B.1 answers

**Level 1: Start of Game - Input / Output Analysis**

Explore the Simon Game and Instruction Booklet to understand how the game works with respect to starting a new game.

1. Describe how to start a new game in your own words using point form.

* You would start the game by pressing any button of your choice.
* For solo mode one would press the red button.
* You would press the green button for the pass it mode.
* You would press the red button for two seconds to get the high score.

1. Re-format your answer to question #1 above to identify and list all the steps required to start a new game.
   * Use an IF … THEN… statement format.
   * e.g. IF the user presses a green button THEN the game flashes a green light

If you press any button, then the game would turn on.

If you press the red button, then the game would go into solo mode.

If you press the green button, then the game would go into party mode.

If you press the red Button for two seconds, then the game would tell you the high score.

1. List all of the user input objects and actions using a table similar to the one below.

|  |  |  |
| --- | --- | --- |
| **Object** | **Action** | **Result** |
| Red Button | Push when game is started. | It would put you into the solo mode. |
| Green Button | Push when game is started. | It would put you into the pass it mode. |
| Yellow Button | Push. | This would remember the colour you pressed. |
| Blue Button | Push. | This would remember the colour you pressed. |
| Red Button | Push for two seconds. | This would give you the high score. |
| Green Button | Push. | This would remember the colour you pressed. |
| Red Button | Push. | This would remember the colour you pressed. |

1. List all of the user output objects and actions using a table similar to the one below.

|  |  |  |
| --- | --- | --- |
| **Object** | **Action** | **Meaning** |
| Red light | Play beep noise. | It would indicate a correct step in the pattern. |
| Green light | Play beep noise. | It would indicate a correct step in the pattern. |
| Yellow light | Play beep noise. | It would indicate a correct step in the pattern. |
| Blue light | Play beep noise. | It would indicate a correct step in the pattern. |
| Red button | Light up for one second. | You clicked the correct colour in the pattern. |
| Green button | Light up for one second. | You clicked the correct colour in the pattern. |
| Yellow button | Light up for one second. | You clicked the correct colour in the pattern. |
| Blue button | Light up for one second. | You clicked the correct colour in the pattern. |
| Red button | Light up for two seconds. | Wrong colour clicked in the pattern. |
| Green button | Light up for two seconds. | Wrong colour clicked in the pattern. |
| Yellow button | Light up for two seconds. | Wrong colour clicked in the pattern. |
| Blue button | Light up for two seconds. | Wrong colour clicked in the pattern. |
| Red light | Play game over tone. | Wrong colour clicked in the pattern. |
| Green light | Play game over tone. | Wrong colour clicked in the pattern. |
| Yellow light | Play game over tone. | Wrong colour clicked in the pattern. |
| Blue light | Play game over tone. | Wrong colour clicked in the pattern. |
| Red, green, blue and yellow light | All buttons light up at once. | You got the pattern correct and you move on to the next level. |

**Level 2: Game Play - Input / Output Analysis**

Explore the Simon Game and Instruction Booklet to understand how the game works with respect to playing the game.

1. Describe how to play the game in your own words using point form. Assume that the pattern is at the 3 tone stage (e.g. Red, Green, Blue).

* the game would show you the pattern by lighting up the buttons and playing a sound in order of how the pattern should be
* then you press the buttons in the correct order that the game showed you and the correct color combination
* if you don’t follow the pattern or switch the color combination then the game would do a game over sound

1. Re-format your answer to question #1 above to identify and list all the steps required to start a new pattern.
   * Use an IF … THEN… statement format.
   * e.g. IF the user presses a green button THEN the game flashes a green light

If you input the correct colour pattern red, green and blue, then the player would move on to the next pattern which is the next level

1. Re-format your answer to question #1 above to identify and list all the steps involved in successfully completing the pattern (e.g. Red, Green, Blue).
   * Use an IF … THEN… statement format.
   * e.g. IF the user presses a green button THEN the game flashes a green light

If you input the correct colour combination that was shown to you which is Red, green and blue, then the game would light up all four buttons and give you a winner sound which indicates that will move on to the next set of pattern which is conciderd the next level.

1. Re-format your answer to question #1 above to identify and list all the steps related to making a mistake in the pattern (e.g. Red, Green, Red).
   * Use an IF … THEN… statement format.
   * e.g. IF the user presses a green button THEN the game flashes a green light

If you press the wrong button in the colour coordination, then the wrong button you pressed would light up to show that you made a mistake and the game would make a game over sound.

1. List all of the user input objects and actions using a table similar to the one below.

|  |  |  |
| --- | --- | --- |
| **Object** | **Action** | **Result** |
| Red Button | Pushed first. | It would remember a step in the pattern |
| Red Button | Pushed in incorrect order. | It would not remember a step in the pattern |
| Green Button | Pushed second. | It would remember a step in the pattern |
| Green Button | Pushed in incorrect order. | It would not remember a step in the pattern |
| Blue Button | Pushed third. | It would remember a step in the pattern |
| Blue Button | Pushed in incorrect order. | It would not remember a step in the pattern |

1. List all of the user output objects and actions using a table similar to the one below.

|  |  |  |
| --- | --- | --- |
| **Object** | **Action** | **Meaning** |
| Red Light | Play beep sound. | correct colour clicked in the pattern. |
| Green light | Play beep sound. | correct colour clicked in the pattern. |
| Red light | Play beep sound. | correct colour clicked in the pattern. |
| Red light | Play game over tone. | wrong colour clicked in the pattern. |
| Green light | Play game over tone. | wrong colour clicked in the pattern. |
| Blue light | Play game over tone. | wrong colour clicked in the pattern. |
| Red button | Light up for one second. | correct colour clicked in the pattern. |
| Green button | Light up for one second. | correct colour clicked in the pattern. |
| Blue button | Light up for one second. | correct colour clicked in the pattern. |
| Red button | Light up for two seconds. | wrong colour clicked in the pattern. |
| Green button | Light up for two seconds. | wrong colour clicked in the pattern. |
| Blue button | Light up for two seconds. | wrong colour clicked in the pattern. |
| Red, green, blue and yellow buttons | All buttons light up at once. | pattern is correct and you go to the next level. |