

The image displays a large, complex UML class diagram for a game engine, organized into a grid of 10 rows and 10 columns. Each cell contains a class diagram for a specific module, with classes and their attributes/operations listed in a structured manner.

**Row 1: Core Game Engine Components**

- loyal.level:Level**: Core level management class.
- loyal.level.tiles:Tile**: Base class for all tile types.
- loyal.Battle.Actions:Ability**: Base class for all abilities.
- loyal.Utilities:AStarTile**: A\* search algorithm utilities.
- loyal.Battle.Characters:PlayingCharacter**: Base class for all playing characters.
- loyal:Loval**: Main game loop and state management.
- loyal.entities:MapMoblin**: Map management and mob spawning.
- loyal.entities:Mob**: Base class for all mobs.

**Row 2: Game Mechanics and UI**

- loyal.entities:Pointer**: Pointer system for entity tracking.
- loyal.Utilities:Edge**: Edge-based movement and pathfinding.
- loyal.Utilities:LinkedList**: Linked list utilities for data structures.
- loyal.Battle:Battle**: Core battle system logic.
- loyal.entities:MapPlayer**: Player map management.
- loyal.Graphics:Screen**: Screen rendering and graphics.
- loyal:InputHandler**: Input processing and event handling.
- loyal.entities:Entity**: Base class for all entities.

**Row 3: Game Mechanics and UI (Continued)**

- loyal.entities:NPCMen**: NPC management and spawning.
- loyal:LevelInitializer**: Level initialization and setup.

**Row 4: Game Mechanics and UI (Continued)**

- loyal:Sound**: Sound management and playback.
- loyal.Utilities:Vertex**: Vertex-based movement and pathfinding.
- loyal.Battle:BattleMenu**: Battle menu and UI.
- loyal.Battle.Actions:ClericAbilityFactory**: Cleric ability factory.
- loyal.Battle.Actions:HunterAbilityFactory**: Hunter ability factory.
- loyal.Battle.Actions:WizardAbilityFactory**: Wizard ability factory.
- loyal.Battle.Actions:WarriorAbilityFactory**: Warrior ability factory.
- loyal.level:LevelGenerator**: Level generation and spawning.

**Row 5: Game Mechanics and UI (Continued)**

- loyal.Battle:BattleAI**: Battle AI logic.
- loyal.Battle.Characters:ModifyingItem**: Item modification system.
- loyal.level:EdgeCollisionDecision**: Edge collision decision logic.
- loyal.level:EnterBattle**: Battle entry logic.
- loyal.Utilities:Node**: Node-based movement and pathfinding.
- loyal.Battle:PlayingCharacterCounter**: Playing character counter.
- loyal.entities:BattleCharacters**: Battle character management.
- loyal.Utilities:Graph**: Graph-based movement and pathfinding.

**Row 6: Game Mechanics and UI (Continued)**

- loyal.Battle.Characters:Arms**: Arms management and spawning.
- loyal.Battle.Characters:Boots**: Boots management and spawning.

**Row 7: Game Mechanics and UI (Continued)**

- loyal.Battle.Characters:Bow**: Bow management and spawning.
- loyal.Battle.Characters:Chest**: Chest management and spawning.
- loyal.Battle.Characters:Helmet**: Helmet management and spawning.
- loyal.Battle:Party**: Party management and spawning.
- loyal.entities:MenuItems**: Menu item management and spawning.
- loyal.level.tiles:AnimatedTile**: Animated tile management and spawning.
- loyal.level.tiles:BasicTile**: Basic tile management and spawning.

**Row 8: Game Mechanics and UI (Continued)**

- loyal.Battle.Actions:AirSlashSingleTargetOffenSiveAbility**: Air slash ability.
- loyal.Battle.Actions:ArrowRainMultiTargetOffensiveAbility**: Arrow rain ability.
- loyal.Battle.Actions:BackSlashSingleTargetOffenSiveAbility**: Back slash ability.
- loyal.Battle.Actions:DarkOrbOffensiveSingleTargetAbility**: Dark orb ability.
- loyal.Battle.Actions:DefensiveAbility**: Defensive ability.
- loyal.Battle.Actions:DefensiveAbility**: Defensive ability.
- loyal.Battle.Actions:DesperateMoveMultiTargetOffensiveAbility**: Desperate move ability.
- loyal.Battle.Actions:LightningSpearOffensiveSingleTarget**: Lightning spear ability.
- loyal.Battle.Actions:MagicBarrierDefensiveSingleTargetAbility**: Magic barrier ability.

**Row 9: Game Mechanics and UI (Continued)**

- loyal.Battle.Actions:MagicShieldDefensiveSingleTargetAbility**: Magic shield ability.
- loyal.Battle.Actions:MultiTargetDefensiveAbility**: Multi-target defensive ability.
- loyal.Battle.Actions:MultiTargetDefensiveAbility**: Multi-target defensive ability.
- loyal.Battle.Actions:MultiTargetOffensiveAbility**: Multi-target offensive ability.
- loyal.Battle.Actions:MultiTargetOffensiveAbility**: Multi-target offensive ability.
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**Row 10: Game Mechanics and UI (Continued)**

- loyal.Battle.Actions:SingleTargetDefensiveAbility**: Single-target defensive ability.
- loyal.Battle.Actions:SingleTargetOffensiveAbility**: Single-target offensive ability.
- loyal.Battle.Actions:SootingSunlightDefensiveSingleTargetAbility**: Soothing sunlight ability.
- loyal.Battle.Actions:SoulArrowOffensiveSingleTarget**: Soul arrow ability.
- loyal.Battle.Actions:SoulShowerMultiTargetOffensiveAbility**: Soul shower ability.
- loyal.Battle.Actions:TauntSingleTargetDefenSiveAbility**: Taunt ability.
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