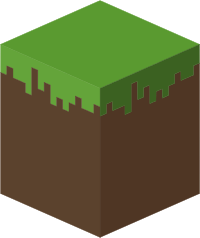
Fight Blocks

Submitted by: Rie Kumar • [rie.kumar@oit.edu](mailto:rie.kumar@oit.edu) • November 10, 2017 • Release: 1.0



# General Comments

Proposal will be attached to the email that is sent with this document. The CRUD matrix is available on the UseCaseObjectModel file which will also be sent with this document.

# Signature Page

This document accepted by:

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| Signature (Calvin Caldwell) |  | Date |

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| Signature (Rie Kumar) |  | Date |

This document submitted by:

# Revision History

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Author** | **Company** | **Date** | **Version** | **File Name** | **Comments** |
| Rie Kumar | All Blocks Development | 11/10/17 | 1.0 | RieKumarObjectModel | None |
|  |  |  |  |  |  |

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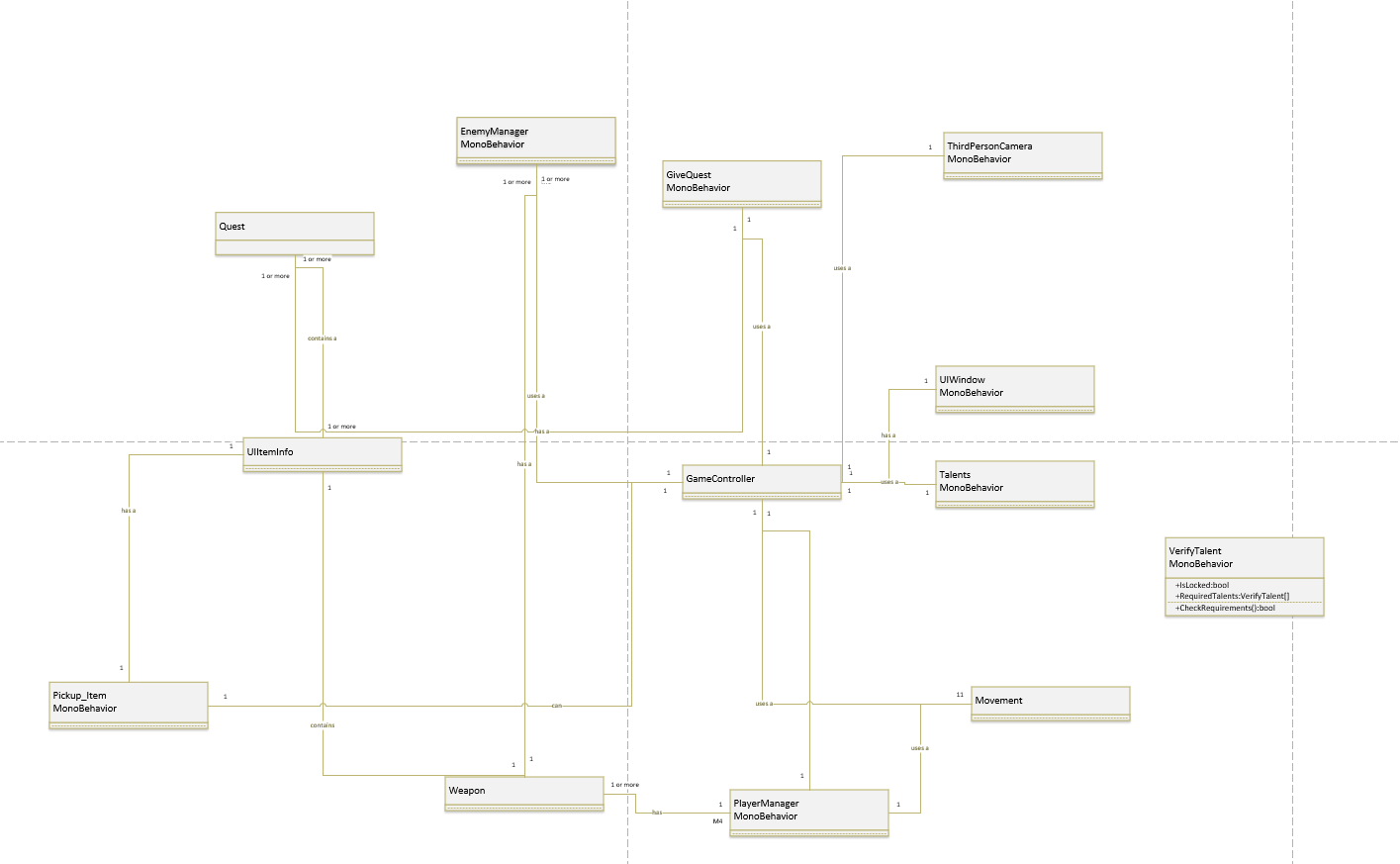
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# Class Diagrams

## Executive



## Detailed

# Class Specifications

## Enemy Manager

|  |
| --- |
| **Class Information** |
| Class Name:EnemyManager **Abstract Type: No Persistence:Yes** |

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| --- | --- | --- |
| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-003 | Attack | 1 |
| SP-017 | Enemy Attack | 1,2,3,4,5,6 |
| SP-016 | Follow | 1,2,3,4 |
| SP-022 | Retreat | 1,2,3,4,5 |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| Public void Attack() | None | Possible inflicted damage to enemy. |
| Public void DisableAttack() | AttackTimeout has been reached | Disables the attack animation and resets the timer. |
| Public void Follow() | Player is within distance of following range. | Enemy moves closer to player. |
| Public void OnTriggerEnter(Collider other) | Object enters the trigger. | Object is out of or currently inside trigger. |
| Public void Retreat() | Player is out of following range. | Enemy retreats to starting position. |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
|  |  |  |

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| --- | --- | --- |
| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
|  |  |  |

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| --- | --- | --- | --- | --- | --- |
| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| AllowFollow | Bool | Y | Instance | Public | Indicates if enemy can follow the player. |
| Anim | Animator | Y | Instance | Public | Provides access to animations of enemy. |
| AttackCooldown | Float | Y | Instance | Public | Time limit for indicating if taking a break from attack. |
| AttackCooldownTimer | Float | Y | Instance | Public | Timer for indicating if taking a break from attack. |
| Controller | GameController | Y | Instance | Public | Provides access to main game functions and objects. |
| CurrentWeapon | Weapon | Y | Instance | Public | Current weapon of the enemy. |
| Distance | Float | Y | Instance | Public | The distance the enemy is from the player. |
| ExperienceWorth | Float | Y | Instance | Public | Amount of experience the enemy is worth. |
| Health | Float | Y | Instance | Public | Amount of health the enemy has. |
| IsDead | Bool | Y | Instance | Public | Indicates if the enemy is currently alive. |
| IsHit | Bool | Y | Instance | Public | Indicates if the enemy is currently taking damage. |
| MaxFollowDistance | Float | Y | Instance | Public | The enemy’s max follow distance. |
| MinFollowDistance | Float | Y | Instance | Public | The enemy’s max attack distance. |
| Name | String | Y | Instance | Public | The enemy’s name. |
| RotationSpeed | Float | Y | Instance | Public | The speed at which the enemy rotates. |
| StartingPosition | Vector3 | Y | Instance | Public | Starting position of the enemy. |
| StartingRotation | Quaternion | Y | Instance | Public | Starting rotation of the enemy. |

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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| 1 | 10 | N/A | 8 |
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| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
|  |  |  |

## Game Controller

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| --- |
| **Class Information** |
| Class Name: GameController **Abstract Type: No Persistence:Yes** |

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| --- | --- | --- |
| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-003 | Attack | 1 |
| SP-017 | Enemy Attack | 4 |
| SP-002 | Pause | 1 |
| SP-021 | Quitting | 1,2 |
| SP-019 | Winning | 1,2 |
| SP-020 | Losing | 1,2 |
| SP-004 | Choose Menu Item | 1,2,3,4 |
| SP-005 | Display Inventory | 1 |

|  |  |  |
| --- | --- | --- |
| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| Public void UpdatePlayerHealthBar() | User takes damage | Users health bar has been updated. |
| Public void UpdateEnemyUI(GameObject target) | Enemy takes damage | Enemy health bar has been updated. |
| Public List<EnemyManager> FindColosestEnemies(float max\_distance) | None | Returns the list of enemies. |
| Public EnemyManager FindClosestEnemy() | None | Returns the closets enemies |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| --- | --- | --- | --- | --- | --- |
| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| WeaponItemOffset | Int | Y | Static | Public | Offset of the int type of an item, but referencing weapons. |
| PotionItemOffset | Int | Y | Static | Public | Offset of the int type of an item, but referencing potions. |
| IsWindowOpen | Bool | Y | Instance | Public | Indicates if a window is open. |
| QuestGiver | GiveQuest | Y | Instance | Public | Provides a reference to the quest giver. |
| Windows | UIWindow | Y | Instance | Public | Provides a reference to the latest dialog. |
| Movement | PlayerMovement | Y | Instance | Public | Provides a reference to the player movement script. |
| Player | PlayerManager | Y | Instance | Public | Provides a reference to the player manager script. |
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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| N/A | N/A | N/A | 1 |
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| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
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## GiveQuest

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| --- |
| **Class Information** |
| Class Name: GiveQuest **Abstract Type: No Persistence:No** |

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| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-012 | Take Quest | 2,3,4 |
| SP-014 | Display Quest | 1 |
| SP-013 | Complete Quest | 2,3,4 |
| SP-018 | Give Quest | 1,2,3,4,5 |
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| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| Public void AcceptQuest() | User clicks accept on the quest window | Quest is accepted, or completed. |
| Public void CheckQuest(string property, object obj) | NPC has a quest available and user is turning in one. | Quest is progressed. |
| Public void DisplayQuest(Quest) | User talks to NPC | Quest is displayed on dialog. |
| Public void DisplayQuestTracker() | User presses “T’ | Quest is displayed. |
| Public void OnTriggerExit(Collider other) | Object exits trigger. | Object is out of trigger. |
| Public void OnTriggerStay(Collider other) | Object stays in trigger. | Object is still in trigger. |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| Anim | Animator | Y | Instance | Public | Provides access to animations for NPC. |
| Controller | GameController | Y | Instance | Public | Provides access to main game functions and objects. |
| CurrentQuest | Quest | Y | Instance | Public | The current quest that the NPC is viewing. |
| IsQuestAccepted | Bool | Y | Instance | Public | Indicates if the quest has been accepted. |
| ObjectiveText | String[] | Y | Instance | Public | List of objective strings used for instantiating a quest. |
| Quests | Quest[] | Y | Instance | Public | List of quests that the NPC has. |
| QuestsText | String[] | Y | Instance | Public | Text objects in window. |
| RewardSlots | UIItemInfo[] | Y | Instance | Public | The item that the quests are offering. |
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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| N/A | N/A | N/A | 1 |
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| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
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## Movement

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| --- |
| **Class Information** |
| Class Name: Movement **Abstract Type: No Persistence:Yes** |

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| --- | --- | --- |
| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-003 | Attack | 1 |
| SP-013 | Complete Quest | 2 |
| SP-014 | Display Quest | 1 |
| SP-018 | Give Quest | 3 |
| SP-011 | Kill Enemy | 1,2 |
| SP-001 | Move | 1,2,3,4 |
| SP-002 | Pause | 1 |
| SP-015 | Pickup\_Item | 1 |
| SP-012 | Take Quest | 2 |

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| --- | --- | --- |
| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| Public void Move() | None | None |
| Public void Rotate() | None | None |
| Public void Jump() | None | None |
| Public void Crouch() | None | None |
| Public void Sneak() | None | None |
| Public void Attack() | None | None |
| Public void CheckAttack() | None | None |
| Public void Pickup() | None | None |

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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| Controller | GameController | Y | Instance | Public | Provides access to main game functions and objects. |
| Anim | Animator | Y | Instance | Public | Provides access to player animations. |
| CrouchVisibility | Float | Y | Instance | Public | (Not Used) |
| RotationSpeed | Float | Y | Const | Public | Speed at which the character rotates his position. |
| Visibility | Float | Y | Instance | Public | (Not Used) |
| IsAttacking | Bool | Y | Instance | Public | Indicates if the player is currently attacking. |
| Speed | Float | Y | Instance | Public | Indicates the movement speed. |
| IsCrouched | Bool | Y | Instance | Public | Indicates if the player is crouched or not. |
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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| N/A | N/A | N/A | 9 |
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| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
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## Pickup\_Item

|  |
| --- |
| **Class Information** |
| Class Name: Pickup\_Item **Abstract Type: No Persistence: No** |

|  |  |  |
| --- | --- | --- |
| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-015 | Pickup Item | 1 |
|  |  |  |

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| --- | --- | --- |
| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| OnTriggerExit(Collider other) | Collier exits trigger | Collier is out of range of trigger |
| OnTriggerStay(Collider other) | Collider stays on trigger | Collider is still in trigger |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| NA |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| NA |  |  |
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| --- | --- | --- | --- | --- | --- |
| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| Controller | GameController | Y | Instance | Public | Provides access to the main game functions and player objects/scripts. |
| IsFilled | Bool | Y | Instance | Public | Indicates if the player’s inventory is currently filled. |
| ItemID | Int | Y | Instance | Public | Indicates the item that is being picked up. |
| ItemInfo | UIItemInfo | Y | Instance | Public | Provides the information of the item that is being picked up. |

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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
|  |  |  |

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| --- | --- | --- | --- |
| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| N/A | N/A | N/A | 1 |
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| --- | --- | --- |
| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
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## PlayerManager

|  |
| --- |
| **Class Information** |
| Class Name: PlayerManager **Abstract Type: No Persistence:Yes** |

|  |  |  |
| --- | --- | --- |
| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-013 | Complete Quest | 2,4 |
| SP-017 | Enemy Attack | 4 |
| SP-002 | Give Quest | 3,4,5 |
| SP-011 | Kill Enemy | 1,2 |
| SP-019 | Winning | 2 |
| SP-020 | Losing | 2 |
| SP-015 | Pickup\_Item | 1 |
| SP-012 | Take\_Quest | 2,4 |

|  |  |  |
| --- | --- | --- |
| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| Public bool AddItemToInventory(UIItemInfo item) | User picked up an item and inventory was not filled. | Item was added to inventory. |
| Public void DealDamage(ref float enemyHealth) | User attacked enemy. | User dealt damage to enemy. |
| Public void TakeDamage(float enemyDamage, ref float enemyHealth) | Enemy attacked player. | Enemy dealt damage to player. |
| Public void UseItem(UIItemInfo item) | User clicked on item in inventory. | Item may have been used or equipped. |
| Public void ApplyPotion(UIItemInfo potion) | User uses an item that is a potion. | Potion is consumed. |
| Publlc void EquipWeapon(UIItemInfo weapon) | User uses an item that is a weapon. | Weapon is equipped. |
|  |  |  |

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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
|  |  |  |

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| --- | --- | --- | --- | --- | --- |
| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| Name | String | Y | Instance | Public | Name of the user. |
| MaxHealth | Float | Y | Instance | Public | Max health of player. |
| Health | Float | Y | Instance | Public | Current health of player. |
| Armor | Float | Y | Instance | Public | Armor of player (unused). |
| BonusDamage | Float | Y | Instance | Public | Damage multiplier and bonus. |
| Controller | GameController | Y | Instance | Public | Provides access to game functions and objects. |
| CurrentWeapon | Weapon | Y | Instance | Public | The current weapon that the user has. |
| CurrentPotion | GameObject | Y | Instance | Public | Current potion that the user has used. |
| Wepaons | Weapon[] | Y | Instance | Public | List of equippable weapons that the user has. |
| Movement | Movement | Y | Instance | Public | Provides access to player movement controls |
| Inventory | List<Int> | Y | Instance | Public | List of inventory items by ID. |
| SkillTree | Talents | Y | Instance | Public | Provides access to skills on the skill tree. |
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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| --- | --- | --- | --- |
| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| N/A | N/A | N/A | 1 |
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| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
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## Quest

|  |
| --- |
| **Class Information** |
| Class Name: QuestAbstract Type: No Persistence: No |

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| --- | --- | --- |
| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-013 | Complete Quest | 3 |
| SP-014 | Display Quest | 1 |
| SP-018 | Give Quest | 1,4,5 |
| SP-012 | Take Quest |  |

|  |  |  |
| --- | --- | --- |
| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| Quest(string name, string description, string complete, float exp, UIItemInfo[] rewards, List<string>[] objective, int status) | None | None |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| NA |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| NA |  |  |
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| --- | --- | --- | --- | --- | --- |
| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| CompletedDescription | String | Y | Instance | Public | Completed description of quest. |
| Description | String | Y | Instance | Public | Description of quest. |
| Experience | Float | Y | Instance | Public | Experience worth of quest. |
| Name | String | Y | Instance | Public | Name of quest. |
| Objective | List<string> | Y | Instance | Public | List of objectives of quest. |
| Status | Int | Y | Instance | Public | Indicates if the quest has been started, progress, and if its completed. |
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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
|  |  |  |

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| --- | --- | --- | --- |
| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| 1 | 3 | N/A | 2 |
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| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
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## Talents

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| **Class Information** |
| Class Name: Talents **Abstract Type: No Persistence:No** |

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| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-006 | Display Skill Tree | 1 |
| SP-010 | Reset Skills | 1 |
| SP-009 | Unlock Skills | 1,2 |
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| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| public void CreateSkills() | Program loads. | Skills are created. |
| public void AddExperience(float amount) | User kills an enemy. | Experience is added to the user and they are either given an extra skill point or nothing. |
| public void ExecuteSkill() | None | Skills is executed. |
| public void UpdateSkill(int type, float amount) | User unlocks new skill. | Skill is updated. |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| Controller | GameController | Y | Instance | Public | Provides access to main game functions and objects. |
| SkillPoints | Int | Y | Instance | Public | # of skills points the user has to purchase new skills. |
| Experience | Float | Y | Instance | Public | The amount of experience the user has before there next skill point. |
| Level | Float | Y | Instance | Public | (Not Used) |
| Booster | Float | Y | Instance | Public | General booster that can be applied to speed, attacks, or health. |
| Type | Float | Y | Instance | Public | Type of skill. |
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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| N/A | N/A | N/A | 1 |
| 1 | 9 | N/A | 9 |

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| **General Comments** | | |
| Author | Date | Comment |
| Rie Kumar | 11/9/17 | I added two instances because a talent that has other objects connected to it has 1 instance, but I will be making adding 9 more to various game objects, that will not be using the other classes. |
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## ThirdPersonCamera

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| **Class Information** |
| Class Name: ThirdPersonCamera **Abstract Type: No Persistence:No** |

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| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| N/A |  |  |
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| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| Controller | GameController | Y | Instance | Public | Provides access to main game functions and objects. |
| LookAt | Transform | Y | Instance | Public | Indicates the transform that to angle the camera around. |
| StartPos | Transform | Y | Instance | Public | Start position of character. |
| Y\_ANGLE\_MIN | Float | Y | Const | Public | Minimum vertical angle of camera. |
| Y\_ANGLE\_MAX | Float | Y | Const | Public | Maximum vertical angle of camera. |
| Distance | Float | Y | Instance | Public | Indicates the distance between the character and the camera. |
| DistanceAbove | Float | Y | Instance | Public | Indicates the vertical distance between the character and the camera. |
| CurrentX | Float | Y | Instance | Public | Indicates the current horizontal mouse position relative to the camera. |
| CurrentY | Float | Y | Instance | Public | Indicates the current vertical mouse position relative to the camera. |
| SensitivityX | Float | Y | Instance | Public | The speed of horizontal mouse movement. |
| SensitivityY | Float | Y | Instance | Public | The speed of vertical mouse movement. |
| AfkTimer | Float | Y | Instance | Public | Time limit of the user being AFK. |
| AfkMaxTime | Float | Y | Instance | Public | Max timeout for the user being AFK. |
| IsInverse | Bool | Y | Instance | Public | Indicates if camera vertical movement is flipped. |
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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| N/A | N/A | N/A | 1 |
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| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
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## UIItemInfo

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| **Class Information** |
| Class Name:UIItemInfo **Abstract Type: No Persistence:No** |

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| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-007 | Equip Weapon | 1,2 |
| SP-015 | Pickup Item | 1 |
| SP-008 | Use Potion | 1,2 |

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| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| ID | Int | Y | Instance | Public | ID of the item, used for searching for an item. |
| Name | String | Y | Instance | Public | Name of the item |
| Icon | Sprit | Y | Instance | Public | Image of the item. |
| Description | String | Y | Instance | Public | Description of the item. |
| Quality | Int | Y | Instance | Public | Item’s quality level. |
| Equip Type | Int | Y | Instance | Public | Type of equippable. |
| Item Type | Int | Y | Instance | Public | Type of item. |
| Type | Int | Y | Instance | Public | Usable type. |
| SubType | Int | Y | Instance | Public | Lower denominated type. |
| Damage | Int | Y | Instance | Public | Amount of damage the item gives or deals. |
| AttackSpeed | Float | Y | Instance | Public | Speed of the item when attacking. |
| Block | Int | Y | Instance | Public | Block Percent (Not used) |
| Armor | Int | Y | Instance | Public | Amount of armor the item provides (not used). |
| Stamina | Int | Y | Instance | Public | Amount of stamina the item provides (not used). |
| Strength | Int | Y | Instance | Public | Amount of strength the item provides (not used). |
| Durability | Int | Y | Instance | Public | # of uses for the item (not used). |
| RequiredLevel | Int | Y | Instance | Public | Level required to use the item (not used). |
| Health | Float | Y | Instance | Public | Health provided or given by the item. |
| RegenRate | Float | Y | Instance | Public | Health per second. |
| Duration | Float | Y | Instance | Public | Time limit for regeneration or continuous use. |

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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| 1 | 10 | N/A | N/A |
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| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
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## UIWindow

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| **Class Information** |
| Class Name: UIWindow **Abstract Type: No Persistence:No** |

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| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-004 | Choose Menu Item | 1,2,3 |
| SP-005 | Display Inventory | 1 |
| SP-006 | Display Skill Tree | 1 |
| SP-007 | Equip Weapon | 1,2 |
| SP-002 | Pause | 1 |
| SP-021 | Quitting | 2 |
| SP-010 | Reset Skills | 1 |
| SP-009 | Unlock Skills | 1,2 |
| SP-008 | Use Potion | 1,2 |

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| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| IsVisible | Bool | Y | Instance | Public | Indicates if the window is visible. |
| Layer | Layer | Y | Instance | Public | Indicates the layer, or depth of the window. |
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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| N/A | N/A | N/A | 1 |
| 1 | 4 | N/A | N/A |

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| **General Comments** | | |
| Author | Date | Comment |
| Rie Kumar | 11/9/17 | I added two instances because it can be set in a variety of ways. |
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## VerifyTalents

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| **Class Information** |
| Class Name: VerifyTalent **Abstract Type: No Persistence:No** |

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| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-009 | Unlock Skill | 1,2 |
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| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| Public Bool CheckRequirements() | When hovering over a skill. | Returns locked or not. |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| IsLocked | Bool | Y | Instance | Public | Indicates if the skill is locked or not. |
| RequiredTalents | VerifyTalent | Y | Instance | Public | List of skills that are required to unlock the skill that this script is attached too. |
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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| 1 | 9 | N/A | 9 |
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| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
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## Weapon

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| **Class Information** |
| Class Name:Weapon **Abstract Type: No Persistence:No** |

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| **Trace-ability Information** | | |
| Use Case ID | Use Case Name | Steps |
| SP-003 | Attack | 1 |
| SP-007 | Equip Weapon | 1,2 |
| SP-015 | Pickup Item | 1 |
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| **Public Methods** | | |
| Signature | Preconditions | Post Conditions |
| Public UIItemInfo GetInfo() | None | Returns item info. |
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| **Protected Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Private Methods** | | |
| Signature | Preconditions | Post Conditions |
| N/A |  |  |
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| **Attributes** | | | | | |
| Name | Type | Object (Y/N) | Instance/Static | Visibility | Description |
| DamageAlt | Float | Y | Instance | Public | Alternative damage for the weapon. |
| IsDisplayOnStart | Bool | Y | Instance | Public | Displays the weapon on start, if equipped on hand. |
| Item\_Weapon | Int | Y | Instance | Public | The weapon id. |
| NameAlt | String | Y | Instance | Public | Name of the weapon. |
|  |  |  |  |  | Provides access to main game functions and objects. |
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| **Concurrency** | |
| Threading Issue | Description |
| N/A |  |
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| **Major Exceptions** | | |
| Name | Trigger | Action |
| N/A |  |  |
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| **Instance Information** | | | |
| Minimum | Maximum | Mean | Fixed |
| 1 | 8 | N/A | N/A |
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| **General Comments** | | |
| Author | Date | Comment |
| N/A |  |  |
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