**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?

My personal best score was 16, because after 16 it was a little hard to remember the pattern because it got longer and longer.

* 1. What was the personal best score in your group?
  2. What makes it a good game?

It is a good game because you can challenge your friends to beat your score and the sounds nad colours make it more fun also.

* 1. In what ways is it similar to modern computer games?

It is similar to modern games because it has sounds like many other modern games. Also, it has colours in them and you can have competitions with friends.

1. 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?

The users have to press a button with a specific colour that is meant to repeat the pattern.

* 1. How does the game output feedback to the players?

The game plays a specific sound and lights up a specific colour so the player knows which button to press.

* 1. What are the game options for starting the game?

You can do a solo or multiplayer option.

* 1. What are the end conditions for stopping the game?

At the end it plays a different tune to end off the game or round.

**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? Ralph Baer
   2. What previous game was it based on? Atari game called Touch Me.
   3. What was the first game system? Nintendo.
   4. What games did it have on it? Pong and Space Invaders.
2. In your group, discuss the following questions:
   1. What is the oldest game system you have played on?

Gameboy.

* 1. How are old games different from current games?

The quality is much more clear now compared to old games and the graphics are better.

* 1. How are old games similar to current games?

They still have the basics like light, sound, colour, and multiplayer.

**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?

Some input devices are keyboards, mouse, scanners digital cameras and joysticks.

* 1. What electronics devices and components collect physical input from the user?

Some output are text, graphics, audio and video.

* 1. What electronics devices and components provide output (sight and sound) to the user?

Some devices are screens and speakers.

1. Research on-line about program logic (e.g. software) is inside the game and recent projects to emulate (duplicate) the game on modern computers.
2. Compare the Simon Game to other classic handheld game systems like the Nintendo DS:
   1. List some similarities.

Some similarities are both are used for entertainment and both are portable. They both need

programming and both have input and output devices.

* 1. List some differences.

Some differences are that the Nintendo DS can hold a lot more games and is more electronically

advanced than Simon.

1. Compare the Simon Game to modern console game systems:
   1. List some similarities.

Both consoles and both are fun. Both have output and input devices.

* 1. List some differences.

Modern day devices have screens as an output device along with speakers where Simon only

has audio output and doesn’t have a screen.

**Level 4: Presentation**

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