Project

- Ability at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\Ability.cs:

Corresponding SyntaxTree:

C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\Ability.csĐ

Ability.cs:Đ

- abilityName: stringĐ
- abilityDescription: stringĐ
- icon: SpriteĐ
- baseDamage: floatĐ
- strengthScaling: floatĐ
- intelligenceScaling: floatĐ
- cooldown: floatĐ
- animationName: stringĐ
- lastTimeUsed: float = 0Đ
- ActivateDelayTime: float = 0Đ
- OnAbilityObjectSpawnedEvent: event (AbilityObject, GameObject)Đ
- OnAbilityObjectHitEvent: event (AbilityObject, GameObject)Đ
- OnAbilityActivated: event (Ability)Đ
- OnAbilityObjectHit: abstract void (AbilityObject, GameObject)Đ
- Activate: abstract void (AbilityData)Đ
- PreActivateAbility: virtual void (AbilityData)Đ
- StartActivation: protected virtual void (AbilityData)Đ
- UpdateActivation: protected virtual void (AbilityData)Đ
- EndActivation: protected virtual void (AbilityData)Đ
- getLastTimeUsed: floatĐ
- setLastTimeUsed: floatĐ
- RaiseOnObjectSpawned: protected void (AbilityObject, GameObject)Đ
- RaiseOnObjectHit: protected void (AbilityObject, GameObject)Đ
- RaiseOnAbilityActivated: protected void ()Đ

Đ

AbilityData:Đ

- Target: GameObjectĐ
- CasterStats: CharacterStatsĐ
- CasterController: AbilityControllerĐ
- CasterCombatController: CharacterCombatControllerĐ
- damage: floatĐ
- projectileSpeed: floatĐ
- stunDuration: float
- AbilityControllData at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\AbilityControllData.cs:

Corresponding SyntaxTree:

```
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\AbilityControllData.csĐ
AbilityControllData:Đ
- type: stringĐ
- direction: Vector3Đ
- target: GameObjectĐ
- targetPosition: Vector3
- AbilityObject at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\AbilityObject.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\AbilityObject.csĐ
AbilityObject:Đ
- event OnHit (GameObject)Đ
- event OnUpdateĐ
- event OnSpawnĐ
- event OnDeleteĐ
- data: AbilityDataĐ
- shouldDestroy: boolĐ
- deleteOnCollision: boolĐ
- deleteOnTimer: boolĐ
- timer: floatĐ
- timerMax: floatĐ
- ParentAbility: AbilityĐ
Đ
- HandleOnHit(target: GameObject)Đ
- Update()Đ
- HandleOnSpawn()Đ
- HandleOnDelete()Đ
- Awake()Đ
- OnTriggerEnter(collision: Collider)Đ
Đ
IBouncingAbilityObject:Đ
- BounceIntensity: floatĐ
- BounceDuration: floatĐ
Đ
- Bounce(target: GameObject)Đ
Đ
IPiercingAbilityObject:Đ
Đ
- Pierce(target: GameObject)Đ
Đ
IHomingAbilityObject:Đ
Đ
- Home(target: GameObject)
```

- BaseProjectileObject at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\BaseProjectileObject.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\BaseProjectileObject.csÐ

```
Class Name: BaseProjectileObjectÐ
Ð
BounceIntensity: floatÐ
BounceDuration: floatÐ
bounceCount: intÐ
pierceCount: intÐ
Ð
HandleOnHit(target: GameObject):Ð
    If data.CasterStats is not null:Ð
        targetStats = target.GetComponent<HealthController>()Ð
        If targetStats is not null:Ð
            damage = data.damageÐ
            targetStats.TakeDamage(damage, data.CasterStats.gameObject)Ð
Ð
    shouldDestroy = deleteOnCollisionÐ
    If bounceCount > 0:Ð
        Bounce(target)Ð
    Else If pierceCount > 0:Ð
        Pierce(target)Ð
Ð
    If shouldDestroy:Ð
        HandleOnDelete()Ð
Ð
Bounce(target: GameObject):Ð
    shouldDestroy = falseÐ
    bounceCount--Ð
    bounceDirection = Vector3.Reflect(transform.forward, target.transform.up)Ð
    transform.forward = bounceDirectionÐ
    rb = GetComponent<Rigidbody>()Ð
    rb.velocity = bounceDirection * data.projectileSpeedÐ
Ð
Pierce(target: GameObject):Ð
    pierceCount--Ð
    shouldDestroy = false
```

- DefaultProjectileAbility at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\DefaultProjectileAbility.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\A

```
bilitysSkillsAndBuffsItems\Abilitys\DefaultProjectileAbility.csĐ
DefaultProjectileAbility:Đ
- projectilePrefab: GameObjectĐ
- projectileSpeed: floatĐ
Đ
- OnAbilityObjectHit(abilityObject, target):Đ
  - if(abilityObject.data.CasterStats != null):Đ
     - targetStats = target.GetComponent<HealthController>()Đ
     - if (targetStats != null):Đ
        - damage = abilityObject.data.damageĐ
        -
targetStats.TakeDamage(damage,abilityObject.data.CasterStats.gameObject)Đ
Đ
  - RaiseOnObjectHit(abilityObject,target)Đ
 Đ
Đ
- Activate(abilityData):Đ
   - if (abilityData.CasterStats == null):Đ
      - returnĐ
Đ
   - firePoint =
abilityData.CasterStats.GetComponent<AbilityController>().firePointĐ
   - projectileInstance = Instantiate(projectilePrefab, firePoint.position,
firePoint.rotation)Đ
   - abilityObject = projectileInstance.GetComponent<BaseProjectileObject>()Đ
   - RaiseOnObjectSpawned(abilityObject,null)Đ
Đ
   - rb = projectileInstance.GetComponent<Rigidbody>()Đ
   - rb.velocity = firePoint.forward * projectileSpeedĐ
Đ
      Đ
   - abilityObject.ParentAbility = thisĐ
   - abilityObject.data = abilityDataĐ
   - abilityData.projectileSpeed = projectileSpeed
- DefaultSkill at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\DefaultSkill.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\DefaultSkill.csĐ
DefaultSkill:Đ
- CreateAssetMenu:Đ
   - fileName = "Skill"Đ
   - menuName = "Skill/Skill"Đ
   - order = 1Đ
- Skill
```

- FireBall at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\FireBall.cs: Corresponding SyntaxTree: C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\FireBall.csĐ

File name: FireBall.csĐ

Đ

Class: FireBall (inherits DefaultProjectileAbility)Đ

Đ

- CreateAssetMenu (menuName = "Abilities/Fireball")Đ
- Override OnAbilityObjectHit (abilityObject, target)Đ
  - If abilityObject.data.CasterStats exists, get target's HealthController componentĐ
  - If targetHealth exists, get damage from abilityObject.data, and call TakeDamage() on targetHealth with damage and abilityObject.data.CasterStats.gameObject as argumentsĐ
  - RaiseOnObjectHit with abilityObject and target as argumentsĐ
- Override Activate (abilityData)Đ
  - If abilityData.CasterStats is null, returnĐ
  - Get firePoint from abilityData.CasterStats's AbilityController componentĐ
  - Instantiate projectilePrefab at firePoint's position and rotation, and get its BaseProjectileObject componentĐ
  - RaiseOnObjectSpawned with abilityObject and null as argumentsĐ
  - Get Rigidbody component from projectileInstance, and set its velocity to firePoint's forward direction multiplied by projectileSpeedĐ
  - Set abilityObject's ParentAbility and data to this and abilityData, respectivelyĐ
  - Set abilityData's projectileSpeed to projectileSpeed.
- ShieldBash at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\ShieldBash.cs: Corresponding SyntaxTree: C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\ShieldBash.csĐ

File Name: ShieldBash.csĐ

Đ

Class Name: ShieldBashĐ

Đ

- prefabAbilityObject: GameObjectĐ
- stunDuration: floatĐ
- abilityName: "Shield Bash"Đ
- baseDamage: 50Đ
- strengthScaling: 0.5fĐ
- intelligenceScaling: 0.5fĐ
- animationName: "Shield Bash animation"Đ

Đ

+ ShieldBash()Đ
+ OnAbilityObjectHit(AbilityObject abilityObject, GameObject target)Đ

```
+ Activate(AbilityData abilityData)
- SimpleStrike at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\SimpleStrike.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Abilitys\SimpleStrike.csĐ
File: SimpleStrike.csĐ
Đ
Class: SimpleStrikeĐ
- MeelePrefab: GameObjectĐ
- lifeTime: floatĐ
- OnAbilityObjectHit(abilityObject: AbilityObject, target: GameObject)Đ
- Activate(abilityData: AbilityData)Đ
Đ
Class: MeleeStrikeObjectĐ
- OnTriggerEnter(collision: Collider)
- Buff at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Buffs\Buff.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Buffs\Buff.csĐ
File name: Buff.csĐ
Đ
Class: BuffĐ
Đ
- buffName: stringĐ
- duration: floatĐ
- stackable: boolĐ
- maxStacks: intĐ
Đ
- OnApply: event taking BuffInstance parameterĐ
- OnFade: event taking BuffInstance parameterĐ
- OnHit: event taking BuffInstance parameterĐ
Đ
+ InvokeOnApply(buffInstance: BuffInstance)Đ
+ InvokeOnFade(buffInstance: BuffInstance)Đ
+ InvokeOnHit(buffInstance: BuffInstance)Đ
Đ
+ GetEventTypes(): List<string>
- BuffInstance at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Buffs\BuffInstance.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Buffs\BuffInstance.csĐ
BuffInstance:Đ
```

```
- buff: BuffĐ
- target: GameObjectĐ
- currentStacks: intĐ
- remainingDuration: floatĐ
Đ
+BuffInstance(buff: Buff, target: GameObject, initialStacks: int, initialDuration:
float)Đ
Đ
+Update()Đ
+Refresh(duration: float)Đ
+AddStack()Đ
+RemoveStack()Đ
+OnBuffApply()Đ
+OnBuffFade()Đ
+OnBuffHit()
- IStatsProvider at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\IStatsProvider.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\IStatsProvider.csĐ
IStatsProviderĐ
   - GetCharacterStats()Đ
      - CharacterStats
- Item at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\items\Item.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\items\Item.csĐ
File: Item.csĐ
Đ
- abstract class ItemĐ
   - string itemNameĐ
   - string descriptionĐ
   - Sprite iconĐ
Đ
- class EquipableItem : ItemĐ
   - EquipManager.EquipmentType equipmentTypeĐ
   - float strengthBonusĐ
   - float intelligenceBonusĐ
   - float dexterityBonusĐ
   - float enduranceBonusĐ
   - float wisdomBonusĐ
   - StatsModifier subStatsModifier
- BouceSkill at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Skills\BouceSkill.cs:
```

```
Corresponding SyntaxTree:

- FireballMasterySkill at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Skills\FireballMasterySkill.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Skills\FireballMasterySkill.csÐ
FireballMasterySkill:Ð
Ð
- explosionPrefab: GameObjectÐ
- ApplySkill(playerStats: CharacterStats): voidÐ
    - fireballAbility: FireBallÐ
        - OnAbilityObjectHitEvent += ExplodeOnHitÐ
- RemoveSkill(playerStats: CharacterStats): voidÐ
    - fireballAbility: FireBallÐ
        - OnAbilityObjectHitEvent -= ExplodeOnHitÐ
- GetFireballAbility(playerStats: CharacterStats): FireBallÐ
- ExplodeOnHit(abilityObject: AbilityObject, target: GameObject): voidÐ
    - ApplyDamageToTargets(position: Vector3, radius: float, damage: float)Ð
    - InstantiateExplosion(position: Vector3)Ð
- ApplyDamageToTargets(position: Vector3, radius: float, damage: float): voidÐ
- InstantiateExplosion(position: Vector3): void
- Skill at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Skills\Skill.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Skills\Skill.csÐ
Skill.cs Ð
- class SkillÐ
    - string skillNameÐ
    - List<Archetype> archTypesÐ
    - StatsModifier statModifierÐ
    - virtual ApplySkill(CharacterStats characterStats)Ð
        - (implemented in derived classes)Ð
    - virtual RemoveSkill(CharacterStats characterStats)Ð
        - (implemented in derived classes)Ð
    - virtual OnSpawnAbilityObject(AbilityObject abilityObject, AbilityData
abilityData)Ð
- enum ArchetypeÐ
    - StrengthÐ
    - IntelligenceÐ
    - DexterityÐ
    - EnduranceÐ
    - Wisdom
- SkillNode at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Skills\SkillNode.cs:
```

```
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Skills\SkillNode.csĐ
File: SkillNode.csĐ
Đ
Class: SkillNodeĐ
Đ
- skillName: stringĐ
- skillDescription: stringĐ
- skillPointCost: intĐ
- icon: SpriteĐ
- mainStatRequirement: List<Archetype>Đ
- mainStatValue: List<int>Đ
- skill: SkillĐ
- prerequisiteSkill: SkillNodeĐ
- isUnlocked: bool
- SkillNodeFactory at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Skills\SkillNodeFactory.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\AbilitysSkillsAndBuffsItems\Skills\SkillNodeFactory.csĐ
Class Name: SkillNodeFactoryĐ
Đ
- SkillNodeFactoryDataClass:Đ
   - skillName: stringĐ
   - skillDescription: stringĐ
   - skillPointCost: intĐ
   - icon: SpriteĐ
   - mainStatRequirement: List<Archetype>Đ
   - mainStatValue: List<int>Đ
   - skill: SkillĐ
   - prerequisiteSkill: SkillNodeĐ
   - isUnlocked: boolĐ
   - SkillNodeFactoryDataClass(string skillName, string skillDescription, int skillPointCost, Sprite icon, List<Archetype> mainStatRequirement, List<int> mainStatValue, Skill skill, SkillNode prerequisiteSkill, bool isUnlocked)Đ
Đ
- CreateSkillNode(SkillNodeFactoryDataClass data):Đ
   - skillNode: SkillNodeĐ
      - name: stringĐ
      - skillName: stringĐ
      - skillDescription: stringĐ
      - skillPointCost: intĐ
      - icon: SpriteĐ
      - mainStatRequirement: List<Archetype>Đ
```

```
        - mainStatValue: List<int>Đ
        - skill: SkillĐ
        - prerequisiteSkill: SkillNodeĐ
        - isUnlocked: boolĐ
    - AssetDatabase.CreateAsset(skillNode, "Assets/Resources/
SkillNodes/"+skillNode.name+".asset")Đ
    - return skillNode
- SkillTree at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\SkillTree.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\SkillTree.csĐ
SkillTreeĐ
- skillNodes: List<SkillNode>Đ
- SkillTree()Đ
- AddSkillNode(SkillNode)Đ
- IsVisible(SkillNode)Đ
- Awake()Đ
- resetAllNodes()
- StatsModifier at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\StatsModifier.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\AbilitysSkillsAndBuffsItems\StatsModifier.csĐ
Class: StatsModifierĐ
Đ
-SerializableĐ
-attackSpeed: floatĐ
-criticalChance: floatĐ
-criticalDamage: floatĐ
-spellCriticalChance: floatĐ
-spellCriticalDamage: floatĐ
-cooldown: floatĐ
-dodgeChance: floatĐ
-armor: floatĐ
-magicResistance: floatĐ
-maxLife: floatĐ
-maxMana: floatĐ
-lifeRegen: floatĐ
-manaRegen: floatĐ
Đ
+Add(other: StatsModifier): voidĐ
+Sub(other: StatsModifier): void
- VisualEffectManager at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My project\Assets\Scripts\GlobalManager\VisualEffectManager.cs:
```

```
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\GlobalManager\VisualEffectManager.csÐ
Class: VisualEffectManagerÐ
Ð
- struct: VisualEffectÐ
    - string : effectNameÐ
    - GameObject: effectPrefabÐ
Ð
- List<VisualEffect>: visualEffectsÐ
Ð
- GameObject: GetEffectPrefab(string effectName)Ð
    - foreach(var effect in visualEffects)Ð
        - if(effect.effectName == effectName)Ð
            - return effect.effectPrefabÐ
    - Debug.LogError($"No effect with name {effectName} found!")Ð
    - return null
- AbilityController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\AbilityController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\AbilityController.csÐ
AbilityController:Ð
- firePoint: TransformÐ
- learnedAbilitys: List<Ability>Ð
- lastTimeAbilityUsed: List<(string,float)>Ð
- statsProvider: IStatsProviderÐ
- animationController: AnimationControllerÐ
Ð
+ Awake()Ð
+ CastAbility(ability: Ability, abilityData: AbilityData)Ð
+ CastAfterDelay(ability: Ability, abilityData: AbilityData): IEnumeratorÐ
+ AddAbility(ability: Ability)Ð
+ checkCooldown(abilityName: string, cooldown: float): boolÐ
+ setCooldown(abilityName: string, cooldown: float)
- AIController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\AIController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\AIController.csÐ
Class Name: AIControllerÐ
Ð
- currentState: AIStateÐ
- idleState: IdleStateÐ
- followState: FollowStateÐ
- assistState: AssistStateĐ
- patrolState: PatrolStateĐ
- navMeshAgent: NavMeshAgentĐ
- chaseState: ChaseStateĐ
- attackState: AttackStateĐ
- target: TransformĐ
- aggroRadius: floatĐ
- aggroTag: stringĐ
- attackInterval: floatĐ
- attackAbility: AbilityĐ
- attackRange: floatĐ
- animator: AnimatorĐ
Đ
+ Start()Đ
    - navMeshAgent = GetComponent<NavMeshAgent>()Đ
    - currentState = idleStateĐ
    - patrolStateMonoBehaviour = GetComponent<PatrolStateMonoBehaviour>()Đ
    + if (patrolStateMonoBehaviour != null)Đ
        - patrolState.waypoints = new List<Transform>()Đ
        + foreach (GameObject g in patrolStateMonoBehaviour.waypoints)Đ
            - patrolState.waypoints.Add(g.transform)Đ
    - animator = GetComponent<Animator>()Đ
Đ
+ NavMeshAgent getNavMeshAgent()Đ
    - return navMeshAgentĐ
Đ
+ Update()Đ
    + if (navMeshAgent == null || animator == null)Đ
        - returnĐ
    - currentState.UpdateState(this)Đ
    + if (navMeshAgent.velocity.magnitude > 0)Đ
        - animator.SetFloat("Speed", 1)Đ
    + elseĐ
        - animator.SetFloat("Speed", 0)Đ
Đ
+ ChangeState(newState: AIState)Đ
    - currentState.ExitState(this)Đ
    - currentState = newStateĐ
    - newState.EnterState(this)Đ
Đ
+ checkForAggro()Đ
    - colliders = Physics.OverlapSphere(transform.position, aggroRadius)Đ
    + foreach (Collider collider in colliders)Đ
        + if (!string.IsNullOrEmpty(collider.tag) && collider.CompareTag("Player"))Đ
            - target = collider.gameObject.transformĐ
            + ChangeState(chaseState)Ð
            + breakÐ
Ð
+ attack()Ð
    + if (target != null)Ð
        - distanceToTarget = Vector3.Distance(transform.position, target.position)Ð
        + if (distanceToTarget <= attackRange)Ð
            - navMeshAgent.isStopped = trueÐ
            - GetComponent<Animator>().SetFloat("Speed", 0)Ð
            +
GetComponent<CharacterCombatController>().PerformAbility(attackAbility,
target.gameObject)Ð
        + elseÐ
            + ChangeState(chaseState)Ð
Ð
+ SetAIController(aiController: AIController)Ð
    - currentState = aiController.currentStateÐ
    - idleState = aiController.idleStateÐ
    - followState = aiController.followStateÐ
    - assistState = aiController.assistStateÐ
    - patrolState = aiController.patrolStateÐ
    - chaseState = aiController.chaseStateÐ
    - attackState = aiController.attackStateÐ
    - target = aiController.targetÐ
    - aggroRadius = aiController.aggroRadiusÐ
    - aggroTag = aiController.aggroTagÐ
    - attackInterval = aiController.attackIntervalÐ
    - attackAbility = aiController.attackAbilityÐ
    - attackRange = aiController.attackRangeÐ
Ð
Class Name: AIState (abstract)Ð
Ð
- EnterState(aiController: AIController)Ð
- UpdateState(aiController: AIController)Ð
- ExitState(aiController: AIController)
- AssistState at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\AssistState.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\AssistState.csÐ
File: AssistState.csÐ
Ð
-AssistStateÐ
    -target (Transform)Ð
    -assistAbility (Ability)Ð
```

```
   -assistRange (float)Đ
Đ
   +EnterState(aiController)Đ
   +UpdateState(aiController)Đ
   +ExitState(aiController)
- AttackState at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\AttackState.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\AttackState.csĐ
AttackState:Đ
- target: TransformĐ
- attackAbility: AbilityĐ
- attackRange: float = 5fĐ
- attackInterval: float = 1fĐ
- nextAttackTime: floatĐ
Đ
EnterState:Đ
- aiController: AIControllerĐ
- nextAttackTime: Time.timeĐ
Đ
UpdateState:Đ
- aiController: AIControllerĐ
Đ
ExitState:Đ
- aiController: AIController
- ChaseState at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\ChaseState.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\ChaseState.csĐ
ChaseState:Đ
- chaseSpeed: floatĐ
- stoppingDistance: floatĐ
Đ
+ EnterState(aiController: AIController): voidĐ
+ UpdateState(aiController: AIController): voidĐ
+ ExitState(aiController: AIController): void Đ
Đ
- target: TransformĐ
- distanceToTarget: floatĐ
Đ
if target is not null:Đ
   distanceToTarget = distance between aiController.transform.position and
target.positionĐ
```

```
    if distanceToTarget > stoppingDistance:Đ
        aiController.GetComponent<UnityEngine.AI.NavMeshAgent>().SetDestination(target.position)Đ
    else:Đ
        aiController.ChangeState(aiController.attackState)Đ

- FollowState at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\FollowState.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\FollowState.csĐ
FollowState:Đ
- target: TransformĐ
- stoppingDistance: floatĐ
Đ
EnterState(aiController):Đ
UpdateState(aiController):Đ
- distanceToTarget: float = Vector3.Distance(aiController.transform.position, target.position)Đ
- if distanceToTarget > stoppingDistance:Đ
  - aiController.GetComponent<UnityEngine.AI.NavMeshAgent>().SetDestination(target.position)Đ
- else:Đ
  - aiController.GetComponent<UnityEngine.AI.NavMeshAgent>().ResetPath()Đ
Đ
ExitState(aiController):
- IdleState at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\IdleState.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\IdleState.csĐ
IdleState:Đ
- CreateAssetMenu:Đ
    - menuName = "AI/States/IdleState"Đ
- Inherit from AIStateĐ
- float idleDurationĐ
- float idleTimeĐ
- EnterState:Đ
    - Set idleTime to current Time + idleDurationĐ
- UpdateState:Đ
    - If current Time > idleTime, ChangeState to patrolStateĐ
- ExitState:Đ
    - Empty
- PatrolState at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\PatrolState.cs:
```

Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\PatrolState.csĐ
Class: PatrolState (File Name: PatrolState.cs)Đ
Đ
- List<Transform> waypointsĐ
- float patrolSpeedĐ
- float waitTimeĐ
- int currentWaypointĐ
- float waitEndTimeĐ

Đ
EnterState(AIController aiController)Đ
- aiController.GetComponent<UnityEngine.AI.NavMeshAgent>().speed = patrolSpeedĐ
- currentWaypoint = 0Đ

Đ
UpdateState(AIController aiController)Đ
- aiController.checkForAggro()Đ
- UnityEngine.AI.NavMeshAgent agent = aiController.GetComponent<UnityEngine.AI.NavMeshAgent>()Đ
- if(waypoints.Count > 0)Đ
- if(!agent.pathPending && agent.remainingDistance < 0.5f)Đ
- if(Time.time > waitEndTime)Đ
- currentWaypoint = (currentWaypoint + 1) % waypoints.CountĐ
- agent.SetDestination(waypoints[currentWaypoint].position)Đ
- waitEndTime = Time.time + waitTimeĐ

Đ
ExitState(AIController aiController)Đ
- Clean up or reset any variables if needed
- PatrolStateMonoBehaviour at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\PatrolStateMonoBehaviour.cs:

Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\AiStates\PatrolStateMonoBehaviour.csĐ
Class: PatrolStateMonoBehaviourĐ
- GameObject[] waypoints
- AnimationController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\AnimationController.cs:

Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\AnimationController.csĐ
Syntax Tree of AnimationController.cs:Đ
- AnimationController classĐ

- MonoBehaviour parent classÐ
- Private fields:Ð
  - Animator animatorÐ
  - List<VisualEffectData> visualEffectDataListÐ
  - List<(string, float)> animationCastDelaysÐ
  - Private const strings:Ð
    - attackAnimationName = "attack"Ð
    - OneHandSwordLightAttack1AnimationName = "1HandSwordLightAttack1"Ð
    - OneHandSwordLightAttack2AnimationName = "1HandSwordLightAttack2"Ð
    - OneHandSwordLightAttack3AnimationName = "1HandSwordLightAttack3"Ð
    - idleAnimationName = "idle"Ð
  - Dictionary<string, GameObject> visualEffectsÐ
- Awake() methodÐ
  - Initializes the visualEffects dictionaryÐ
  - Calls initAnimationDelays() methodÐ
  - Loops through each VisualEffectData object in visualEffectDataList, adding the corresponding visual effect prefab to visualEffects dictionaryÐ
- PlayAnimation() methodÐ
  - If animationName is "attack", sets the animator trigger to "attack" and returnsÐ
  - Otherwise, plays the animation with the given name using the animator Play() methodÐ
- ApplyVisualEffect() methodÐ
  - If the effectName is found in visualEffects dictionary, instantiates the visualEffectPrefab at the given position and rotationÐ
  - Otherwise, logs a warning messageÐ
- initAnimationDelays() methodÐ
  - Initializes the animationCastDelays list with pairs of animation names and corresponding delay timesÐ
- returnAnimationDelay() methodÐ
  - Loops through each pair in animationCastDelays and returns the delay time corresponding to animationName, or 0 if not foundÐ

Ð

VisualEffectData class:Ð

- Serializable classÐ
- Public fields:Ð
  - string nameÐ
  - GameObject visualEffectPrefab
- BuffSystem at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\BuffSystem.cs:

Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\BuffSystem.csÐ
BuffSystemÐ

Ð

- private Dictionary<string, BuffInstance> activeBuffsÐ

```
- private Dictionary<string, System.Action<BuffInstance>> eventHandlersĐ
Đ
+ Awake()Đ
    - activeBuffs = new Dictionary<string, BuffInstance>()Đ
    - eventHandlers = new Dictionary<string, System.Action<BuffInstance>>()Đ
Đ
+ AddBuff(Buff buff, GameObject target)Đ
    ? activeBuffs.ContainsKey(buff.buffName)Đ
        + existingBuff = activeBuffs[buff.buffName]Đ
        ? buff.stackable && existingBuff.currentStacks < buff.maxStacksĐ
            - existingBuff.AddStack()Đ
            - existingBuff.Refresh(buff.duration)Đ
        : - existingBuff.Refresh(buff.duration)Đ
    : + newBuff = new BuffInstance(buff, target, 1, buff.duration)Đ
        - activeBuffs.Add(buff.buffName, newBuff)Đ
        + AddEventHandlers(buff)Đ
        - newBuff.OnBuffApply()Đ
Đ
+ RemoveBuff(Buff buff)Đ
    ? activeBuffs.ContainsKey(buff.buffName)Đ
        + existingBuff = activeBuffs[buff.buffName]Đ
        - existingBuff.RemoveStack()Đ
        ? existingBuff.currentStacks <= 0Đ
            - RemoveEventHandlers(buff)Đ
            - activeBuffs.Remove(buff.buffName)Đ
Đ
+ GetBuffInstance(string buffName)Đ
    ? activeBuffs.ContainsKey(buffName)Đ
        - return activeBuffs[buffName]Đ
    - return nullĐ
Đ
- AddEventHandlers(Buff buff)Đ
    + eventTypes = buff.GetEventTypes()Đ
    . foreach(string eventType in eventTypes)Đ
        ? !eventHandlers.ContainsKey(eventType)Đ
            - eventHandlers.Add(eventType, (BuffInstance buffInstance) => {})Đ
        - eventHandler = nullĐ
        ? eventType == "OnApply"Đ
            - eventHandler = buff.InvokeOnApplyĐ
        ? eventType == "OnFade"Đ
            - eventHandler = buff.InvokeOnFadeĐ
        ? eventType == "OnHit"Đ
            - eventHandler = buff.InvokeOnHitĐ
        ? eventHandler != nullĐ
            - eventHandlers[eventType] += eventHandlerĐ
```

```
Đ
- RemoveEventHandlers(Buff buff)Đ
    + eventTypes = buff.GetEventTypes()Đ
    . foreach(string eventType in eventTypes)Đ
        - eventHandler = nullĐ
        ? eventType == "OnApply"Đ
            - eventHandler = buff.InvokeOnApplyĐ
        ? eventType == "OnFade"Đ
            - eventHandler = buff.InvokeOnFadeĐ
        ? eventType == "OnHit"Đ
            - eventHandler = buff.InvokeOnHitĐ
        ? eventHandler != nullĐ
            - eventHandlers[eventType] -= eventHandlerĐ
Đ
+ CallEventHandlers(string eventType, BuffInstance buffInstance)Đ
    ? eventHandlers.ContainsKey(eventType)Đ
        - eventHandlers[eventType]?.Invoke(buffInstance)
- ButtonWithToolTip at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\ButtonWithToolTip.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\ButtonWithToolTip.csĐ
Class: ButtonWithToolTipĐ
Đ
- skillNode: SkillNodeĐ
- playerController: PlayerControllerĐ
- uiManager: UIManagerĐ
- toolTipObject: GameObjectĐ
- button: ButtonĐ
Đ
- Awake()Đ
  - playerController = FindObjectOfType<PlayerController>()Đ
  - uiManager = FindObjectOfType<UIManager>()Đ
  - toolTipObject = uiManager.tooltipĐ
  - toolTipObject.SetActive(false)Đ
  - button = GetComponent<Button>()Đ
  - button.onClick.AddListener(TryLearn)Đ
  - if (skillNode != null)Đ
    - GetComponent<Image>().sprite = skillNode.iconĐ
Đ
- OnPointerEnter(eventData: PointerEventData)Đ
  - ShowToolTip()Đ
Đ
- OnPointerExit(eventData: PointerEventData)Đ
  - HideToolTip()Đ
```

```
Đ
- ShowToolTip()Đ
  - uiManager.OpenToolTip(skillNode,
gameObject.GetComponent<RectTransform>().position)Đ
Đ
- HideToolTip()Đ
  - uiManager.CloseToolTip()Đ
Đ
- TryLearn()Đ
  - playerController.TryUnlockSkillNode(skillNode)
- CharacterCombatController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\CharacterCombatController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\CharacterCombatController.csĐ
File: CharacterCombatController.csĐ
- Class: CharacterCombatControllerĐ
    - characterStatsĐ
    - abilityControllerĐ
    - animationControllerĐ
    - stunnableĐ
    - comboControllerĐ
    - Start()Đ
        - characterStats = GetComponent<CharacterStats>()Đ
        - stunnable = GetComponent<IStunnable>()Đ
        - abilityController = GetComponent<AbilityController>()Đ
        - animationController = GetComponent<AnimationController>()Đ
        - comboController = new ComboController()Đ
    - PerformAbility(Ability ability, GameObject target)Đ
        - if stunnable.isStunned()Đ
            - returnĐ
        - if abilityController.checkCooldown(ability.name,ability.cooldown)==falseĐ
            - returnĐ
        - playerController = GetComponent<PlayerController>()Đ
        - if playerController != nullĐ
            - playerController.faceIndirectionOfCamera()Đ
        - damageAbility = ability.baseDamage + (ability.strengthScaling *
characterStats.strength) + (ability.intelligenceScaling *
characterStats.intelligence)Đ
        - critChance = characterStats.criticalChanceĐ
        - if Random.Range(0f, 1f) <= critChanceĐ
            - damageAbility *= 2Đ
        - abilityData = new AbilityDataĐ
            - CasterStats = characterStatsĐ
```

```
      - Target = targetÐ
      - damage = damageAbilityÐ
      - CasterController = abilityControllerÐ
      - CasterCombatController = thisÐ
    - abilityController.setCooldown(ability.name,ability.cooldown)Ð
    - comboController.UpdateComboController()Ð
    - abilityController.CastAbility(ability, abilityData)Ð
  - GetCharacterStats()Ð
    - return characterStats
- CharacterStats at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\CharacterStats.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\CharacterStats.csÐ
Class: CharacterStatsÐ
- float strengthÐ
- float intelligenceÐ
- float dexterityÐ
- float enduranceÐ
- float wisdomÐ
- float criticalChanceÐ
- float criticalDamageÐ
- float attackSpeedÐ
- float spellCriticalChanceÐ
- float spellCriticalDamageÐ
- float cooldownÐ
- float maxLifeÐ
- float maxManaÐ
- float lifeRegenÐ
- float manaRegenÐ
- float armorÐ
- float magicResistanceÐ
- float dodgeChanceÐ
- int unspentStatPointsÐ
- event Action StatsChangedÐ
- EquipManager equipManagerÐ
- SkillController skillControllerÐ
Ð
+ void Awake()Ð
+ void Start()Ð
+ IEnumerator InitializeCharacterStats()Ð
+ void AddStatPoints(int amount)Ð
+ void UpdateSubStats()Ð
+ void AddStatBonuses(StatsModifier statModifier)Ð
+ void IncreaseStat(Archetype stateType, int amount)Ð
+ void SetStats(CharacterStats stats)
- ComboController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\ComboController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\ComboController.csĐ
File: ComboController.csĐ
Đ
Class: ComboControllerĐ
 - comboCounterList: List<ComboCounter>Đ
Đ
Method: ComboController()Đ
 - comboCounterList = new List<ComboCounter>()Đ
Đ
Method: UpdateComboController()Đ
 - foreach (ComboCounter comboCounter in comboCounterList)Đ
   - comboCounter.UpdateComboCounter()Đ
Đ
Method: IncreaseComboCounter(string comboName)Đ
 - bool found = falseĐ
 - foreach (ComboCounter comboCounter in comboCounterList)Đ
   - if(comboCounter.ComboName == comboName)Đ
     - comboCounter.IncreaseComboCounter()Đ
     - found = trueĐ
 - if(!found)Đ
   - comboCounterList.Add(new ComboCounter(1f, comboName))Đ
Đ
Method: GetComboCounter(string comboName)Đ
 - foreach (ComboCounter comboCounter in comboCounterList)Đ
   - if(comboCounter.ComboName == comboName)Đ
     - return comboCounter.GetComboCounter()Đ
 - return 0Đ
Đ
Method: ResetComboCounter(string comboName)Đ
 - foreach (ComboCounter comboCounter in comboCounterList)Đ
   - if(comboCounter.ComboName == comboName)Đ
     - comboCounter.ResetComboCounter()Đ
Đ
Class: ComboCounterĐ
 - ComboName: stringĐ
 - comboCounter: intĐ
 - comboTimer: floatĐ
 - comboTimeLimit: floatĐ
Đ
Method: ComboCounter(float comboTimeLimit, string comboName)Đ
```

```
 - this.comboTimeLimit = comboTimeLimitĐ
 - comboCounter = 0Đ
 - comboTimer = 0Đ
 - ComboName = comboNameĐ
Đ
Method: UpdateComboCounter()Đ
 - comboTimer += Time.deltaTimeĐ
 - if(comboTimer >= comboTimeLimit)Đ
   - comboCounter = 0Đ
Đ
Method: IncreaseComboCounter()Đ
 - UpdateComboCounter()Đ
 - comboCounter++Đ
 - comboTimer = 0Đ
Đ
Method: GetComboCounter()Đ
 - return comboCounterĐ
Đ
Method: ResetComboCounter()Đ
 - comboCounter = 0Đ
 - comboTimer = 0
- EquipManager at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\EquipManager.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\EquipManager.csĐ
Filename: EquipManager.csĐ
Đ
Syntax Tree:Đ
- class EquipManagerĐ
    - public enum EquipmentTypeĐ
        - WeaponĐ
        - ShieldĐ
        - HelmetĐ
        - ChestArmorĐ
        - LegArmorĐ
        - BootsĐ
        - RingĐ
        - WristĐ
    - public Dictionary<EquipmentType, EquipableItem> equippedItemsĐ
    - public StatsModifier TotalStatModierĐ
    - public float TotalStrengthĐ
    - public float TotalIntelligenceĐ
    - public float TotalDexterityĐ
    - public float TotalEnduranceĐ
```

    - public float TotalWisdomĐ
    - public void EquipItem(EquipmentType type, EquipableItem item)Đ
        - if (equippedItems.ContainsKey(type))Đ
            - UnequipItem(type)Đ
        - equippedItems[type] = itemĐ
        - ApplyItemStats(item)Đ
    - public void UnequipItem(EquipmentType type)Đ
        - if (!equippedItems.ContainsKey(type)) returnĐ
        - EquipableItem item = equippedItems[type]Đ
        - RemoveItemStats(item)Đ
        - equippedItems.Remove(type)Đ
    - private void ApplyItemStats(EquipableItem item)Đ
        - TotalStrength += item.strengthBonusĐ
        - TotalIntelligence += item.intelligenceBonusĐ
        - TotalDexterity += item.dexterityBonusĐ
        - TotalEndurance += item.enduranceBonusĐ
        - TotalWisdom += item.wisdomBonusĐ
        - TotalStatModier.Add(item.subStatsModifier)Đ
    - private void RemoveItemStats(EquipableItem item)Đ
        - TotalStrength -= item.strengthBonusĐ
        - TotalIntelligence -= item.intelligenceBonusĐ
        - TotalDexterity -= item.dexterityBonusĐ
        - TotalEndurance -= item.enduranceBonusĐ
        - TotalWisdom -= item.wisdomBonusĐ
        - TotalStatModier.Sub(item.subStatsModifier)Đ
    - internal void SetEquipManager(EquipManager equipManager)Đ
        - equippedItems = equipManager.equippedItemsĐ
        - TotalStatModier = equipManager.TotalStatModierĐ
        - TotalStrength = equipManager.TotalStrengthĐ
        - TotalIntelligence = equipManager.TotalIntelligenceĐ
        - TotalDexterity = equipManager.TotalDexterityĐ
        - TotalEndurance = equipManager.TotalEnduranceĐ
        - TotalWisdom = equipManager.TotalWisdom
- ExperienceSystem at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\ExperienceSystem.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\ExperienceSystem.csĐ
File: ExperienceSystem.csĐ
Đ
Class: ExperienceSystemĐ
Đ
- CurrentXP: intĐ
- Level: intĐ
- XpToNextLevel: intĐ

```
- LevelUpEvent: ActionÐ
- ExperienceGained: Action<int>Ð
Ð
- ExperienceSystem()Ð
- AddExperience(int amount)Ð
- LevelUp()Ð
- UpdateXpToNextLevel()Ð
- CalculateXpForLevel(int level)
- HealthController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\HealthController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\HealthController.csÐ
HealthController:Ð
- private characterStatsÐ
- public Name:stringÐ
- public maxHealth:floatÐ
- public currentHealth:floatÐ
- private damageTextPrefab:GameObjectÐ
- private questSystemÐ
Ð
- UpdateMaxHealth()Ð
  - maxHealth = characterStats.maxLifeÐ
Ð
- updateHealth()Ð
  - currentHealth = maxHealthÐ
Ð
- Start()Ð
  - characterStats = GetComponent<CharacterStats>()Ð
  - characterStats.StatsChanged+=UpdateMaxHealthÐ
  - UpdateMaxHealth()Ð
  - currentHealth = maxHealthÐ
  - damageTextPrefab = GameObject.Find("DamageTextTemplate")Ð
Ð
- TakeDamage(damage:float, from:GameObject)Ð
  - currentHealth -= damageÐ
  - ShowDamageNumbers(damage)Ð
  - if currentHealth <= 0Ð
    - if from.GetComponent<QuestSystem>() != nullÐ
      - from.GetComponent<QuestSystem>().UpdateQuestObjective("kill:"+Name)Ð
    - Die()Ð
Ð
- Die()Ð
  - Destroy(gameObject)Ð
Ð
```

```
- ShowDamageNumbers(damage:float)Đ
  - if WorldSpaceCanvasController.Instance == nullĐ
    - Debug.LogError("WorldSpaceCanvasController instance is not present in the scene.")Đ
    - returnĐ
  - WorldSpaceCanvasController.Instance.SpawnDamageNumber(damage, transform.position + Vector3.up * 2f)
- HotkeyController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\HotkeyController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\HotkeyController.csĐ
HotkeyController:Đ
- public List<Hotkey> hotkeysĐ
- private CharacterCombatController combatControllerĐ
- public Dictionary<KeyCode, Hotkey> hotkeyMappingĐ
- public void Update()Đ
    - HandleHotkey()Đ
- public void Start()Đ
    - combatController = GetComponent<CharacterCombatController>()Đ
    - hotkeys = new List<Hotkey>()Đ
        - for (int i = 0; i < 9; i++)Đ
            - hotkeys.Add(new Hotkey())Đ
    - hotkeyMapping = new Dictionary<KeyCode, Hotkey> { ... }Đ
    - Hotkey hotkeyTest = new Hotkey()Đ
    - hotkeyTest.ability = combatController.abilityController.learnedAbilitys[0]Đ
    - hotkeys[0].ability = combatController.abilityController.learnedAbilitys[0]Đ
- private void HandleHotkey()Đ
    - foreach (KeyValuePair<KeyCode, Hotkey> entry in hotkeyMapping)Đ
        - if (Input.GetKeyDown(entry.Key))Đ
            - Hotkey hotkey = entry.ValueĐ
            - if (hotkey.ability != null)Đ
                - combatController.PerformAbility(hotkey.ability, this.gameObject)Đ
- internal void SwapHotkeys(int hotkeyIndex1, int hotkeyIndex2)Đ
    - Hotkey tempHotkey = hotkeys[hotkeyIndex1]Đ
    - hotkeys[hotkeyIndex1] = hotkeys[hotkeyIndex2]Đ
    - hotkeys[hotkeyIndex2] = tempHotkeyĐ
- internal void AssignAbilityToHotkey(int hotkeyIndex, Ability assignedAbility)Đ
    - hotkeys[hotkeyIndex].ability = assignedAbilityĐ
    - hotkeys[hotkeyIndex].item = nullĐ
- internal void AssignItemToHotkey(int hotkeyIndex, Item assignedItem)Đ
    - hotkeys[hotkeyIndex].item = assignedItemĐ
    - hotkeys[hotkeyIndex].ability = nullĐ
Hotkey:Đ
- public Ability abilityĐ
- public Item item
- IInteractable at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\IInteractable.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\IInteractable.csÐ
IInteractable: Ð
- InterfaceÐ
- Method: Interact(Transform interacter)
- Inventory at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\Inventory.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\Inventory.csÐ
Inventory:Ð
- items: List<Item>Ð
- questSystem: QuestSystemÐ
Ð
Start():Ð
- questSystem = GetComponent<QuestSystem>()Ð
Ð
AddItem(item: Item):Ð
- items.Add(item)Ð
- if questSystem != null:Ð
   - Debug.Log("collect:" + item.name)Ð
   - questSystem.UpdateQuestObjective("collect:" + item.name)Ð
Ð
RemoveItem(item: Item):Ð
- items.Remove(item)Ð
Ð
HasItem(item: Item):Ð
- return items.Contains(item)
- isStunnableController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\isStunnableController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\isStunnableController.csÐ
Class: isStunnableControllerÐ
Ð
- bool stunnedÐ
- float timeAtStunStartÐ
- float stunDurationÐ
- VisualEffectController visualEffectControllerÐ
- void Start()Ð
- void Stun(float duration)Ð
- bool isStunned()Ð
Ð
IStunnableÐ
- bool stunnedÐ
- float timeAtStunStartÐ
- float stunDuration
- IStunnable at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\IStunnable.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\IStunnable.csÐ
IStunnable.cs:Ð
- interface IStunnableÐ
  - bool stunnedÐ
  - float timeAtStunStartÐ
  - float stunDurationÐ
  - void Stun(float duration)Ð
  - bool isStunned()
- ManaController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\ManaController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\ManaController.csÐ
ManaController:Ð
 -maxMana: floatÐ
 -currentMana: floatÐ
 -characterStats: CharacterStatsÐ
 +Start()Ð
 +updateMaxMana()Ð
 +updateMana()Ð
 +UseMana(manaCost: float)Ð
 +HasSufficientMana(manaCost: float): boolÐ
 +RegenerateMana(manaAmount: float)
- MovementController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\MovementController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\MovementController.csÐ
MovementController:Ð
- stunnable: IStunnableÐ
- target: TransformÐ
- stoppingDistance: floatÐ
- agent: NavMeshAgentÐ
```

```
Đ
Start():Đ
- agent = GetComponent<NavMeshAgent>()Đ
- stunnable = GetComponent<IStunnable>()Đ
- Debug.Log("stunnable: " + stunnable)Đ
Đ
Update():Đ
- if target is not null:Đ
  - agent.SetDestination(target.position)Đ
  - agent.stoppingDistance = stoppingDistanceĐ
- if stunnable is not null and stunnable.isStunned():Đ
  - agent.isStopped = trueĐ
- else:Đ
  - agent.isStopped = false
- PlayerController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\PlayerController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\PlayerController.csĐ
PlayerController:Đ
- buffSystemĐ
- experienceSystemĐ
- characterStatsĐ
- combatControllerĐ
- skillControllerĐ
- skillTreeĐ
- stunnableĐ
- hotkeyControllerĐ
- canGrabControllerĐ
- targetingSystemĐ
- Ability1Đ
- moveSpeedĐ
- rotationSpeedĐ
- jumpForceĐ
- groundLayerĐ
- cameraTargetĐ
- cameraDistanceĐ
- cameraHeightĐ
- cameraRotationSpeedĐ
- rbĐ
- animatorĐ
- moveDirectionĐ
- isGroundedĐ
- mainCameraĐ
- cameraRotationYĐ
```

```
Ð
Start():Ð
- canGrabController = GetComponent(CanGrabController)Ð
- combatController = GetComponent(CharacterCombatController)Ð
- characterStats = GetComponent(CharacterStats)Ð
- skillController = GetComponent(SkillController)Ð
- targetingSystem = GetComponent(TargetingSystem)Ð
- skillController.skillTree.resetAllNodes()Ð
- rb = GetComponent(Rigidbody)Ð
- animator = GetComponent(Animator)Ð
- mainCamera = Camera.main.transformÐ
- Cursor.lockState = CursorLockMode.LockedÐ
- Cursor.visible = falseÐ
- skillController.OnSkillUnlocked += UpdateToSkillEventsÐ
- stunnable = GetComponent(IStunnable)Ð
Ð
Update():Ð
- HandleMovement()Ð
- HandleJump()Ð
- HandleCamera()Ð
- HandleActions()Ð
Ð
UpdateToSkillEvents(SkillNode node):Ð
- characterStats.UpdateSubStats()Ð
Ð
HandleActions():Ð
- target = targetingSystem.GetTarget()Ð
- if target == null, returnÐ
- if target.GetComponent(IInteractable) != null:Ð
  - if Vector3.Distance(target.transform.position,transform.position) < 10f:Ð
    - target.GetComponent(IInteractable).Interact(transform)Ð
Ð
HandleMovement():Ð
- if stunnable != null and stunnable.isStunned(), returnÐ
- horizontal = Input.GetAxis("Horizontal")Ð
- vertical = Input.GetAxis("Vertical")Ð
- moveDirection = mainCamera.forward * vertical + mainCamera.right * horizontalÐ
- moveDirection.y = 0fÐ
- moveDirection.Normalize()Ð
- if moveDirection != Vector3.zero:Ð
  - targetRotation = Quaternion.LookRotation(moveDirection)Ð
  - transform.rotation = Quaternion.RotateTowards(transform.rotation, targetRotation, rotationSpeed * Time.deltaTime)Ð
- animator.SetFloat("Speed", moveDirection.magnitude)Ð
- rb.MovePosition(rb.position + moveDirection * moveSpeed * Time.deltaTime)Ð
```

```
Ð
HandleJump():Ð
- if stunnable != null and stunnable.isStunned(), returnÐ
- isGrounded = Physics.Raycast(transform.position, Vector3.down, 0.4f, groundLayer)Ð
- if Input.GetButtonDown("Jump") and isGrounded:Ð
  - rb.AddForce(Vector3.up * jumpForce, ForceMode.Impulse)Ð
Ð
HandleCamera():Ð
- mouseX = Input.GetAxis("Mouse X")Ð
- mouseY = Input.GetAxis("Mouse Y")Ð
- cameraRotationY -= mouseY * cameraRotationSpeedÐ
- cameraRotationY = Mathf.Clamp(cameraRotationY, -80f, 80f)Ð
- mainCamera.RotateAround(cameraTarget.position, Vector3.up, mouseX * cameraRotationSpeed)Ð
- mainCamera.localRotation = Quaternion.Euler(cameraRotationY, mainCamera.localEulerAngles.y, 0f)Ð
- cameraOffset = new Vector3(0f, cameraHeight, -cameraDistance)Ð
- targetPosition = cameraTarget.position + mainCamera.TransformDirection(cameraOffset)Ð
- mainCamera.position = Vector3.Lerp(mainCamera.position, targetPosition, Time.deltaTime * rotationSpeed)Ð
- mainCamera.LookAt(cameraTarget)Ð
Ð
faceIndirectionOfCamera():Ð
- transform.rotation = Quaternion.Euler(0f, mainCamera.localEulerAngles.y, 0f)Ð
Ð
TryUnlockSkillNode(SkillNode skillNode):Ð
- if skillNode == null, Debug.LogWarning("Invalid skill node."), return falseÐ
- if skillNode.isUnlocked, Debug.LogWarning("Already learned."), return falseÐ
- if skillController.availableSkillPoints < skillNode.skillPointCost, Debug.LogWarning("Not enough skill points."), return falseÐ
- statRequirementsMet = trueÐ
- for i = 0 to skillNode.mainStatRequirement.Count:Ð
  - statName = skillNode.mainStatRequirement[i]Ð
  - requiredValue = skillNode.mainStatValue[i]Ð
  - if statName == Archetype.Strength:Ð
    - if characterStats.strength < requiredValue, statRequirementsMet = falseÐ
  - elif statName == Archetype.Intelligence:Ð
    - if characterStats.intelligence < requiredValue, statRequirementsMet = falseÐ
  - elif statName == Archetype.Dexterity:Ð
    - if characterStats.dexterity < requiredValue, statRequirementsMet = falseÐ
  - elif statName == Archetype.Endurance:Ð
    - if characterStats.endurance < requiredValue, statRequirementsMet = falseÐ
  - elif statName == Archetype.Wisdom:Ð
```

```
    - if characterStats.wisdom < requiredValue, statRequirementsMet = falseĐ
  - else:Đ
    - Debug.LogWarning("Invalid stat name in the skill node.")Đ
- if not statRequirementsMet, Debug.LogWarning("Main stat requirement not met."), return falseĐ
- if skillNode.prerequisiteSkill != null and not skillNode.prerequisiteSkill.isUnlocked, Debug.LogWarning("Prerequisite skill not unlocked."), return falseĐ
- if not skillController.skillTree.IsVisible(skillNode), Debug.LogWarning("Skill node is not visible."), return falseĐ
- skillNode.isUnlocked = trueĐ
- skillController.LearnSkill(skillNode)Đ
- return trueĐ
Đ
TryUnLearnSkillNode(SkillNode skillNode):Đ
- if not skillNode.isUnlocked, return falseĐ
- skillNode.isUnlocked = falseĐ
- skillController.UnlearnSkill(skillNode)Đ
- return true
- SkillController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\SkillController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\PlayerAndUnitsComponent\SkillController.csĐ
Class: SkillControllerĐ
Đ
- activeSkills: List<Skill>Đ
- skillTree: SkillTreeĐ
- availableSkillPoints: intĐ
- totalStatsModier: StatsModifierĐ
- OnSkillUnlocked: delegate void SkillEvent(SkillNode skillNode)Đ
- OnSkillUnlearnd: delegate void SkillEvent(SkillNode skillNode)Đ
Đ
+ LearnSkill(skillNode: SkillNode)Đ
    - activeSkills.Add(skillNode.skill)Đ
    - skillNode.skill.ApplySkill(getComponent(CharacterStats))Đ
    - totalStatsModier.Add(skillNode.skill.statModifier)Đ
    - availableSkillPoints -= skillNode.skillPointCostĐ
    - OnSkillUnlocked?.Invoke(skillNode)Đ
Đ
+ UnlearnSkill(skillNode: SkillNode)Đ
    - if activeSkills.Remove(skillNode.skill)Đ
        - totalStatsModier.Sub(skillNode.skill.statModifier)Đ
    - availableSkillPoints += skillNode.skillPointCostĐ
    - skillNode.skill.RemoveSkill(getComponent(CharacterStats))Đ
    - OnSkillUnlearnd?.Invoke(skillNode)
- TargetingSystem at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\TargetingSystem.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\TargetingSystem.csĐ
TargetingSystem:Đ
    - playerCamera: CameraĐ
    - targetLayerMask: LayerMaskĐ
    - currentTarget: GameObjectĐ
    - crosshair: GameObjectĐ
    - maxTargetingDistance: floatĐ
    - highlightMaterial: MaterialĐ
    - lastTarget: GameObjectĐ
    - originalMaterial: MaterialĐ
    - outlineHighlightController: OutlineHighlightĐ
Đ
    + Update()Đ
    - HandleCrosshairTargeting()Đ
    - HandleMouseClickTargeting()Đ
    - HighlightTarget()Đ
    + Start()Đ
    + GetTarget(): GameObjectĐ
Đ
Note: This class represents a system for targeting game objects in the game
world, based on player input and the position of the crosshair on the screen. It
also provides functionality for highlighting and selecting the target, using an
outline highlighting effect.
- VisualEffectController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\VisualEffectController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\PlayerAndUnitsComponent\VisualEffectController.csĐ
Class: VisualEffectControllerĐ
Đ
Fields:Đ
- visualEffectManagerĐ
- positionOverHeadĐ
- positionUnderFeetĐ
- goalTransformĐ
- effectInstancesĐ
Đ
Methods:Đ
- SpawnEffect(effectName, effectDuration, effectPosition)Đ
- Update()
- GameEvent at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\GameEvent.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\GameEvent.csĐ
File: GameEvent.csĐ
Đ
Class: GameEventĐ
  - [System.Serializable]Đ
  - : UnityEvent<string>Đ
    - UnityEventĐ
      - UnityEventBaseĐ
        - InvokableCallListĐ
          - List<BaseInvokableCall>Đ
        - PersistentCallGroupĐ
          - List<PersistentCall>Đ
      - Delegate[] m_InvokeArrayĐ

- KillObjective at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\KillObjective.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\KillObjective.csĐ
File: KillObjective.csĐ
Đ
Class: KillObjective : QuestObjectiveĐ
- [SerializeField] enemyId : stringĐ
- [SerializeField] targetKills : intĐ
- [SerializeField] currentKills : intĐ
Đ
+ KillObjective(id : string, description : string, enemyId : string, targetKills : int)Đ
- this.id = idĐ
- this.description = descriptionĐ
- this.enemyId = enemyIdĐ
- this.targetKills = targetKillsĐ
- this.currentKills = 0Đ
- this.status = ObjectiveStatus.IncompleteĐ
Đ
+ UpdateProgress(killedEnemyId : string)Đ
- if(killedEnemyId == "kill:"+enemyId && status != ObjectiveStatus.Completed)Đ
    + currentKills++Đ
    + Debug.LogError("Current Kills: " + currentKills)Đ
    - if(currentKills >= targetKills)Đ
        - status = ObjectiveStatus.completedĐ
```

```
Đ
+ GetObjectiveProgress() : stringĐ
- return currentKills + "/" + targetKillsĐ
Đ
+ IsCompleted() : boolĐ
- return status == ObjectiveStatus.Completed
- Quest at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\Quest.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\Quest.csĐ
QuestĐ
- id: intĐ
- title: stringĐ
- description: stringĐ
- objectives: List<QuestObjective>Đ
- rewards: List<Reward>Đ
- status: QuestStatusĐ
Đ
+ Quest(id: int, title: string, description: string)Đ
+ AddObjective(objective: QuestObjective): voidĐ
+ AddReward(reward: Reward): voidĐ
+ CheckAndUpdateObjectives(objectiveId: string): voidĐ
- CheckQuestCompletion(): voidĐ
Đ
QuestStatusĐ
- NotStartedĐ
- InProgressĐ
- Completed
- QuestAction at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestAction.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestAction.csĐ
Class: QuestActionĐ
Đ
- fileName: string = "QuestAction"Đ
- menuName: string = "QuestSystem/QuestAction"Đ
- order: int = 1Đ
- extends: ScriptableObjectĐ
- actionId: string
- QuestGiver at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestGiver.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestGiver.csĐ
```

```
Class: QuestGiverĐ
Đ
- Quest questĐ
- GameObject interactionIndicatorĐ
- bool playerInRangeĐ
- QuestSystem playerQuestSystemĐ
- GameObject InteractsĐ
- UIManager uiManagerĐ
Đ
Start()Đ
- uiManager = FindObjectOfType<UIManager>()Đ
Đ
Update()Đ
- if (playerInRange && Input.GetKeyDown(KeyCode.E))Đ
- Interact(Interacts.transform)Đ
Đ
Interact(Transform interactFrom)Đ
- if(uiManager.questUIPresenter.gameObject.activeInHierarchy)Đ
- uiManager.hideQuestUiPresenter()Đ
- elseĐ
- uiManager.showQuestUiPresenter(quest)Đ
Đ
OnTriggerEnter(Collider other)Đ
- if (other.CompareTag("Player"))Đ
- playerInRange = trueĐ
- Interacts = other.gameObjectĐ
- interactionIndicator.SetActive(true)Đ
- playerQuestSystem = other.GetComponent<QuestSystem>()Đ
Đ
OnTriggerExit(Collider other)Đ
- if (other.CompareTag("Player"))Đ
- playerInRange = falseĐ
- interactionIndicator.SetActive(false)
- QuestObjective at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestObjective.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestObjective.csĐ
Syntax Tree of QuestObjective.cs:Đ
- QuestObjectiveĐ
  - string idĐ
  - string descriptionĐ
  - ObjectiveStatus statusĐ
  - abstract bool IsCompleted()Đ
  - abstract void UpdateProgress(string infoId)Đ
  - abstract string GetObjectiveProgress()Đ
- enum ObjectiveStatusĐ
  - CompletedĐ
  - IncompleteĐ
- GatherObjective : QuestObjectiveĐ
  - string itemIdĐ
  - int targetItemsĐ
  - int currentItemsĐ
  - GatherObjective(string id, string description, string itemId, int targetItems)Đ
  - override void UpdateProgress(string gatheredItemId)Đ
  - override bool IsCompleted()Đ
  - override string GetObjectiveProgress()Đ
- InspectObjective : QuestObjectiveĐ
  - string locationIdĐ
  - bool locationInspectedĐ
  - InspectObjective(string id, string description, string locationId)Đ
  - override void UpdateProgress(string inspectedLocationId)Đ
  - override bool IsCompleted()Đ
  - override string GetObjectiveProgress()Đ
- ActivateObjective : QuestObjectiveĐ
  - string altarIdĐ
  - bool altarActivatedĐ
  - ActivateObjective(string id, string description, string altarId)Đ
  - override void UpdateProgress(string activatedAltarId)Đ
  - override bool IsCompleted()Đ
  - override string GetObjectiveProgress()
- HuntWolvesQuest at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestS\HuntWolvesQuest.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestS\HuntWolvesQuest.csĐ
Class: HuntWolvesQuestĐ
Đ
- CreateAssetMenuĐ
    - fileName: "HuntWolves"Đ
    - menuName: "ScriptableObjects/Quests/HuntWolves"Đ
    - order: 1Đ
Đ
- Base: QuestĐ
    - ID: 1Đ
    - Title: "Hunt the Wolves"Đ
    - Description: "The village has been suffering from frequent wolf attacks.
They've asked you to hunt down 10 wolves and bring back their pelts as proof."Đ
Đ
- AddObjectiveĐ
```

```
    - KillObjectiveĐ
        - ID: "HuntWolvesObjective"Đ
        - Title: "Hunt 10 Wolves"Đ
        - EnemyName: "Wolf"Đ
        - TargetAmount: 10
- NewBehaviourScript at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My project\Assets\Scripts\QuestFiles\QuestS\NewBehaviourScript.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestS\NewBehaviourScript.csĐ
NewBehaviourScript:Đ
- using System.Collections;Đ
- using System.Collections.Generic;Đ
- using UnityEngine;Đ
- class NewBehaviourScript:Đ
  - MonoBehaviourĐ
  - method Start():Đ
  - method Update():
- QuestSystem at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestSystem.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\QuestSystem.csĐ
File: QuestSystem.csĐ
Đ
Class: QuestSystemĐ
Đ
- quests : List<Quest>Đ
- uiManager : UIManagerĐ
Đ
+ GetQuestByID(questID : int) : QuestĐ
- Start() : voidĐ
+ AddQuest(quest : Quest) : voidĐ
+ RemoveQuest(questId : int) : voidĐ
+ UpdateQuestObjective(objectiveId : string) : void
- Reward at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\Reward.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\QuestFiles\Reward.csĐ
Reward:Đ
- rewardId: stringĐ
- rewardName: stringĐ
- quantity: intĐ
- Reward(rewardId: string, rewardName: string, quantity: int)
- CharacterStatsUI at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\Ui\CharacterStatsUI.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\Ui\CharacterStatsUI.csÐ
CharacterStatsUI:Ð
- public Text unspentStatPointsTextÐ
- public Text strengthTextÐ
- public Text intelligenceTextÐ
- public Text dexterityTextÐ
- public Text enduranceTextÐ
- public Text wisdomTextÐ
- public Button strengthButtonÐ
- public Button intelligenceButtonÐ
- public Button dexterityButtonÐ
- public Button enduranceButtonÐ
- public Button wisdomButtonÐ
- public CharacterStats characterStatsÐ
- Start()Ð
    - strengthButton.onClick.AddListener(() -> IncreaseStat(Archetype.Strength))Ð
    - intelligenceButton.onClick.AddListener(() -> IncreaseStat(Archetype.Intelligence))Ð
    - dexterityButton.onClick.AddListener(() -> IncreaseStat(Archetype.Dexterity))Ð
    - enduranceButton.onClick.AddListener(() -> IncreaseStat(Archetype.Endurance))Ð
    - wisdomButton.onClick.AddListener(() -> IncreaseStat(Archetype.Wisdom))Ð
    - characterStats.StatsChanged += UpdateUIÐ
    - UpdateUI()Ð
- Awake()Ð
    - Cursor.visible = trueÐ
    - Cursor.lockState = CursorLockMode.NoneÐ
- UpdateUI()Ð
    - unspentStatPointsText.text = "Unspent Points: " + characterStats.unspentStatPointsÐ
    - strengthText.text = "Strength: " + characterStats.strengthÐ
    - intelligenceText.text = "Intelligence: " + characterStats.intelligenceÐ
    - dexterityText.text = "Dexterity: " + characterStats.dexterityÐ
    - enduranceText.text = "Endurance: " + characterStats.enduranceÐ
    - wisdomText.text = "Wisdom: " + characterStats.wisdomÐ
- IncreaseStat(Archetype mainStatType)Ð
    - characterStats.IncreaseStat(mainStatType, 1)
- CharacterUi at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\Ui\CharacterUi.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\Ui\CharacterUi.csÐ
```

```
Class Name: CharacterUiĐ
Đ
- public Text unspentStatPointsText;Đ
- public Text strengthText;Đ
- public Text intelligenceText;Đ
- public Text dexterityText;Đ
- public Text enduranceText;Đ
- public Text wisdomText;Đ
- public Text subStatsPhysical;Đ
- public Text subStatsSpellCasting;Đ
- public Text subStatsDefensive;Đ
- public Text subStatsUniversal;Đ
- public Button openCharacterStatsMenu;Đ
- public Image unspentStatPoints;Đ
- public CharacterStats characterStats;Đ
- public UIManager uiManager;Đ
Đ
- private void Start()Đ
   - openCharacterStatsMenu.onClick.AddListener(() =>
uiManager.OpenCharacterStatusUI());Đ
   - characterStats.StatsChanged += UpdateUI;Đ
   - UpdateUI();Đ
Đ
- private void Awake()Đ
   - Cursor.visible = true;Đ
   - Cursor.lockState = CursorLockMode.None;Đ
Đ
- private void UpdateUI()Đ
   - strengthText.text = "Strength: " + characterStats.strength;Đ
   - intelligenceText.text = "Intelligence: " + characterStats.intelligence;Đ
   - dexterityText.text = "Dexterity: " + characterStats.dexterity;Đ
   - enduranceText.text = "Endurance: " + characterStats.endurance;Đ
   - wisdomText.text = "Wisdom: " + characterStats.wisdom;Đ
   - subStatsPhysical.text = "Critical Chance: " +
characterStats.criticalChance.ToString("F1") + "%" + "\nCritical Damage: " +
characterStats.criticalDamage + "%" + "\nAttack Speed: " +
characterStats.attackSpeed.ToString("F2");Đ
   - subStatsSpellCasting.text = "Spell Crit Chc: " +
characterStats.spellCriticalChance.ToString("F1") + "%" + "\nSpell Crit Dmg: " +
characterStats.spellCriticalDamage + "%" + "\nCooldown: " +
characterStats.cooldown;Đ
   - subStatsDefensive.text = "Armor: " + characterStats.armor + "\nMagic Resi: "
+ characterStats.magicResistance + "\nDodge Chance: " +
characterStats.dodgeChance.ToString("F1") + "%";Đ
   - subStatsUniversal.text = "Max Life: " + characterStats.maxLife + "\nLife Reg:
```

```
" + characterStats.lifeRegen + "\nMax Mana: " + characterStats.maxMana +
"\nMana Reg: " + characterStats.manaRegen;
- DamageNumberController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My project\Assets\Scripts\Ui\DamageNumberController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\DamageNumberController.csÐ
Class: DamageNumberControllerÐ
Ð
- textMeshPro : TextMeshProÐ
- floatSpeed : floatÐ
- duration : floatÐ
- elapsedTime : floatÐ
- playerCamera : CameraÐ
Ð
+ Start()Ð
- SetDamageValue(damage : float)Ð
+ Update()Ð
- FaceCamera()
- GameManager at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\GameManager.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\GameManager.csÐ
GameManager:Ð
- Instance: staticÐ
- currentState: enumÐ
- Awake()Ð
   - if Instance == nullÐ
      - Instance = thisÐ
      - DontDestroyOnLoad(gameObject)Ð
   - elseÐ
      - Destroy(gameObject)Ð
      - returnÐ
   - currentState = InMenuÐ
- Update()Ð
   - HandleGameState()Ð
   - UpdateCursorVisibility()Ð
- UpdateCursorVisibility()Ð
   - if currentState == Paused or InMenuÐ
      - Cursor.visible = trueÐ
      - Cursor.lockState = NoneÐ
   - else if currentState == PlayingÐ
      - Cursor.visible = falseÐ
      - Cursor.lockState = LockedÐ
- HandleGameState()Ð
    - switch currentStateÐ
        - InMenuÐ
            - Handle main menu logicÐ
        - PlayingÐ
            - Handle playing state logicÐ
        - PausedÐ
            - Handle paused state logicÐ
        - GameOverÐ
            - Handle game over logicÐ
- ChangeGameState(newState)Ð
    - currentState = newStateÐ
- SaveGame()Ð
    - Implement save game logicÐ
- LoadGame()Ð
    - Implement load game logic
- IDragable at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\Interfaces\IDragable.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\Interfaces\IDragable.csÐ
IDragable:Ð
- interfaceÐ
- IBeginDragHandlerÐ
- IDragHandlerÐ
- IEndDragHandlerÐ
- GameObjectÐ
- getDraggedObject()
- IRecieveDrop at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\Interfaces\IRecieveDrop.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\Interfaces\IRecieveDrop.csÐ
IRecieveDrop:Ð
- interfaceÐ
- name: IRecieveDropÐ
- extends: IPointerEnterHandler, IPointerExitHandler, IDropHandlerÐ
- namespace: UnityEngine.EventSystems, UnityEngineÐ
- filepath: C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\Interfaces\IRecieveDrop.cs
- OutlineHighlight at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\OutlineHighlight.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\OutlineHighlight.csÐ
```

```
class: OutlineHighlightĐ
  - highlightMaterial: MaterialĐ
  - highlightColor: ColorĐ
  - outlineThickness: floatĐ
  - target: TransformĐ
  - cam: CameraĐ
  - commandBuffer: CommandBufferĐ
  + Start()Đ
  + OnRenderImage(src: RenderTexture, dest: RenderTexture)
- OverlayUiController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\OverlayUiController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\OverlayUiController.csĐ
OverlayUiControllerĐ
- UIManagerĐ
- Text characterNameTextĐ
- Slider healthBarĐ
- Slider manaBarĐ
- Text levelTextĐ
- GameObject playerĐ
- HealthController HealthControllerĐ
- ManaController ManaControllerĐ
- void updateHealthBar()Đ
- void updateManaBar()Đ
- void updateHealthAndMana()Đ
- void Start()Đ
- void Update()
- PresentQuestUiController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My project\Assets\Scripts\Ui\PresentQuestUiController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\PresentQuestUiController.csĐ
PresentQuestUiControllerĐ
- questTitle: TMP_TextĐ
- questDescription: TMP_TextĐ
- acceptButton: ButtonĐ
- declineButton: ButtonĐ
- questSystem: QuestSystemĐ
Đ
_Start()Đ
- questSystem = FindObjectOfType<QuestSystem>()Đ
Đ
+ showQuestInfo(quest: Quest, UIManager: UIManager)Đ
- questTitle.text = quest.titleĐ
- questDescription.text = quest.descriptionĐ
- acceptButton.onClick.AddListener(() => questSystem.AddQuest(quest))Đ
- acceptButton.onClick.AddListener(() => UIManager.hideQuestUiPresenter())Đ
- declineButton.onClick.AddListener(() => UIManager.hideQuestUiPresenter())
- QuestBookUIController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My project\Assets\Scripts\Ui\QuestBookUIController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\QuestBookUIController.csĐ
QuestBookUIControllerĐ
- titleText: TMP_TextĐ
- descriptionText: TMP_TextĐ
- objectivesText: TMP_TextĐ
- questListScrollRect: ScrollRectĐ
- questListItemPrefab: GameObjectĐ
- questListContent: TransformĐ
- questSystem: QuestSystemĐ
Đ
+ Awake()Đ
+ Start()Đ
+ UpdateQuestList()Đ
+ ShowQuestInformation(Quest quest)
- QuestLogUIController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My project\Assets\Scripts\Ui\QuestLogUIController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\QuestLogUIController.csĐ
Class: QuestLogUIControllerĐ
Đ
- public TMP_Text questLogTextĐ
- public TMP_Text trackingTextĐ
- private QuestSystem questSystemĐ
- private List<Quest> trackingQuestsĐ
Đ
- private void Awake()Đ
   - questSystem = FindObjectOfType<QuestSystem>()Đ
   - if questSystem == null, Debug.LogError("No QuestSystem found in the
scene!")Đ
Đ
- private void Start()Đ
   - UpdateQuestLog()Đ
Đ
- public void UpdateQuestLog()Đ
   - string questLogString = ""Đ
   - foreach Quest quest in questSystem.questsĐ
```

```
        - questLogString += $"[{quest.status}] {quest.title}\n"Ð
        - foreach QuestObjective objective in quest.objectivesÐ
            - questLogString += $"- {objective.description}
({objective.GetObjectiveProgress()})\n"Ð
        - questLogString += "\n"Ð
    - questLogText.text = questLogStringÐ
Ð
    - string trackingString = "Tracking: "Ð
    - foreach Quest quest in trackingQuestsÐ
        - trackingString += quest.title + ", "Ð
    - trackingText.text = trackingString.TrimEnd(',', ' ')Ð
Ð
- public void AddQuestToTrack(int questID)Ð
    - Quest quest = questSystem.GetQuestByID(questID)Ð
    - if quest != null && !trackingQuests.Contains(quest)Ð
        - trackingQuests.Add(quest)Ð
        - UpdateQuestLog()Ð
Ð
- public void RemoveQuestToTrack(int questID)Ð
    - Quest quest = questSystem.GetQuestByID(questID)Ð
    - if quest != null && trackingQuests.Contains(quest)Ð
        - trackingQuests.Remove(quest)Ð
        - UpdateQuestLog()
- SkillTreeMenuController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My project\Assets\Scripts\Ui\SkillTreeMenuController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\SkillTreeMenuController.csÐ
SkillTreeMenuController:Ð
- GameObject[] skillTreesÐ
- int currentSkillTree = 0Ð
- Start():Ð
’Ò 6¶–ÆÅ@rees[currentSkillTree].SetActive(true)Ð
- SwitchSkillTree(int index):Ð
’Ò –b †–æFPx < 0 || index >= skillTrees.Length) returnÐ
’Ò 6¶–ÆÅ@rees[currentSkillTree].SetActive(false)Ð
’Ò 6¶–ÆÅ@rees[index].SetActive(true)Ð
’Ò 7W'&VçE6¶–ÆÅ@ree = index
- SpellBookUiController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My project\Assets\Scripts\Ui\SpellBookUiController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\SpellBookUiController.csÐ
SpellBookUiController:Ð
- titleText: TMP_TextÐ
- descriptionText: TMP_TextĐ
- objectivesText: TMP_TextĐ
- spellListScrollRect: ScrollRectĐ
- spellListItemPrefab: GameObjectĐ
- spellListContent: TransformĐ
- abilityController: AbilityControllerĐ
Đ
+ Awake()Đ
+ Start()Đ
+ UpdateQuestList()Đ
+ ShowAbilityInformation(Ability ability)
- ToolTipUiController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\ToolTipUiController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\ToolTipUiController.csĐ
ToolTipUiController:Đ
Đ
- SkillNameĐ
- SkillDescriptionĐ
- AlreadySkilledĐ
- SkillpointCostĐ
- AttrbuteReqĐ
- SkillIconĐ
Đ
Start()Đ
Đ
Awake()Đ
Đ
UpdateUI(node)Đ
Đ
- SkillName.textĐ
- SkillDescription.textĐ
- AlreadySkilled.gameObject.SetActive(bool)Đ
- SkillpointCost.textĐ
- AttrbuteReq.textĐ
- SkillIcon.spriteĐ
Đ
UpdateUI(ability)Đ
Đ
- SkillName.textĐ
- SkillDescription.textĐ
- AlreadySkilled.gameObject.SetActive(false)Đ
- SkillpointCost.gameObject.SetActive(false)Đ
- AttrbuteReq.textĐ
```

```
Đ
UpdateUI(item)Đ
Đ
- SkillName.textĐ
- SkillDescription.textĐ
- AlreadySkilled.gameObject.SetActive(false)Đ
- SkillpointCost.gameObject.SetActive(false)Đ
- AttrbuteReq.textĐ
- SkillIcon.sprite
- UiAbilitySlot at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\UiAbilitySlot.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\UiAbilitySlot.csĐ
UiAbilitySlot:Đ
-ability : AbilityĐ
-icon : ImageĐ
-Start()Đ
--if(ability != null)Đ
---icon.sprite = ability.icon
- UiBaseDragAndDropFunc at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My project\Assets\Scripts\Ui\UiBaseDragAndDropFunc.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\UiBaseDragAndDropFunc.csĐ
UiBaseDragAndDropFunc:Đ
- rectTransform: RectTransformĐ
- uiManager: UIManagerĐ
- dragObject: GameObjectĐ
- originalPosition: Vector3Đ
- dragedObject: GameObjectĐ
Đ
+ Awake():Đ
   rectTransform = Get<RectTransform>()Đ
   uiManager = Find<UIManager>()Đ
   originalPosition = rectTransform.localPositionĐ
Đ
+ OnBeginDrag(eventData: PointerEventData):Đ
   dragedObject = eventData.pointerDragĐ
   dragObject = new GameObject("DragObject")Đ
   dragObject.transform.SetParent(uiManager.gameObject.transform)Đ
   dragObject.transform.SetSiblingIndex(uiManager.gameObject.transform.childCount - 1)Đ
   dragRectTransform = dragObject.AddComponent<RectTransform>()Đ
   dragRectTransform.sizeDelta = rectTransform.sizeDeltaĐ
```

```
    dragRectTransform.position = eventData.positionÐ
    uiAbilitySlot = dragedObject.Get<UiAbilitySlot>()Ð
    uiItemSlot = dragedObject.Get<UiItemSlot>()Ð
    image = dragObject.AddComponent<Image>()Ð
    image.sprite = Get<Image>().spriteÐ
    image.raycastTarget = falseÐ
    if(uiAbilitySlot!=null):Ð
        image.sprite = uiAbilitySlot.icon.spriteÐ
Ð
+ OnDrag(eventData: PointerEventData):Ð
    dragObject.Get<RectTransform>().position = eventData.positionÐ
Ð
+ OnEndDrag(eventData: PointerEventData):Ð
    Destroy(dragObject)Ð
    if (eventData.pointerEnter != null):Ð
        hotkeySlot = eventData.pointerEnter.Get<UiHotKeySlot>()Ð
        uiAbilitySlot = dragedObject.Get<UiAbilitySlot>()Ð
        uiItemSlot = dragedObject.Get<UiItemSlot>()Ð
        if (hotkeySlot != null):Ð
            if(uiAbilitySlot!=null):Ð
                hotkeySlot.ability = uiAbilitySlot.abilityÐ
                hotkeySlot.item = nullÐ
            else if(uiItemSlot!=null):Ð
                hotkeySlot.item = uiItemSlot.itemÐ
                hotkeySlot.ability = nullÐ
            else:Ð
                hotkeySlot.item = nullÐ
                hotkeySlot.ability = nullÐ
            hotkeySlot.updateinfo()Ð
    rectTransform.localPosition = originalPosition
- UiHotKeySlot at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\UiHotKeySlot.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\UiHotKeySlot.csÐ
UiHotKeySlot:Ð
- icon: ImageÐ
- hotkeyIndex: intÐ
- uiManager: UIManagerÐ
- rectTransform: RectTransformÐ
- originalPosition: Vector3Ð
- ability: AbilityÐ
- item: ItemÐ
- hotkeyController: HotkeyControllerÐ
Ð
```

```
- Start():Ð
   - hotkeyController = FindObjectOfType<HotkeyController>()Ð
   - uiManager = FindObjectOfType<UIManager>()Ð
   - rectTransform = GetComponent<RectTransform>()Ð
   - icon = GetComponent<Image>()Ð
   - originalPosition = rectTransform.localPositionÐ
Ð
- updateinfo():Ð
   - if(ability!=null):Ð
      - icon.sprite = ability.iconÐ
      - hotkeyController.hotkeys[hotkeyIndex].ability = abilityÐ
      - hotkeyController.hotkeys[hotkeyIndex].item = nullÐ
   - if(item!=null):Ð
      - icon.sprite = item.iconÐ
      - hotkeyController.hotkeys[hotkeyIndex].item = itemÐ
      - hotkeyController.hotkeys[hotkeyIndex].ability = nullÐ
Ð
- OnPointerEnter(eventData: PointerEventData):Ð
   - uiManager.OpenToolTip(hotkeyController.hotkeys[hotkeyIndex],
rectTransform.position)Ð
Ð
- OnPointerExit(eventData: PointerEventData):Ð
   - uiManager.CloseToolTip()
- UiItemSlot at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\UiItemSlot.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\UiItemSlot.csÐ
UiItemSlot:Ð
’Ò 'WGFöåv—F…@oolTipÐ
’Ò •&V6–PveDropÐ
’Ò ”G& gableÐ
’Ò —FVÓ  ItemÐ
’Ò petDraggedObject(): GameObjectÐ
’Ò öä&Vv–äG& g(eventData: PointerEventData)Ð
’Ò öäG& g(eventData: PointerEventData)Ð
’Ò öäG op(eventData: PointerEventData)Ð
’Ò öäVæDG& g(eventData: PointerEventData)
- UIManager at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\UIManager.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\UIManager.csÐ
UIManagerÐ
- pauseMenu: GameObjectÐ
- mainMenu: GameObjectĐ
- characterStatusUI: GameObjectĐ
- characterUi: GameObjectĐ
- tooltip: GameObjectĐ
- skillTreeMenu: GameObjectĐ
- questBookUi: GameObjectĐ
- questListQuickUi: GameObjectĐ
- toolTipController: ToolTipUiControllerĐ
- questUIPresenter: PresentQuestUiControllerĐ
- onPlayerHealthManaChange: eventUi (delegate)Đ
Đ
+ updateQuestBook(): voidĐ
+ showQuestBookUi(): voidĐ
+ hideQuestBookUi(): voidĐ
+ showQuestListQuickUi(): voidĐ
+ hideQuestListQuickUi(): voidĐ
+ showQuestUiPresenter(quest: Quest): voidĐ
+ hideQuestUiPresenter(): voidĐ
+ PauseGame(): voidĐ
+ UnpauseGame(): voidĐ
+ ShowMainMenu(): voidĐ
+ HideMainMenu(): voidĐ
+ OpenCharacterStatusUI(): voidĐ
+ OpenCharacterUi(): voidĐ
+ CloseCharacterUi(): voidĐ
+ OpenSkillTreeMenu(): voidĐ
+ CloseSkillTreeMenu(): voidĐ
+ CloseCharacterStatusUI(): voidĐ
+ OpenToolTip(node: SkillNode, Position: Vector3): voidĐ
+ OpenToolTip(hotkey: Hotkey, Position: Vector3): voidĐ
+ OpenToolTip(ability: Ability, Position: Vector3): voidĐ
+ OpenToolTip(item: Item, Position: Vector3): voidĐ
+ CloseToolTip(): voidĐ
+ Awake(): voidĐ
+ Update(): void
- WorldSpaceCanvasController at C:\Users\Toastbrot\Downloads\STRATEGY
01.04.2022\My project\Assets\Scripts\Ui\WorldSpaceCanvasController.cs:
Corresponding SyntaxTree:
C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My
project\Assets\Scripts\Ui\WorldSpaceCanvasController.csĐ
WorldSpaceCanvasController:Đ
- InstanceĐ
- damageNumberPrefabĐ
- Awake()Đ
- SpawnDamageNumber(damage, position)
```

- UnitSpawnerController at C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\WorldManagmentUnitSpawning\UnitSpawnerController.cs: Corresponding SyntaxTree: C:\Users\Toastbrot\Downloads\STRATEGY 01.04.2022\My project\Assets\Scripts\WorldManagmentUnitSpawning\UnitSpawnerController.csĐ
Name: UnitSpawnerController.csĐ

Đ

- Variables:Đ
    - unitPrefab: GameObjectĐ
    - spawnRange: floatĐ
    - stats: CharacterStatsĐ
    - abilities: Ability[]Đ
    - aiState: AIStateĐ
    - equipManager: EquipManagerĐ
    - aiController: AIControllerĐ
    - playerTransform: TransformĐ

Đ

- Start():Đ
    - Get the player transformĐ

Đ

- Update():Đ
    - Check if player is within spawn rangeĐ
    - If player transform is null or unit has already spawned, returnĐ
    - Spawn the unit and set its equip manager, AI controller, stats, abilities, and AI stateĐ
    - Destroy the spawner game object