**Planning: Jeopardy Game Program**

# **Game Objective**:

The objective of this exercise is to develop a modular and efficient Jeopardy game program that can manage player inputs, track scores, and display questions dynamically.

# **Components**:

1. **Game Categories and Questions**:
   * At least 3 categories with 5 questions each (15 total questions).
   * Questions should range from $200 to $1000 in difficulty/value.
   * Answers must be formatted as questions (e.g., "What is...?").
2. **Players**:
   * Support two players with real-time score tracking.
3. **Timing**:
   * Players have 10 seconds to respond to each question.
4. **Moderator Role (Program Logic)**:
   * Display questions.
   * Validate answers and handle score updates.
   * Mark questions as answered to prevent repeats.

# **GameFlow**:

1. **Initialization**:
   * Start game with a welcome message.
   * Explain the rules.
   * Gather player names.
   * Set up the question board.
2. **Gameplay**:

**Step 1**: Players take turns selecting questions.

**Step 2**: Present selected question.

**Step 3**: Start timer and collect the answer.

**Step 4**: Check the answer:

If correct, award points.

If incorrect, deduct points and pass turn.

**Step 5**: Mark question as answered.

1. **End Game**:
   * When all questions are answered, calculate and display final scores.
   * Declare the winner.
2. **Exit**:
   * Thank players and exit the game.

# **DataStructures**:

* Use dictionaries for storing categories, questions, and answers.
* Use variables for player scores and question states.

# **Optimization**:

* Create reusable functions for actions like presenting questions, validating answers, and updating scores.