1. What are the most challenging aspect of the coursework task?

The above task's implementation of game logic, user input, and output that is relevant to the user are the most difficult to complete. For instance, obtaining the player's move and verifying the input to make sure the player has entered a legitimate cell on the board. Putting the computer's move into practice presents another difficulty. A random number must be created and used as the cell's representation to achieve this. The task of determining whether the player or the machine has won the game presents another obstacle. This calls for examining each and every potential winning scenario, such as determining if three identical marks appear in a row, column, or diagonally.

Furthermore, it might be difficult to save and load scores into and out of a file since doing so entails working with file I/O operations and transforming data from a file into a dictionary and vice versa. Displaying the leaderboard presents another difficulty because it calls for sorting the results and meaningfully presenting them.

Overall, the assignment necessitates a thorough comprehension of the Python implementation of the game logic as well as the capacity to handle and manipulate data in a file.

1. How did you go about completing the task?

As a language model, I was able to do the work by simply storing the user-provided code snippets in my memory and producing text based on those. Although I don't have any personal experiences or feelings, I have been trained on a variety of text material, which enables me to respond to a wide range of activities like coding.

For this particular work, I generated the definitions and functions for the menu, load scores, save score, and display leaderboard routines using the code snippets offered. I filled in the implementation based on the details supplied in the comments and the task's context after the code snippets gave function headers and some remarks on what the functions should accomplish.

Overall, I used a simple approach to doing the work. I just followed the instructions and used the information to produce the code.

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

I had to develop code in order to complete this class assignment using the guidelines and prompts provided. This gave me the opportunity to show that I can create code to perform the needed functionality, such as initializing a game board, obtaining player input, and figuring out if a game is a win or a tie. It also strengthened my comprehension of basic programming ideas like loops, functions, and data structures. The code describes the flow and rules of the game of tic tac toe, including the criteria for a victory, a draw, and the sequence of moves. The code explains how to accept input from the player and show the user the game board. Input/Output Handling The code explains how control flow is utilized to go through the game and make decisions, as well as implementing methods for a variety of game behaviors. Data structures: The code shows how to work with arrays to store and update game state while representing the Tic Tac Toe board as a 2D array.

In summary I can hone my skills and show my ability by completing assignments like this one.