

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

Ans: The coursework task is about a simple game called Noughts and crosses (Tic Tac Toe) in which two players can play. The game is of three-by-three grid where players take their turns to place their mark that is either a nought "0" or a cross "x" in the cell of the grid. In this game the player who put values placing 3 of their marks in the horizontal, Vertical, or Diagonal row will be the winner.

During this coursework task , I had faced some of the most challenging aspect of the program Noughts and crosses which I am going to describe. First of all, I had got problems in thinking about the game logic. Since I am beginner of python programming and first time I am developing this game so I felt difficult to this the login of game but after more research , I got the logic and start to program by defining the different functions such as "check for win", "check for draw". Second challenge is that during the User input validation. The requirements was to validate the user's placed value should be within the valid range and the cell will be empty. So in this case I had handled it by defining function "get player move" in which user input row and column numbers. Likewise I had faced challenges in leadership board and file handling case.

2. How did you go about completing the task?

Ans: To complete this task , I had used different steps. In first, I import different built-in modules like import random for choosing computer random choice , import os.path for checking the directory or path of the file exists or not and import json for storing and exchanging the leadership board.

After that I had defined different functions for draw board to display the game in 3*3 grid form with dashes and pipes, for welcoming the message to display welcome messages, for initializing the board to set all the elements of board in single space character, for player move (board) to prompt the user input in the form of row and column for their moves, for choosing computer move(board) to choose random empty cells , for checking the win board (board,mark) to check if player has won or the computer , for checking the draw to check the game is draw by iterating through the cell and check if any empty or not, and lastly for playing game to defines player or computer marks and updates board

checking for win or draw and switches player until game over. Likewise at last I had defined load scores , save scores and display leadership board.

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

Ans: From this coursework task, Somehow I had built up confidence how to tackle different challenges python programs. This coursework helps me to understand this concepts and techniques used in python. I got idea how to handle error if the user inputs invalid values like non integers value or out of range choices. It helps me to find error and handle exceptions for running the program smoothly. Likewise , I learned to define different functions like displaying the messages, initializing the board t set all elements of the board in one spaces, getting player move to ask the user for the cell to put the “x” in the boards etc. Likewise, I had also learned how to handle file and how to manages leader board. I also learned how to combine all the functions and implement as a main program flow. Soo this coursework was very helpful for me to develops my skills and creativity.