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Due: Wednesday, 10 July 2024, 11:55 PM

Your instructor will grade you based on the [Discussion Forum Rubric Unit 3.](#)

Assignment Information:

In this discussion assignment you will evaluate and compare different flip flops such as D, JK, and T flip-flops in digital circuit design.

Scenario: Arcade Game Circuit Design

You and your classmates are taking an introductory course in digital circuit design. As part of a project, your task is to design a simple electronic circuit for an arcade game that uses flip-flops. You need to choose between D, JK, and T flip-flops to create a circuit that keeps track of the player's score and controls the game's lights and sound effects.

Based on the scenario, answer the following questions:

1. How can D flip-flops be connected to create a binary counter that accurately records the player's score as they progress through the game? What kind of information would you store in each D flip-flop?

2. In the context of the arcade game, where do you think would T flip-flops be employed to control the flashing lights and sound effects that indicate game events?

3. Imagine you had chosen JK flip-flops instead of T flip-flops for controlling lights and sound in the game. How would the behavior of JK flip-flops differ from T flip-flops in this scenario, and what changes might you need to make to your circuit design to accommodate JK flip-flops?

Your Discussion should be a minimum of 500 words in length and not more than 750 words. Please include a word count. Following the APA standard, use references and in-text citations for the textbook and any other sources.

End your discussion post with one question related to the concepts learned in this unit, from which your colleagues can formulate a response or generate further discussion.

  NOTE: Remember to post as early as possible.

Discussion Responses

Please respond to any two classmates by providing comments or questions about their main post. Feedback should be appropriate, meaningful, and helpful. Overall, your comments should contribute positively to the conversation by broadening or clarifying it. Feedback should be in complete sentences. Read '[Peer feedback for students](#)' to know more on how to give feedback.

Academic Integrity

If at any time you suspect that a post in this assignment violates UoPeople's rules regarding plagiarism and/or any aspect of UoPeople's Academic Code of Conduct, please notify your instructor immediately. Refer to the [UoPeople APA Tutorials in the LRC](#) for help in APA citations.

Please wait for your instructor to post the discussion assignment below.

This is a question and answer forum. To see other replies, you must first post your reply.

Separate groups: Group 0008

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