



# JAVA PROGRAMMING PROJECT LIST

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## Project Title: Virtual Spin Wheel for Rewards – Spin to Win with Java!

To create a fun and interactive **Java console application** that simulates a virtual spin wheel, randomly selecting a reward for the user. This project is designed to help learners practice **randomization, arrays, loops, and conditional logic** in Java.

### 1. Tasks / Requirements

#### Core Features to Include:

- Display a welcome message with instructions
- Define a set of predefined rewards in an array (e.g., “Free Coffee”, “Extra Credit”, “Amazon Gift Card”, “Try Again”, etc.)
- Use Java’s Random class to simulate the spinning of the wheel
- Randomly select and display a reward
- Prompt the user to spin again or exit

#### Basic Flow:

1. Show the list of available rewards
2. Ask the user: “Press Enter to Spin the Wheel”
3. Generate a random index and pick a reward
4. Display the selected reward
5. Ask the user: “Do you want to spin again? (yes/no)”
6. Repeat or exit based on the response

#### Optional Enhancements:

- Add a **spin animation effect** using delays (`Thread.sleep()`)
- Limit the number of spins allowed per session

- Track the **total rewards won**
- Assign different **probabilities/weights** to each reward
- Display a “Thank you for playing!” message with a summary at the end

## 2. Tools to Use

- **Language:** Java (SE 8 or higher)
- **IDE:** IntelliJ IDEA, Eclipse, BlueJ, VS Code, or Replit
- **Java Classes & Features:**
  - Scanner for user input
  - Random for reward selection
  - Array or ArrayList to store rewards
  - Thread.sleep() (optional for animation effects)

## 3. Concepts Used in This Project

- Java program structure and syntax
- Arrays or ArrayLists to manage reward items
- Random number generation using java.util.Random
- Input/output handling using Scanner
- Loops (while, do-while) for repeatable interaction
- Conditional logic (if, switch)
- Optional: Thread.sleep() for simulating spin delay
- Clean UI in console with formatted output