



## Complete Implementation Checklist

### Files to Update (In Order)

- 1. Item.java

**ADD these two methods:**

```
java
```

```

/**
 * ★ NEW: Determine which gear slot this item can be equipped in
 */
public String getEquipSlot() {
    if (isWeapon()) return "WEAPON";

    if (isArmor()) {
        String nameLower = name.toLowerCase();
        if (nameLower.contains("helmet") || nameLower.contains("hat")) return "HEAD";
        if (nameLower.contains("pants") || nameLower.contains("leggings")) return "PANTS";
        if (nameLower.contains("gloves") || nameLower.contains("gauntlet")) return "GLOVES";
        if (nameLower.contains("boots") || nameLower.contains("shoes")) return "SHOES";
        return "TOP_ARMOR"; // Default armor goes to chest
    }

    if (isAccessory()) {
        String nameLower = name.toLowerCase();
        if (nameLower.contains("earring")) return "EARRINGS";
        if (nameLower.contains("necklace") || nameLower.contains("amulet")) return "NECKLACE";
        if (nameLower.contains("bracelet")) return "BRACELET";
        if (nameLower.contains("ring")) return "RING_1";
        if (nameLower.contains("boots") || nameLower.contains("shoes")) return "SHOES";
        return "SPECIAL";
    }

    return null;
}

/**
 * ★ NEW: Can this item be equipped?
 */
public boolean isEquippable() {
    return getEquipSlot() != null;
}

```

**Where:** Add at the bottom of Item.java, before the closing brace

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## 2. UIInventorySlot.java

**ALREADY DONE** if using the debug version!

Contains:

- NEW badge system
- `markAsNew()` method
- `update()` method for animation
- `drawNewItemBadge()` rendering

### **UPDATE the `onRightClick()` method:**

Replace your existing `onRightClick()` with the version from artifact "UIInventorySlot - Right-Click to Equip (All Gear)"

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### 3. **UIGearSlot.java**

**REPLACE** with the icon-enabled version from artifact "UIGearSlot.java (Updated with Icons)"

Contains:

- Icon rendering (same as inventory)
- Rarity borders
- Fallback placeholders

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### 4. **UIScrollViewableInventoryPanel.java**

### **UPDATE `addItemToCurrentTab()` method:**

Replace the existing method with BOTH methods from artifact "UIScrollViewableInventoryPanel - Add NEW Badge Support":

```
java

// Method 1: With markAsNew parameter
public boolean addItemToCurrentTab(Item item, boolean markAsNew) { ... }

// Method 2: Backwards compatible (calls method 1)
public boolean addItemToCurrentTab(Item item) {
    return addItemToCurrentTab(item, true);
}
```

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**Where:** Find your existing `addItemToCurrentTab()` method and replace it with both versions

## 5. UIManager.java

### UPDATE addItemToInventory() method:

Replace with:

```
java

/**
 * ★ UPDATED: Add item to inventory (marks as new by default)
 */
public boolean addItemToInventory(Item item) {
    return addItemToInventory(item, true);
}

/**
 * ★ NEW: Add item with optional "NEW" badge
 */
public boolean addItemToInventory(Item item, boolean markAsNew) {
    if (inventoryContainer == null) {
        createInventorySystem();
    }

    if (inventoryGrid != null) {
        boolean added = inventoryGrid.addItemToCurrentTab(item, markAsNew);

        if (added) {
            System.out.println("Added item to inventory (tab=" + currentInventoryTab +
                ", marked as new=" + markAsNew + ")");
            notifyInventoryUpdate();
            return true;
        }
    }

    System.out.println("Inventory full!");
    return false;
}
```

## Testing Checklist

### Test 1: Icons Show Up

```
java

// Add test items
uiManager.addItemToInventory(ItemManager.createWoodenShortSword());
uiManager.addItemToInventory(ItemManager.createLeatherArmor());
uiManager.addItemToInventory(ItemManager.createPowerRing());
```

#### Expected:

- Icons appear in inventory (or colored placeholders with letters)
  - Rarity-colored borders around items
  - Green "NEW" badges on all three items
- 

### Test 2: Right-Click Equipping

```
java

// Open inventory (I key)
// Right-click the Wooden Short Sword
```

#### Expected:

- Sword moves to Weapon slot
  - Icon appears in Weapon slot
  - Sword removed from inventory
  - Console: "  Equipped Wooden Short Sword to WEAPON slot"
- 

### Test 3: All Gear Types

```
java

// Right-click armor
// Right-click ring
// Right-click boots
```

### Expected:

- Armor → Top Armor slot
  - Ring → Ring 1 slot (or Ring 2 if Ring 1 occupied)
  - Boots → Shoes slot
  - Icons show in all gear slots
- 

### Test 4: NEW Badge Animation

```
java  
// Add an item  
uiManager.addItemToInventory(ItemManager.createHealthPotion());  
// Watch for 5 seconds
```

### Expected:

- Green "NEW" badge appears immediately
  - Badge pulses/glowes
  - Badge fades away after 5 seconds
- 

### Test 5: Stackable Items

```
java  
// Add same item multiple times  
for (int i = 0; i < 5; i++) {  
    uiManager.addItemToInventory(ItemManager.createCarvedWood());  
}
```

### Expected:

- Items stack into one slot
  - Shows count "5" in bottom-right
  - NEW badge shows on stacked item
-

## Troubleshooting

### Compilation Errors

**Error:** "Cannot find symbol: getEquipSlot()"

-  **Fix:** Add the two methods to Item.java

**Error:** "Cannot find symbol: markAsNew()"

-  **Fix:** Use updated UIInventorySlot.java (debug version)

**Error:** "Method does not override or implement a method from a supertype"

-  **Fix:** Check that onRightClick() is in UIInventorySlot, not UIScrollableInventoryPanel
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### Runtime Errors

#### Icons don't show:

-  Check console for icon loading messages
-  Verify PNG files are in `resources/items/icons/`
-  Rebuild project

#### NEW badge doesn't appear:

-  Check `markAsNew` parameter is true
-  Verify `update()` is being called on slots
-  Check console for ".⭐ Marked slot X as NEW"

#### Can't equip items:

-  Verify Item.java has `getEquipSlot()` method
-  Check item names contain keywords ("sword", "armor", "ring", etc.)
-  Look at console for error messages

#### Wrong gear goes to wrong slot:

-  Check item names in ItemManager
-  Verify logic in `getEquipSlot()` method

- Ensure item types are correct (WEAPON, ARMOR, ACCESSORY)
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## Success Criteria

Your implementation is complete when:

1.  **Icons show** in inventory slots
  2.  **Icons show** in gear slots when equipped
  3.  **Colored borders** match item rarity
  4.  **Right-click** any gear to auto-equip
  5.  **Green "NEW" badge** shows on new items
  6.  **Badge fades** after 5 seconds
  7.  **Stack counts** show on consumables
  8.  **Tooltips** show item stats on hover
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## Quick Reference

**Add item with badge:**

```
java  
addItemToInventory(item); // Shows NEW badge
```

**Add item silently:**

```
java  
addItemToInventory(item, false); // No badge
```

**Manual badge control:**

```
java  
slot.markAsNew(); // Show badge  
slot.clearNewBadge(); // Remove badge
```

## **Final Notes**

- All updates maintain backwards compatibility
- Existing code continues to work
- NEW badges are optional (controlled by boolean parameter)
- System works with or without icon files (fallback placeholders)

You're all set! 