**Outline**

Play the original Simon game to establish a mind-set around basic game systems. Research the history of game systems. Analyze the Simon game from an input-process-output perspective.

**Objectives**

* Use the input-process-output model to solve programming problems.
* Use industry-standard programming tools (e.g., UML [Unified Modeling Language], diagrams, structure charts, flow charts, pseudocode) to develop a software project.

**Materials**

* Simon game obtained from teacher

**Level 1: Play the Simon Game**

1. Play the Simon game in your group while taking note of the following game-play items:
   1. What was your personal best score?
   2. What was the personal best score in your group?
   3. What makes it a good game?
   4. In what ways is it similar to modern computer games?
2. Play the Simon game in your group while taking note of the rules of the game:
   1. How do users input information into the game?
   2. How does the game output feedback to the players?
   3. What are the game options for starting the game?
   4. What are the end conditions for stopping the game?

**Level 2: Simon History**

Suggested web resource: http://americanhistory.si.edu/collections/search/object/nmah\_1302005

1. Research the history of the Simon game, focusing on the following questions:
   1. Who created Simon?
   2. What previous game was it based on?
   3. What was the first game system?
   4. What games did it have on it?
2. In your group, discuss the following questions:
   1. What is the oldest game system you have played on?
   2. How are old games different from current games?
   3. How are old games similar to current games?

**Level 3: Inside the Simon Game**

1. Research on-line about what is physically inside the game and the components inside the package:
   1. What electronics devices and components provide the logic and computer processing?
   2. What electronics devices and components collect physical input from the user?
   3. What electronics devices and components provide output (sight and sound) to the user?
2. Research on-line about program logic (e.g. software) is inside the game and recent projects to emulate (duplicate) the game on modern computers.
3. Compare the Simon Game to other classic handheld game systems like the Nintendo DS:
   1. List some similarities.
   2. List some differences.
4. Compare the Simon Game to modern console game systems:
   1. List some similarities.
   2. List some differences.

**Level 4: Presentation**

1. With your group, prepare a 5-10 minute PowerPoint (or equivalent) presentation about your research related to the Simon Game.