







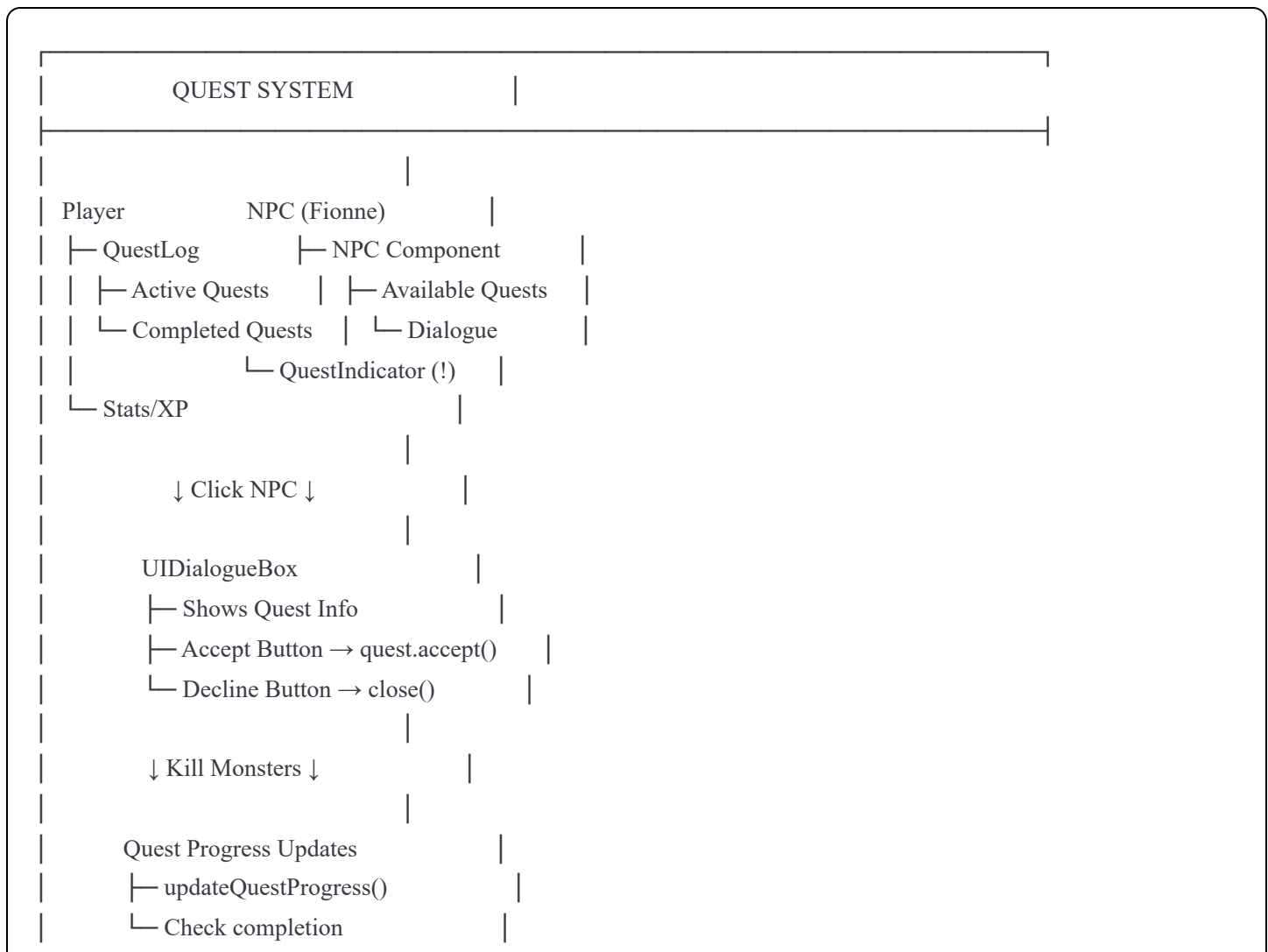
# Quest System - Complete Implementation Guide

## Overview

The quest system includes:

-  **Quest** class - Tracks objectives, rewards, and status
  -  **NPC** component - Handles dialogue and quest offers
  -  **QuestLog** component - Tracks player's active/completed quests
  -  **UIDialogueBox** - Beautiful dialogue UI with Accept/Decline buttons
  -  **QuestIndicator** - Shows ! or ? above NPCs
  -  **Fionne NPC** - Sample quest giver with "Goblin Slayer" quest
- 

## Architecture



↓ Return to NPC (?) ↓

Claim Rewards & Complete Quest

## How It Works

### 1. Fionne NPC Creation

In `GameState.initializeWorld()`:

```
java
```

```
Entity fionne = EntityFactory.createFionne(10 * 64, 5 * 64);  
entities.add(fionne);
```

Fionne is created with:

- **Quest:** "Goblin Slayer" - Kill 5 Goblins
- **Rewards:** 150 XP, 50 Gold, Potion
- **Dialogue:** Custom greeting/farewell messages

### 2. Player Clicks Fionne

Player clicks NPC → `Engine.handleNPCClick()`

↓

Check range → `NPC.isPlayerInRange()`

↓

Check quest status:

- Quest completed? → Show "Quest Complete" dialogue
- Quest active? → Show "Quest Progress" dialogue
- Quest available? → Show "Quest Offer" dialogue
- No quests? → Show greeting dialogue

### 3. Quest Offer Dialogue

When clicking Fionne (who has an available quest):

```
UIDialogueBox.showQuestOffer("Fionne", goblinSlayerQuest)
```

↓

Displays:

```
| Fionne |
|
| The goblins have been causing trouble |
| near the village. Could you help us by |
| defeating some of them? |
|
| Quest: Goblin Slayer |
| Objectives: |
| • Defeat 5 Goblins (0/5) |
|
| Rewards: |
| • 150 XP |
| • 50 Gold |
| • Potion of Minor Healing |
|
| [Accept] [Decline] |
```

### 4. Player Accepts Quest

Player clicks "Accept"

↓

```
UIManager.handleQuestAccept()
```

↓

```
quest.accept() → status = ACTIVE
```

↓

```
questLog.addQuest(quest)
```

↓

Dialogue closes

↓

Quest indicator changes: ! → ...

### Console Output:

Quest accepted: Goblin Slayer  
Quest added to log: Goblin Slayer

---

## 5. Player Kills Goblins

```
Player kills Goblin
↓
GameLogic.handleMonsterDeath()
↓
GameLogic.updateQuestProgress()
↓
questLog.updateQuestProgress("kill_goblins", 1)
↓
Quest checks objectives
↓
All complete? → quest.status = COMPLETED
```

### Console Output:

```
Goblin Lv1 TRASH has died!
→ XP Reward: 25
Quest progress: Goblin Slayer - Defeat 5 Goblins
Objective complete: Defeat 5 Goblins
Quest completed: Goblin Slayer
```

---

## 6. Return to Fionne (Quest Complete)

```
Player clicks Fionne
↓
NPC has completed quest → Show completion dialogue
↓
```

Fionne
Amazing work! The village is safer thanks to you. Here's your reward.

Quest: Goblin Slayer

Objectives:

- Defeat 5 Goblins ✓

Rewards:

- 150 XP
- 50 Gold
- Potion of Minor Healing

Close

Click "Close":

UIManager.handleDialogueClose()  
↓  
quest.claimRewards(player)  
↓  
Award XP (may level up!)  
Award gold  
Award items  
↓  
Dialogue closes  
↓  
Quest indicator disappears

## Visual Indicators

### Quest Indicator States

Symbol	Color	Meaning
!	Gold	Quest available
?	Gold	Quest complete - return to NPC
...	Gray	Quest in progress
(none)	-	No quests

The indicator **bounces** above the NPC's head with a smooth animation.

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## Creating Custom Quests

### Example: Create a Collection Quest

```
java
```

*// In EntityFactory or wherever you create NPCs:*

```
public static Entity createMerchantNPC(float x, float y) {
    Entity merchant = createNPC("merchant", "Merchant Bob", x, y);
    NPC npcComponent = merchant.getComponent(NPC.class);

    // Create collection quest
    Quest collectQuest = new Quest(
        "collect_herbs",
        "Herb Gathering",
        "I need 10 healing herbs for my potions. Can you gather them?",
        Quest.QuestType.COLLECT
    );

    // Add objective
    collectQuest.addObjective(new QuestObjective(
        "collect_healing_herbs",
        "Gather 10 Healing Herbs",
        10
    ));

    // Set rewards
    collectQuest.setExpReward(100);
    collectQuest.setGoldReward(75);
    collectQuest.addItemReward("Health Potion x3");

    // Set dialogue
    collectQuest.setAcceptDialogue("Great! Look for herbs near the forest.");
    collectQuest.setProgressDialogue("Still looking for those herbs?");
    collectQuest.setCompleteDialogue("Perfect! These will make excellent potions.");

    // Add to NPC
    npcComponent.addQuest(collectQuest);

    return merchant;
}
```

---

## Quest Types

The `Quest.QuestType` enum supports:

- **KILL** - Kill X monsters
- **COLLECT** - Gather X items
- **TALK** - Speak to NPC
- **ESCORT** - Protect/guide NPC
- **EXPLORE** - Reach location
- **DELIVERY** - Deliver item to NPC

*(Currently only KILL is fully implemented)*

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## **Testing the Quest System**

### **Step 1: Start Game**

Player spawns at (8, 5)  
Fionne spawns at (10, 5) with "!" indicator

### **Step 2: Click Fionne**

Press left-click on Fionne  
→ Dialogue box appears with quest offer

### **Step 3: Accept Quest**

Click "Accept" button  
→ Quest added to log  
→ Indicator changes to "..."

### **Step 4: Kill Goblins**

Kill goblins in the area  
→ Console shows quest progress (1/5, 2/5, etc.)  
→ After 5th kill: "Quest completed!"

### **Step 5: Return to Fionne**

Click Fionne again



- Indicator changed to "?"
- Completion dialogue appears
- Click "Close" to claim rewards
- Get 150 XP (may level up!)

## Console Output Example

Fionne NPC created at (10, 5)  
Player clicked NPC: Fionne  
Quest accepted: Goblin Slayer  
Quest added to log: Goblin Slayer

Goblin Lv1 TRASH has died!  
Quest progress: Goblin Slayer - Defeat 5 Goblins (1/5)

Goblin Lv1 TRASH has died!  
Quest progress: Goblin Slayer - Defeat 5 Goblins (2/5)

...

Goblin Lv1 TRASH has died!  
Quest progress: Goblin Slayer - Defeat 5 Goblins (5/5)  
Objective complete: Defeat 5 Goblins  
Quest completed: Goblin Slayer

Gained 150 XP from quest!  
Gained 50 gold from quest!  
Received item: Potion of Minor Healing  
Quest rewards claimed!

## Next Steps







### Features to Add:

1. **Quest Log UI** - View all active quests
2. **Multiple Objectives** - Quests with several tasks
3. **Quest Chains** - Quests that unlock other quests







4. **Item Collection** - Track collected items
  5. **Escort Quests** - NPC following logic
  6. **Timed Quests** - Complete within time limit
  7. **Quest Rewards UI** - Show rewards being awarded
  8. **Quest Markers** - Show locations on minimap
- 

## **Files Modified/Created**

### **New Files:**



-  `Quest.java` - Quest system
-  `QuestObjective.java` - Quest objectives
-  `NPC.java` - NPC component
-  `QuestLog.java` - Player quest tracking
-  `UIDialogueBox.java` - Dialogue UI
-  `QuestIndicator.java` - Visual indicator





### **Modified Files:**

-  `EntityFactory.java` - Added `createNPC()` and `createFionne()`
  -  `Engine.java` - Added NPC interaction
  -  `GameLogic.java` - Added quest progress tracking
  -  `GameState.java` - Added Fionne to world
  -  `UIManager.java` - Added dialogue box support
  -  `Renderer.java` - Added quest indicator rendering
- 

## **Summary**

You now have a complete quest system with:

-  NPC dialogue boxes
-  Quest acceptance/decline

-  Quest progress tracking
-  Visual indicators (! and ?)
-  Reward system
-  Sample quest: "Goblin Slayer"

**Fionne is waiting for you at tile (10, 5)!**