1. The printGantt function is used to print out the gantt chart, it takes in an array of task structures (tasksArray) and the number of tasks (numTasks). First the function clears the console to get rid of previous gantt charts, using a for loop it then prints out a line with vertical bar breaks every 10 characters. Next the headings for all the columns are printed. The function then enters a loop that iterates through each task in the tasksArray. For each task, it prints a row that includes the task name and a series of X's to represent the months in which the task is scheduled to take place. If a month falls outside the range of the task's start and end months, the function prints spaces instead of X's. After printing the month columns, the function prints the task's dependencies in the final column. If the task has no dependencies, this column will be empty. The function also takes into account the number of dependencies spacing them out as necessary. Finally the function prints another line with bar breaks completing the chart border.
2. To map the task to a struct we made a struct called Task that has a pointer to a character array, two integers for start month and end month, a pointer to an integer array for all the dependencies, and an integer for dependencies count. We read in all these values from the user in the SetupTask function and used malloc to create the arrays before assigning the values.
3. To edit a task the user first enters the name of the task they want to change, then we used strcmp to find if that task actually exists, and if it does, then we just reused the SetupTask function from the beginning to fill in the tasks values again.
4. To check for circle dependencies we used a recursive function that accepts a linked list and it goes down each tree and sees if the node it is currently in is contained in the linked list. If it is then a circle dependency is found, otherwise it adds the current node to the list and goes onto the next node in the tree. Once there are no more nodes to travel to in a tree then it is free of circle dependencies.
5. The ascii art added is used a sort of logo which is printed at the start and end of the programme execution.
6. Group C, Assignment 2, [Artjoms Kucajevs / Assignment 2 · GitLab (ucd.ie)](https://csgitlab.ucd.ie/artemkuc44/assignment-2)