1. Check if a Number is Positive or Negative
2. Check if a Number is Even or Odd
3. Find the Largest of Two Numbers
4. Find the Largest of Three Numbers
5. Check if a Year is a Leap Year
6. Check Vowel or Consonant
7. Check if a Person is Eligible to Vote
8. Check Number Type (Positive, Negative, Zero)
9. Nested if: Check Even or Odd and Positive or Negative

1. The AI Security System 🤖🔐  
A high-tech security system uses multiple conditions to allow access to a secret lab.  
  
Challenge:  
A person needs to meet the following conditions to enter:  
  
They must have an access card (true or false).  
If they do not have an access card, they can enter only if they are a scientist (true or false) AND they know the secret passcode (true or false).  
If they have an access card, check its security clearance level (integer).  
If the clearance level is 5 or higher, allow entry.  
If the clearance level is below 5, entry is denied.

2. The Space Rescue Decision 🚀🆘  
A spaceship captain has to decide whether to rescue a stranded astronaut.  
  
Challenge:  
The spaceship will attempt a rescue only if:  
  
The astronaut sends a distress signal (true or false).  
If no distress signal is received, the captain will only attempt a rescue if:  
The astronaut is on a habitable planet (true or false).  
AND the planet is within reachable distance (true or false).

**3. The Ancient Puzzle Door 🏛️🔑**  
An **ancient temple door** will only open if the adventurer **solves the puzzle** or **meets special conditions**.  
**Challenge:**  
To **open the door**, one of the following conditions must be met:

* The adventurer **solves the puzzle** (true or false).
* If they don’t solve the puzzle, they can **still enter** if:
* They **possess the golden amulet** (true or false).
* OR they **have a companion who knows the puzzle solution** (true or false).
* If neither is true, check if they **are a direct descendant of the temple's creators** (true or false).
* If they are a descendant, they can **enter**.
* Otherwise, **the door remains locked**.

4. **1. The AI feeling Detector 🤖😃**  
An advanced AI assistant detects a person's **mood** and suggests an appropriate activity.  
**Challenge:**

* Given a **feeling** (string: "happy", "sad", "angry", "bored", "excited", "tired"), the AI suggests an activity:
* "happy" → "Go out and celebrate! 🎉"
* "sad" → "Watch a comforting movie. 🍿"
* "angry" → "Try meditation or deep breathing. 🧘"
* "bored" → "Read a book or try a new hobby. 📚"
* "excited" → "Share the good news with friends! 🎊"
* "tired" → "Take a nap or rest. 😴"
* **Any other mood** → "Mood not recognized. Try expressing yourself more clearly!"

5. **The Smart Vending Machine 🥤🍫**  
A **smart vending machine** dispenses items based on a selected product **code**.  
**Challenge:**

* Given a **product code** (1 to 5), the vending machine dispenses:
* 1 → "Coke 🥤 - $1.50"
* 2 → "Chips 🍟 - $1.00"
* 3 → "Chocolate 🍫 - $2.00"
* 4 → "Water 💧 - $1.00"
* 5 → "Juice 🍊 - $1.75"
* **Invalid code** → "Invalid selection. Please try again!"

**6. The Space Mission Control Panel 🚀🔧**  
A **space mission control panel** executes commands based on an input **operation code**.  
**Challenge:**

* Given a **command code** ("launch", "abort", "status", "self-destruct", "reboot"), the control panel performs:
* "launch" → "Initiating launch sequence... 🚀"
* "abort" → "Mission aborted! Returning to standby mode. ❌"
* "status" → "All systems operational. ✅"
* "self-destruct" → "WARNING! Self-destruct sequence initiated! 💥"
* "reboot" → "Rebooting all systems... Please wait. 🔄"
* **Unknown command** → "Invalid command. Please enter a valid operation!"