

## 1. What are the most challenging aspects of the coursework task?

The coursework task posed significant challenges, primarily centered around validating player moves in the tic-tac-toe game. Ensuring that the moves adhered to the specified range (0 to 2) and confirming the unoccupied status of the selected cell demanded meticulous coding. The complexity escalated with the introduction of a computer move, necessitating strategic decision-making to uphold an engaging and dynamic gaming experience. Integrating this additional layer required careful consideration to seamlessly blend the computer's moves into the existing code structure.

Effectively navigating these challenges required a thorough understanding of game logic, input validation, and strategic decision-making. The task not only demanded precise coding for managing player moves but also introduced a heightened level of complexity with the inclusion of computer-generated decisions. Striking a balance between these elements contributed to the depth of the coursework, ultimately enhancing problem-solving skills within the realm of Python programming.

## 2. How did you go about completing the task?

In tackling the task, I embraced a methodical, step-by-step approach. My initial focus centered on the establishment of the game board, accompanied by the implementation of a function for its visual representation. This foundational step served as the bedrock for subsequent advancements. Transitioning to the player move function, I introduced a loop mechanism, persistently prompting for input until a

valid move was received, all the while ensuring the robust incorporation of error handling.

As the task unfolded, the integration of the computer move introduced an additional layer of intricacy. This stage demanded a strategic mindset, requiring meticulous efforts to seamlessly weave the computer's moves into the existing code structure while upholding readability and simplicity.

This incremental methodology facilitated a logical progression, ensuring each component underwent thorough development before transitioning to the next phase. The thoughtful consideration given to both player and computer moves underscored a commitment to delivering a cohesive and engaging tic-tac-toe implementation.

3. What have you learned over the course of completing this coursework task?

Throughout the completion of this coursework task, I acquired valuable insights into diverse programming aspects. Handling user input, grappling with game logic intricacies, and delving into rudimentary computer decision-making provided a hands-on learning experience. This process enabled me to acquaint myself with the nuances of managing loops for user interactions, ensuring a smooth and responsive interface. Additionally, overcoming challenges related to varied inputs, a fundamental aspect of game logic, deepened my understanding of the intricacies of input validation.

Furthermore, actively monitoring the dynamic changes in the game board contributed to a more comprehensive understanding of state

management in programming. The practical nature of this coursework led to a nuanced improvement in my Python skills. Exposure to real-world coding challenges instilled confidence in addressing problems methodically and emphasized the significance of clear, efficient code for enhanced readability and maintainability.