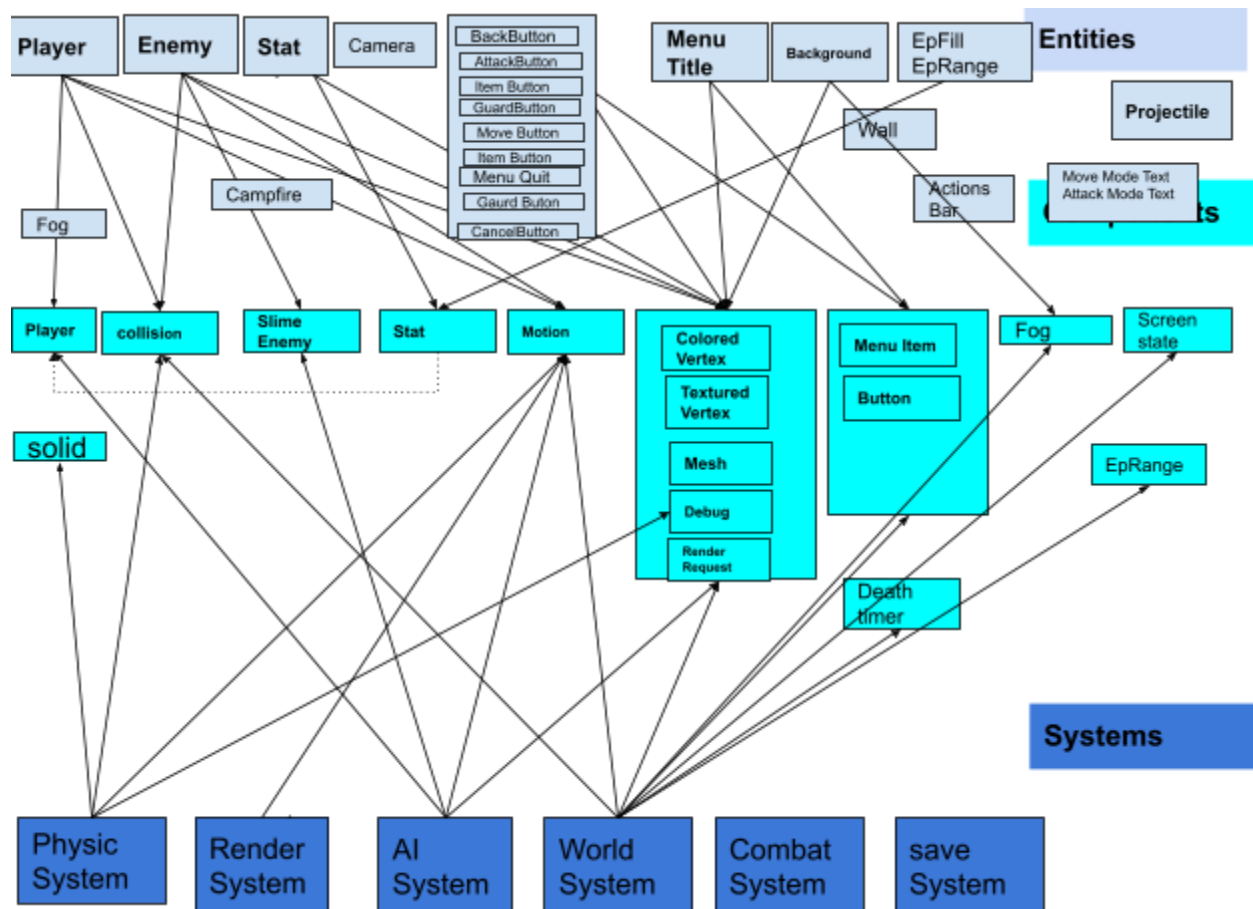# ECS Documentation

Team ID: 6

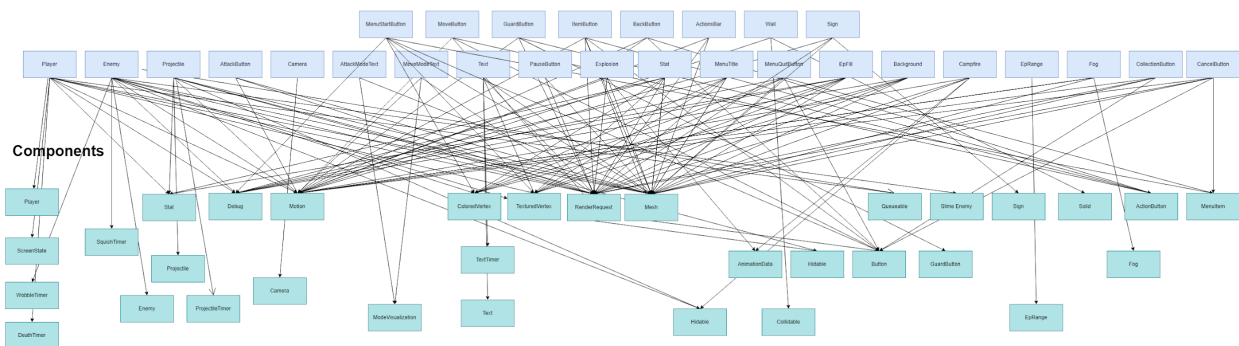Diagram 1. ECS diagram for Adrift In Somnium Game (Milestone 1)

Diagram 2. ECS diagram for Adrift In Somnium Game (Milestone 2)

Entities (defined as constructors in world_init)
NOTE: [n] represents not yet implemented
- Player Entity
- Enemy Entity
- Projectile
- Boss
- Artifact [n]
- Consumable [n]
- Equipable [n]
- Chest [n]
- Door [n]
- Sign [n]
- Stair [n]
- Wall
- ActionsBar
- AttackButton
- MoveButton
- GuardButton
- ItemButton
- BackButton
- CancelButton
- AttackModeText
- MoveModeText
- PauseButton
- CollectionButton [n]
- Fog

- EpRange (movement)
- Camera
- Text
- Campfire
- Explosion
- Stat
- EpFill (fills the bar)
- Menu Start Button
- Menu Quit Button
- Menu Title
- Background
- Tile

Components (defined as structs in components.hpp)
NOTE: [n] represents not yet implemented
- Player
- Stat
- Collision
- Motion (for physics)
- Debug (from template)
- ColoredVertex (from template)
- TexturedVertex (from template)
- Mesh (from template)
- RenderRequest(from template)
- Queueable (for turn order)
- Fog
- Slime Enemy
- EpRange
- Player_Action
- Consumable [n]
- Weapon [n]
- Armour [n]
- Artifact [n]
- ModeVisualization
- Collidable
- ScreenState
- DeathTimer
- SquishTimer
- WobbleTimer

- Damageable
- Equipable [n]
- Guardable [n]
- Interactable [n]
- Solid
- Enemy
- ActionButton
- MenuItem
- Camera
- Text
- TextTimer
- Door [n]
- TileUV
- AnimationData
- GuardButton
- Projectile
- ProjectileTimer
- Sign
- Inventory

Systems (defined as separate cpp/hpp files)
- world_system (main game loop)
- physics_system (movement_system)
- render_system
- turn_system (for turn order in battle)
- ai_system
- combat_system
- save_system

List of Entities and their components used

Player Entity
Components used: Player, ColoredVertex, TexturedVertex, Debug, Motion, Stat, Collision, Mesh, RenderRequest

Enemy Entity
Components used: Slime Enemy, ColoredVertex, TexturedVertex, Debug, Motion, Collision, Mesh, RenderRequest

Projectile

Components used: Mesh, Stat, Motion, RenderRequest, Hidable, Projectile, ProjectileTimer

Boss [n]

Components used: Mesh, Motion, RenderRequest, Hidable, Queueable

Artifact [n]

Components used: Mesh, Motion, RenderRequest, Artifact, Hidable

Consumable [n]

Components used: Mesh, Motion, RenderRequest, Hidable, Consumable

Equipable [n]

Components used: Mesh, Motion, RenderRequest, Hidable, Equipable

Chest [n]

Components used: Mesh, Motion, RenderRequest, Hidable

Door [n]

Components used: Mesh, Motion, RenderRequest

Sign

Components used: Mesh, Motion, RenderRequest, AnimationData, Sign

Stair [n]

Components used: Mesh, Motion, RenderRequest,

Wall

Components used: Motion, Solid, Collidable

ActionsBar

Components used: Mesh, Motion, RenderRequest

AttackButton

Components used: Mesh, Motion, RenderRequest, Button, ActionButton

MoveButton

Components used: Mesh, Motion, RenderRequest, Button, ActionButton

GuardButton

Components used: Mesh, Motion, RenderRequest, GuardButton, ActionButton

ItemButton
Components used: Mesh, Motion, RenderRequest, Button, ActionButton

BackButton
Components used: Mesh, Motion, RenderRequest, Button, ModeVisualization

CancelButton
Components used: Mesh, Motion, RenderRequest, Button, MenuItem

AttackModeText
Components used: Mesh, Motion, RenderRequest, ModeVisualization

MoveModeText
Components used: Mesh, Motion, RenderRequest, ModeVisualization

PauseButton
Components used: Mesh, Motion, RenderRequest, Button

CollectionButton
Components used: Mesh, Motion, RenderRequest, Button

Fog
Components used: Mesh, Motion, RenderRequest, Fog

EpRange
Components used: Mesh, Motion, RenderRequest, EpRange

Camera
Components used: Camera

Text
Components used: Mesh, RenderRequest, Text, TextTimer

Campfire
Components used: Mesh, Motion, RenderRequest, AnimationData, Hidable

Explosion
Components used: Mesh, Motion, RenderRequest, AnimationData

Stat

Components used: Stat, ColoredVertex, TexturedVertex, Debug, Mesh, RenderRequest

EpFill

Components used: Stat, ColoredVertex, TexturedVertex, Debug, Mesh, RenderRequest

Menu Start Button

Components used: Menu Item, Button, ColoredVertex, TexturedVertex, Debug, Mesh, RenderRequest

Menu Quit Button

Components used: Menu Item, Button, ColoredVertex, TexturedVertex, Debug, Mesh, RenderRequest

Menu Title

Components used: Menu Item, Button, ColoredVertex, TexturedVertex, Debug, Mesh, RenderRequest

Background

Components used: ColoredVertex, TexturedVertex, Debug, Mesh, RenderRequest

Tile

Components used: Motion, TileUV, RenderRequest

List of Systems and their components

world_system (main game loop)

Components used: Fog, EpRange, Motion, Button, Menu Item, Collison, DeathTimer

physics_system (movement_system)

Components used: Debug, Motion, Collison, solid

render_system

Components used: Motion

ai_system

Components used: Motion, Player, Slime Enemy, Enemy

turn_order_system
Components used: Player, Queueable

combat_system
Components used: Stats, Player

save_system
Components used: Stats, Motion, Artifact, Equipable, Consumable, Player, Enemy, Slime Enemy