**GAME3121 Assignment 1, Part 2: Component Architecture Description**

**Actor – ActorComponent**

Vector2 position;

Vector2 scalar;

float rotation;

* TextureComponent
  + A single texture that visually represent the object in the game scene.
  + Texture sprite;
* AnimationComponent
  + A sequence of textures that visually represent the object in the game scene.
  + Texture[] sprite;
* SolidCollider
  + A 2D Box collider that represents a zone that cannot be traversed by the player nor ground-based AI.
  + Rect size;
* OverlapCollider
  + A 2D Box collider that represents a zone that triggers an event when the player and/xor AI collides with it.
  + Rect size;
* PlayerComponent
  + Represents the object as a controllable entity. Works in conjunction with keyboard input.
  + float speed;
  + Int lives;
  + Int mana;
  + Int coin;
* PickUpComponent
  + An object that can be picked up by player character.
  + PickUpTypeEnum type;
* ProjectileAbility
  + Signifies that the object has the ability to shoot a projectile.
  + ProjectileEnumType type;
* WanderAIComponent
  + Makes the AI wander using very basic pathing that avoids walls. Multiple AI components will have them switch between all of them over time.
  + float duration;
* FlyAIComponent
  + Makes the AI wander using very basic pathing that disregards walls. Multiple AI components will have them switch between all of them over time.
  + float duration;
* SentryAIComponent
  + Makes the AI shoot at the player if within radius. Multiple AI components will have them switch between all of them over time.
  + float duration;
  + float radius;
* AttackAIComponent
  + Makes the AI directly move toward the target’s initial location. It does not follow the target. Multiple AI components will have them switch between all of them over time.
  + Vector3 target;
* LifetimeComponent
  + The object will be destroyed after a certain time.
  + Float lifetime;