

# Quest Indicator Integration - Complete Summary

## ⌚ What Changed

I've integrated the visual quest indicator system with IntroQuestHandler so Fionne automatically shows the right symbol above her head based on the quest stage.

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## 📊 Indicator Behavior

Quest Stage	Indicator	Meaning
NOT_STARTED	(!) (Gold)	Quest available - talk to Fionne
STAGE_1_DIALOGUE	(!) (Gold)	Quest dialogue shown
STAGE_1_COMPLETE	(...) (Gray)	In progress - equip the sword
STAGE_2_COMPLETE	(!) (Gold)	Next quest available
STAGE_3_DIALOGUE	(!) (Gold)	Next quest available
STAGE_3_COMPLETE	Hidden	All complete
ALL_COMPLETE	Hidden	All complete

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## 🔧 Changes Made to IntroQuestHandler

### 1. Added Import

```
java  
import dev.main.quest.QuestIndicator.IndicatorType;
```

### 2. Added Field to Track Fionne

```
java  
private Entity fionneEntity; // Track Fionne entity for indicator updates
```

### 3. Added Helper Method to Find Fionne

```
java

private void cacheFionneEntity() {
    if (fionneEntity != null) return;

    for (Entity entity : gameState.getEntities()) {
        NPC npc = entity.getComponent(NPC.class);
        if (npc != null && "fionne".equals(npc.getNpcId())) {
            fionneEntity = entity;
            updateQuestIndicator(); // Set initial indicator
            break;
        }
    }
}
```

### 4. Added updateQuestIndicator() Method

```
java
```

```

private void updateQuestIndicator() {
    cacheFionneEntity();

    if (fionneEntity == null) return;

    QuestIndicator indicator = fionneEntity.getComponent(QuestIndicator.class);
    if (indicator == null) return;

    switch (currentStage) {
        case NOT_STARTED:
        case STAGE_1_DIALOGUE:
            indicator.show(IndicatorType.AVAILABLE); // ! (Gold)
            break;

        case STAGE_1_COMPLETE:
            indicator.show(IndicatorType.IN_PROGRESS); // ... (Gray)
            break;

        case STAGE_2_COMPLETE:
        case STAGE_3_DIALOGUE:
            indicator.show(IndicatorType.AVAILABLE); // ! (Gold)
            break;

        case STAGE_3_COMPLETE:
        case ALL_COMPLETE:
            indicator.hide(); // No indicator
            break;
    }
}

```

## 5. Call updateQuestIndicator() After Every Stage Change

- After `completeStage1()`
- After `advanceToStage2Complete()`
- After `completeStage3()`
- After `markAllComplete()`
- In `forceSetStage()` (debug)
- In `resetIntroQuests()` (debug)

## Required: Add QuestIndicator to Fionne

You MUST add this to your `EntityFactory.createFionne()` method:

```
java  
// Add quest indicator component  
fionne.addComponent(new QuestIndicator(-70)); // Positioned above name tag
```

Full example provided in the "EntityFactory.java - Add QuestIndicator to Fionne" artifact.

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## How It Works

Flow Example:

### 1. Game Starts

```
IntroQuestHandler constructor  
→ currentStage = NOT_STARTED  
→ fionneEntity = null (not found yet)
```

### 2. First Click on Fionne

```
handleFionneInteraction()  
→ cacheFionneEntity() finds Fionne  
→ updateQuestIndicator()  
→ Indicator shows "!" (AVAILABLE)  
→ showStage1Dialogue()
```

### 3. Accept Stage 1

```
completeStage1()  
→ currentStage = STAGE_1_COMPLETE  
→ updateQuestIndicator()  
→ Indicator changes to "..." (IN_PROGRESS)
```

### 4. Equip Sword

```
onSwordEquipped()
→ advanceToStage2Complete()
→ currentStage = STAGE_2_COMPLETE
→ updateQuestIndicator()
→ Indicator changes to "!" (AVAILABLE)
```

## 5. Click Fionne Again

```
handleFionneInteraction()
→ STAGE_2_COMPLETE → showStage3Dialogue()
→ Indicator stays "!" (AVAILABLE)
```

## 6. Complete Stage 3

```
completeStage3()
→ currentStage = STAGE_3_COMPLETE
→ updateQuestIndicator()
→ Indicator HIDDEN
```

## 🐛 Error Handling

The system includes safety checks:

```
java

if (fionneEntity == null) {
    System.err.println("[INTRO QUEST] Warning: Cannot update indicator - Fionne entity not found");
    return;
}

QuestIndicator indicator = fionneEntity.getComponent(QuestIndicator.class);
if (indicator == null) {
    System.err.println("[INTRO QUEST] Warning: Fionne has no QuestIndicator component");
    return;
}
```

If you forget to add QuestIndicator to Fionne, you'll see a warning in console but the game won't crash.

## Testing Checklist

- Add `QuestIndicator` to Fionne in EntityFactory
  - Start game → See "!" above Fionne
  - Talk to Fionne → Still "!"
  - Accept quest → Changes to "..." (equip sword)
  - Equip sword → Changes to "!" (next quest)
  - Talk to Fionne → Still "!"
  - Accept stage 3 → Still "!" during dialogue
  - Complete stage 3 → Indicator disappears
  - Talk to Fionne → No indicator, generic dialogue
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## Visual Appearance

The indicator:

- **Bounces** up and down (sine wave animation)
  - **Positioned** 70 pixels above Fionne's position
  - **Color coded**:
    - `!` = Bright gold (255, 215, 0) - Quest available
    - `?` = Bright gold (255, 215, 0) - Quest complete (not used in intro)
    - `...` = Gray (150, 150, 150) - In progress
  - **Font**: Arial Bold, 24pt (`QUEST_INDICATOR_FONT` in Renderer)
  - **Shadow**: Black drop shadow for visibility
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## Benefits

- Visual feedback** - Player knows quest status at a glance
  - No manual updates** - IntroQuestHandler manages everything
  - Consistent with game** - Uses existing `QuestIndicator` system
  - Easy to extend** - Add more stages, indicators auto-update
  - Debug friendly** - Force stage changes update indicator immediately
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## Next Steps

1. **Add QuestIndicator to Fionne** in EntityFactory (see artifact)
2. **Test the flow** (use checklist above)
3. **Verify console output** - Should see indicator state changes
4. **Optional:** Extend to other NPCs with quests

The system is now fully integrated! The indicator will automatically update as players progress through the intro quest chain.