🎮 Lesson 05 Day 1 Activity: Player Rank System

Activity Instructions

📋 Overview

Detail	Info
Activity Name	Player Rank System
Time	10-15 minutes
Skills Practiced	`if`, `else`, `else if`
Difficulty	⭐ ⭐ Intermediate

🎯 What You're Building

You're creating a **competitive ranking system** for GameHub — just like the ones in Rocket League, Valorant, or League of Legends! Players earn ranks based on their points.

The Rank Tiers:

Points	Rank
1000+	🏆 Legend
750-999	💎 Diamond
500-749	⚪ Platinum
250-499	🥇 Gold
100-249	🥈 Silver
0-99	🥉 Bronze

📁 Getting Started

1. **Open** the file `lesson05_day1_activity.js` in VS Code
2. **Read** the player stats at the top (don't change these!)
3. **Complete** each challenge in order
4. **Test** your code in the browser console after each challenge
5. **Save** your file frequently (Ctrl+S / Cmd+S)

✅ Challenge Breakdown

Challenge 1: Basic Rank Assignment

⏱️ **Time: 3 minutes**

Task: Write an `if/else if/else` chain to assign the correct rank based on `playerPoints`.

Requirements:

- ☐ Check for Legend first (1000+)
- ☐ Check conditions from HIGHEST to LOWEST
- ☐ Use `>=` for comparisons
- ☐ Assign rank to the `rank` variable
- ☐ Include all 6 rank tiers

Expected Output (with playerPoints = 650):

```
Player Rank:  ○  Platinum
Points: 650
```

Hints:

- Start with `if (playerPoints >= 1000)`
- Remember: order matters! Check highest values first
- Don't forget the final `else` for Bronze

Challenge 2: Rank with Bonus Message

⏱ **Time: 4 minutes**

Task: Assign a rank AND a personalized message telling players how close they are to the next rank.

Requirements:

☐ Assign the correct rank to `player2Rank`
☐ Calculate points needed for next rank
☐ Create encouraging message in `message` variable
☐ Legend players get a special "top" message

Expected Output (with player2Points = 480):

```
Player 2 Rank: 🥇 Gold
Message: Only 20 points to Platinum!
```

Hints:

- To find points needed: `nextRankThreshold - player2Points`
- Example: For Gold player, Platinum starts at 500
- Use template literals: `` `Only ${points} points to ${nextRank}!` ``

Challenge 3: Win Streak Bonus

⏱ **Time: 4 minutes**

Task: Players with 10+ consecutive wins get upgraded to the next rank!

Requirements:

☐ First determine the base rank from points
☐ Check if `winStreak >= 10`
☐ If yes, upgrade to the next higher rank
☐ Set `bonusApplied` to `true` if upgraded
☐ Legend stays Legend (can't go higher!)

Expected Output (with player3Points = 400, winStreak = 12):

```
Player 3 Base Points: 400
Win Streak: 12
Final Rank: ◯ Platinum  (upgraded from Gold!)
Bonus Applied: true
```

Hints:

- You'll need TWO separate conditional blocks:
    i. First: determine base rank from points
    ii. Second: check win streak and upgrade if needed
- Think about which rank upgrades to which

🌟 Bonus Challenge: Rank Badge Generator

⏱ Time: If you finish early!

Task: Create a complete player badge with rank, color, and stars.

Requirements:

- ☐ Set `badgeRank` based on points
- ☐ Set `badgeColor` (Legend=purple, Diamond=cyan, etc.)
- ☐ Set `badgeStars` (Legend=5, Diamond=4, Platinum=3, Gold=2, Silver=1, Bronze=0)

Expected Output (with badgePoints = 825):

```
===== PLAYER BADGE =====
👤  ProGamer99
🏆  💎 Diamond
🎨  Color: cyan
⭐  ★★★★☆
========================
```

▨ Success Criteria

You've completed the activity when:

- ☐ ✅ Challenge 1: Basic ranks work correctly
- ☐ ✅ Challenge 2: Personalized messages display
- ☐ ✅ Challenge 3: Win streak bonus upgrades ranks
- ☐ ✅ No errors in the console
- ☐ ✅ You can explain WHY order matters in else if chains

🧪 Test Your Code

After each challenge, test with different values:

Test Cases for Challenge 1:

playerPoints	Expected Rank
1500	🏆 Legend
800	💎 Diamond
500	⚪ Platinum
300	🥇 Gold
150	🥈 Silver
50	🥉 Bronze

Test Cases for Challenge 3:

Points	Win Streak	Expected Result
400	12	Platinum (upgraded from Gold)
400	5	Gold (no upgrade)
1200	15	Legend (stays Legend)

🆘 Troubleshooting

"My ranks are all wrong!"

- Check that you're comparing from HIGHEST to LOWEST
- Make sure you use `>=` not just `>`
- Verify each threshold: 1000, 750, 500, 250, 100

"Only the first rank shows!"

- You probably used multiple `if` statements instead of `else if`
- Make sure it's: `if → else if → else if → else`

"My bonus isn't applying!"

- Make sure you set the base rank BEFORE checking win streak
- Check that you're comparing `winStreak >= 10`

"I get 'undefined'!"

- Make sure you're assigning to the correct variable name
- Check for typos in variable names

💡 Key Concepts Practiced

1. **if/else if/else chains** — Multiple conditions checked in order
2. **Comparison operators** — `>=` for "greater than or equal"
3. **Order matters** — Check highest values first
4. **Variable assignment** — Setting values based on conditions
5. **Template literals** — Creating dynamic messages

🎯 Reflection Questions

After completing the activity, think about:

1. What would happen if you checked `points >= 100` before `points >= 1000` ?
2. How would you handle a player with negative points?
3. Could you add more ranks between existing ones? What would you change?

⏭️ What's Next?

Great job! Tomorrow you'll learn:

- **Nested conditionals** — Decisions inside decisions
- **switch statements** — Perfect for menu systems
- **Ternary operator** — One-line conditions

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