🛡️ Gear Icon Setup - Complete Guide

📝 Summary of Changes

1. ✅ UIGearSlot.java

- **REPLACED** with icon-enabled version
- Now displays item icons when equipped
- Shows rarity-colored borders
- Falls back to placeholder if icon missing

2. ✅ Item.java

- **ADD** the new methods: `getEquipSlot()` and `isEquippable()`
- These determine which gear slot an item goes into

3. ✅ UIInventorySlot.java

- **REPLACE** the `onRightClick()` method
- Now handles right-clicking ANY equippable item (not just weapons)
- Automatically puts items in correct slots

🎯 How to Test

Step 1: Add Test Items

Add this method to your UIManager.java (or wherever you initialize):

```java
```

```java
public void addTestGearItems() {
    // Weapons
    addItemToInventory(ItemManager.createWoodenShortSword());
    addItemToInventory(ItemManager.createIronSword());
    addItemToInventory(ItemManager.createMysticStaff());

    // Armor
    addItemToInventory(ItemManager.createLeatherArmor());
    addItemToInventory(ItemManager.createChainmail());
    addItemToInventory(ItemManager.createPlateArmor());

    // Accessories
    addItemToInventory(ItemManager.createPowerRing());
    addItemToInventory(ItemManager.createAmuletOfProtection());
    addItemToInventory(ItemManager.createSpeedBoots());

    System.out.println("✅ Test gear items added!");
}
```

Then call it after UI initialization:

```java
// In your Engine or Game class
uiManager.addTestGearItems();
```

Step 2: Run the Game

1. Start your game
2. Press **I** to open inventory
3. You should see all the test items with icons (or placeholders)

Step 3: Test Equipping

Right-click items to equip them:

Item	Where It Goes	What You'll See
Wooden Short Sword	Weapon slot	⚔️ Sword icon (or "W" placeholder)
Leather Armor	Top Armor slot	🛡️ Armor icon (or "L" placeholder)
Ring of Power	Ring 1 slot	💍 Ring icon (or "R" placeholder)
Boots of Speed	Shoes slot	👢 Boot icon (or "B" placeholder)
Amulet of Protection	Necklace slot	🏅 Amulet icon (or "A" placeholder)

Step 4: Verify Icons Appear

What you SHOULD see:

- ✅ Icons in inventory slots
- ✅ Icons in gear slots when equipped
- ✅ Colored borders based on rarity:
  - Gray = Common
  - Green = Uncommon
  - Blue = Rare
  - Purple = Epic
  - Gold = Legendary

If icons are missing:

- ⚠️ You'll see colored squares with the first letter
- This is normal if you haven't added PNG files yet
- The system still works, just without icons

📁 **Icon Files Needed**

Create these PNG files in `resources/items/icons/`:

Weapons:

- `wooden_short_sword.png`
- `iron_sword.png`
- `steel_longsword.png`

- mystic_staff.png

Armor:

- leather_armor.png
- chainmail.png
- plate_armor.png

Accessories:

- ring_of_power.png
- amulet_of_protection.png
- boots_of_speed.png

Consumables:

- health_potion.png
- mana_potion.png
- stamina_potion.png

Materials:

- carved_wood.png
- clay.png
- fire_rune.png
- ice_rune.png

🎨 Creating Quick Test Icons

If you don't have icons yet, create simple 64x64 PNG files:

Option 1: Solid Colors

- Weapons: Red square
- Armor: Blue square
- Accessories: Purple square
- Consumables: Green square
- Materials: Brown square

Option 2: Use Emojis

1. Find emoji online (⚔️ 🛡️ 💍 🧪)

2. Screenshot or save as image

3. Resize to 64x64

4. Save as PNG

Option 3: Use Existing Icons

Copy from your UI icons folder:

```bash
cp resources/ui/icons/inventory.png resources/items/icons/wooden_short_sword.png
```

🔧 Troubleshooting

Icons don't show in inventory

- ✅ Check console output from debug version
- ✅ Verify resources folder is marked as "Resources Root"
- ✅ Check PNG files exist at correct path

Icons show in inventory but not gear slots

- ✅ Make sure you replaced UIGearSlot.java
- ✅ Rebuild your project
- ✅ Check console for error messages

Can't equip items

- ✅ Make sure you added the new methods to Item.java
- ✅ Make sure you updated onRightClick() in UIInventorySlot
- ✅ Check console output when right-clicking

Wrong item goes to wrong slot

- ✅ Check the `getEquipSlot()` logic in Item.java
- ✅ Item names must contain keywords (e.g., "armor", "ring", "boots")

✨ Expected Behavior

✅ Working Correctly:

Inventory:

[⚔️] [🛡️] [💍] [🧪] [🪵]
 W   L   R   H   C

- Icons or colored placeholders with letters
- Colored borders by rarity
- Stack counts on stackable items

Gear Slots:

[🎩]   [🏵️]
Head   Neck

[⚔️] [👤] [💍]
Weapon Player Ring

[🛡️]   [👢]
Armor   Shoes

- Icons appear when items equipped
- Right-click to unequip (returns to inventory)
- Tooltips on hover

🎮 Full Testing Checklist

☐ Icons show in inventory
☐ Icons show in gear slots when equipped
☐ Rarity borders are correct colors
☐ Right-click weapons → equips to Weapon slot
☐ Right-click armor → equips to Armor slot
☐ Right-click rings → equips to Ring slot
☐ Right-click boots → equips to Shoes slot
☐ Right-click necklace → equips to Necklace slot
☐ Right-click gear slots → unequips items

- [ ] Tooltips show item stats on hover
- [ ] Stack counts display on stackable items
- [ ] Tab system filters items correctly

🚀 Next Steps

Once everything works:

1. **Replace placeholders** with actual icon art
2. **Add more gear types** (helmets, gloves, etc.)
3. **Create more items** using ItemManager templates
4. **Polish the visuals** (shadows, glows, effects)

The system is now fully functional! You can equip gear and see icons in both inventory and gear slots. 🎉