Real-World Scenario-Based Coding Tasks Using Conditional Statements in Java

Java Learning Hub!.. 🚀

Q. Age-Based Ticket Pricing System 🎟️

Scenario:

A movie theatre has different ticket prices based on age:

- **Below 5 years** – Free
- **5 to 12 years** – ₹100
- **13 to 60 years** – ₹200
- **Above 60 years** – ₹150

Task:

1. Ask the user to enter their age.
2. Implement conditions to determine the ticket price.
3. Print the price based on the age category.

🚀 **Try implementing it in Java!**

Q. Number Comparison Game 🔢

Scenario:

A game asks the user to input three numbers, and it determines:

- The **largest** number
- The **smallest** number
- Whether all numbers are **equal**

Task:

1. Take three integer inputs from the user.
2. Use **if-else conditions** to find the largest and smallest.
3. Print appropriate messages.

🔥 **Write a Java program for this logic!**

Q. Employee Bonus Calculator 💰

Scenario:

A company gives a bonus based on years of service:

- **More than 10 years** – 10% bonus
- **Between 5 and 10 years** – 7% bonus
- **Less than 5 years** – 5% bonus

Task:

1. Ask the user to enter their salary and years of service.
2. Calculate the bonus based on conditions.
3. Print the final salary after adding the bonus.

💡 **Write Java code for this scenario!**

Q. Student Grade Evaluator 📚

Scenario:

A school follows the grading system:

- **Marks ≥ 90** → A+
- **Marks 80 - 89** → A
- **Marks 70 - 79** → B
- **Marks 60 - 69** → C
- **Marks < 60** → Fail

Task:

1. Take the student's marks as input.
2. Use **if-else ladder** to assign a grade.
3. Display the student's grade.

✍ **Implement it in Java!**

Q. Odd or Even with Extra Conditions 🧐

Scenario:

A program determines whether a number is:

- **Even**
- **Odd**
- **Odd and greater than 50**
- **Even and a multiple of 10**

Task:

1. Take an integer input.
2. Use **nested if-else** to check multiple conditions.
3. Print the appropriate category.

🎯 **Write Java code to implement this logic!**

Q.ATM Cash Withdrawal System 🏧

Scenario:

An ATM allows cash withdrawals only under certain conditions:

- **User must enter the correct PIN.**
- **Requested amount should be a multiple of ₹100.**
- **User should have sufficient balance.**

Task:

1. Ask the user to enter a **PIN** (assume correct PIN is 1234).
2. Take **balance** and **withdrawal amount** as inputs.
3. Check if the PIN is correct, the amount is a multiple of 100, and if the balance is enough.
4. Display an appropriate message for success or failure.

Implement this in Java! 🏦

Q. Traffic Light Controller 🚦

Scenario:

A traffic light system works based on color input:

- **"Red"** → Stop 🚗
- **"Yellow"** → Get Ready 🏁
- **"Green"** → Go 🏎️
- **Any other color** → Invalid Input ❌

Task:

1. Ask the user to enter a traffic light color.
2. Use **if-else** to print the correct action.
3. Handle invalid inputs.

🎯 **Write a Java program to simulate this!**

Q. Online Shopping Discount Calculator 🛒

Scenario:

An e-commerce website offers discounts based on purchase amount:

- **Above ₹5000** → 20% discount
- **Between ₹2000 and ₹5000** → 10% discount
- **Below ₹2000** → No discount

Task:

1. Take **total bill amount** as input.
2. Apply the discount based on conditions.
3. Print the **final amount after discount**.

🛍️ **Code this in Java and test with different amounts!**

Q. Smart Home Temperature Control 🌡️

Scenario:

A smart AC adjusts based on room temperature:

- **Above 30°C** → Set AC to High ❄️
- **Between 20°C and 30°C** → Set AC to Medium 🌬️
- **Below 20°C** → Turn AC Off 🚫

Task:

1. Take **room temperature** as input.
2. Use **if-else** conditions to decide the AC setting.
3. Print the **AC mode**.

🏠 **Write a Java program for this logic!**

Q. Car Fuel Indicator System ⛽

Scenario:

A car dashboard shows fuel level warnings:

- **More than 50% fuel** → "Enough Fuel ✅ "
- **Between 20% - 50%** → "Refuel Soon ⏳ "
- **Less than 20%** → "Low Fuel! 🚨 "

Task:

1. Take **fuel percentage** as input.
2. Use **conditional statements** to display a warning message.
3. Test different values and see the output.

🚗 **Implement it in Java and check the results!**

Don't worry if it doesn't work the first time, Even a calculator had to be invented first 🔢 !..