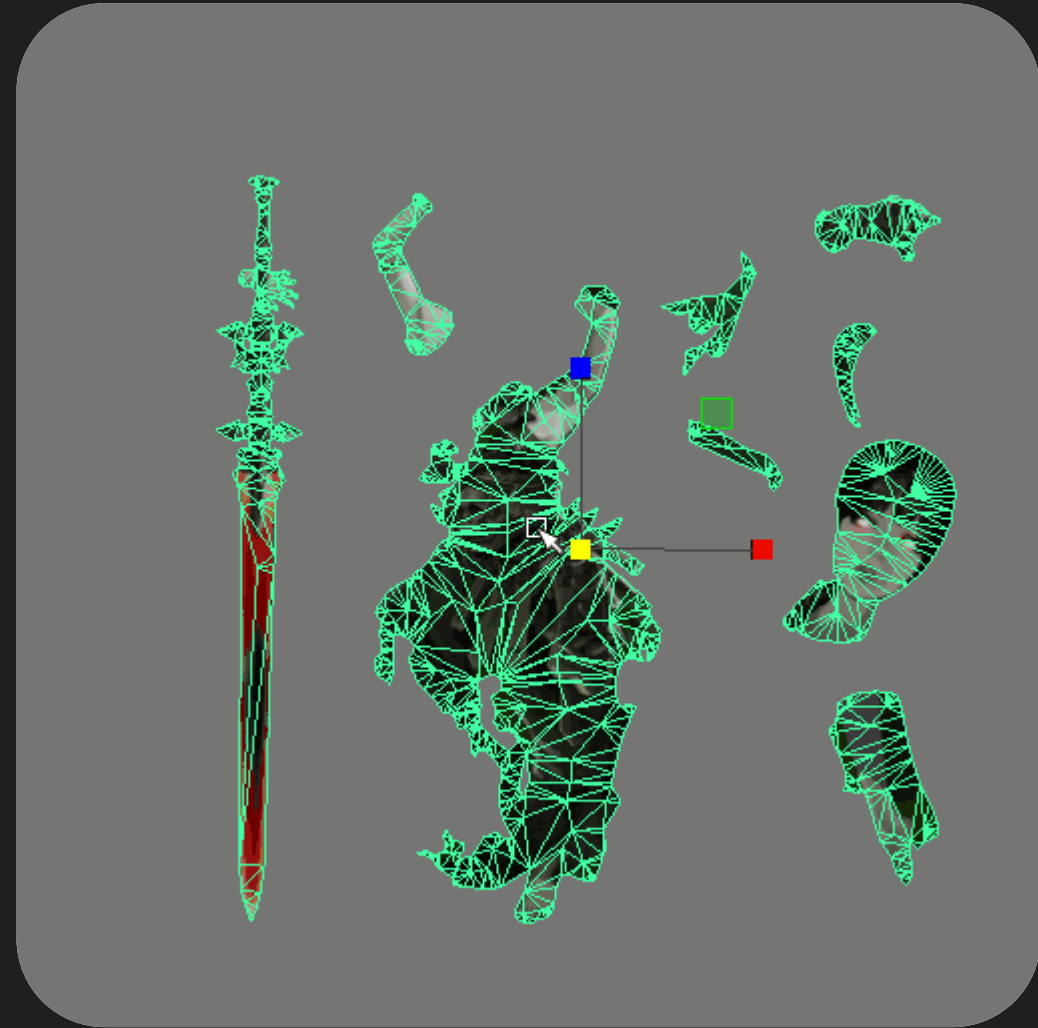
Texturing:

- Tweak UVs to fit texture
- Duplicate Mesh
- Optimize UVs on duplicate
- Transfer Maps



Rigging:

- Prep model for rigging
 - Separate islands into separate meshes



Rigging:

- Prep model for rigging
 - Separate islands into separate meshes
 - Re-combine pieces to look like original art
 - Layer pieces to avoid clipping



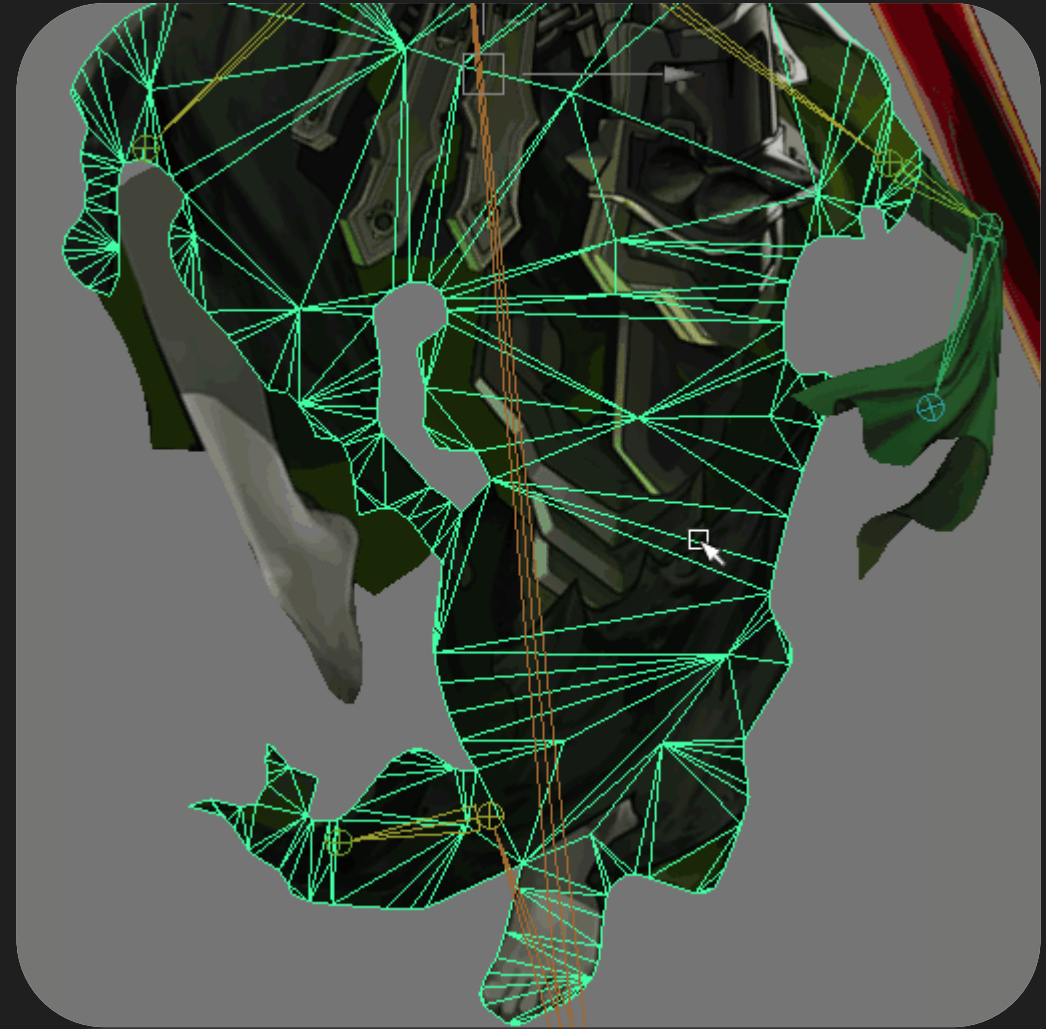
Rigging:

- Add joints only where needed
 - ~20 joints



Rigging:

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 - ~20 joints
- Quick Skin-weighting pass



Rigging:

- Add joints only where needed
 - ~20 joints
- Quick Skin-weighting pass
- Utilize root bone for fake “IK” effect



Animation:

- Keep it simple.
 - 2 poses
 - 60 - 120 frames
 - Follow through, overlapping action



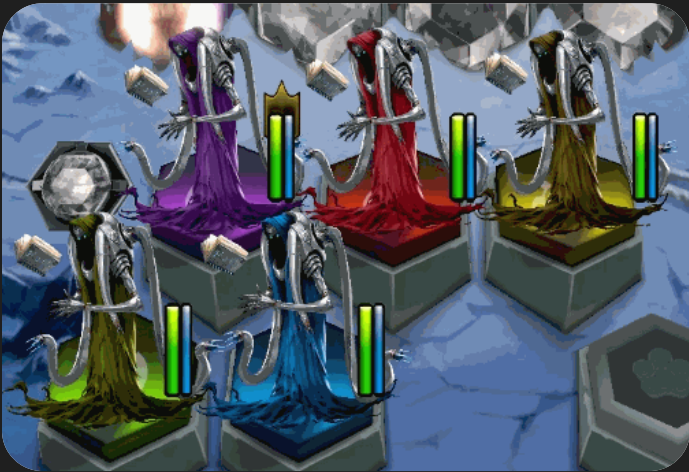
Character Tiers:

- Treated as new character
- Append joints onto existing skeleton
- Append new animation onto existing animation
- Tiers share animation, but have unique skeletal mesh and textures.



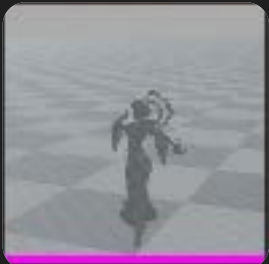
Character Variants:

- Same geometry, skeleton, and animation
 - Requires only texturing phase of pipeline
 - (transfer maps)



Unreal Engine Setup:

- Assets that make up a character:
 - Skeletal Mesh/Skeleton
 - Texture/Icon
 - Animation
 - Character Definition (Data Asset)
 - Character Display (Data Asset)



Summary:





Questions?

