LAB 1 – Algorithm

ELEC 3150 – Object Oriented Programming (Fall 2023)

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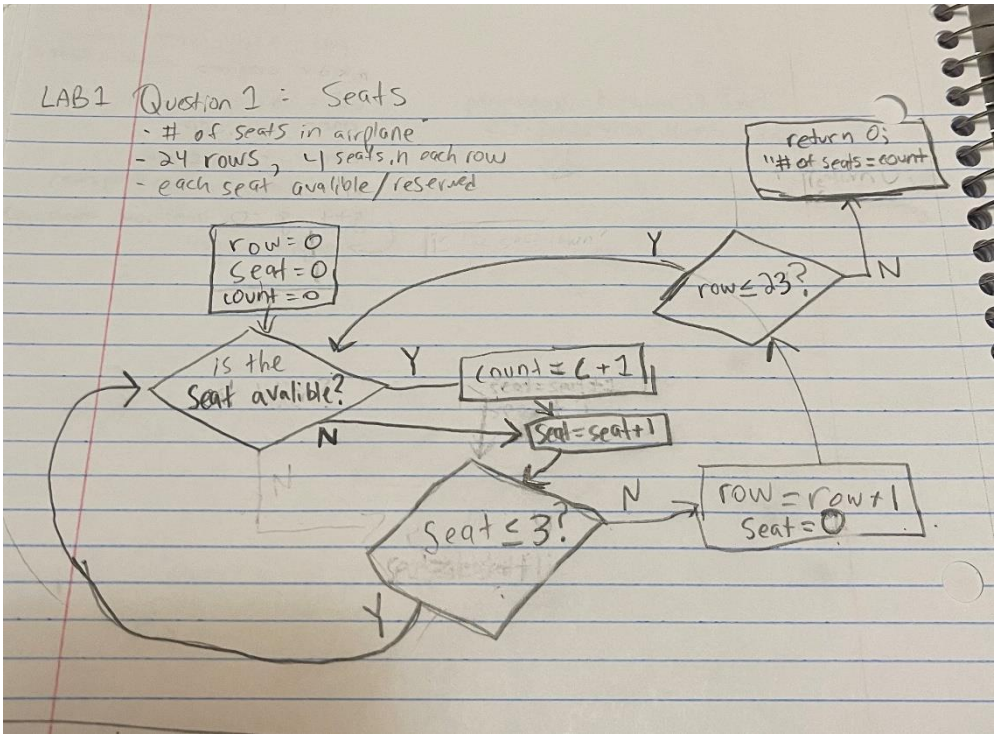
Question 1: Seats

Create a flowchart to find the number of available seats in an airplane from the airline seating system.

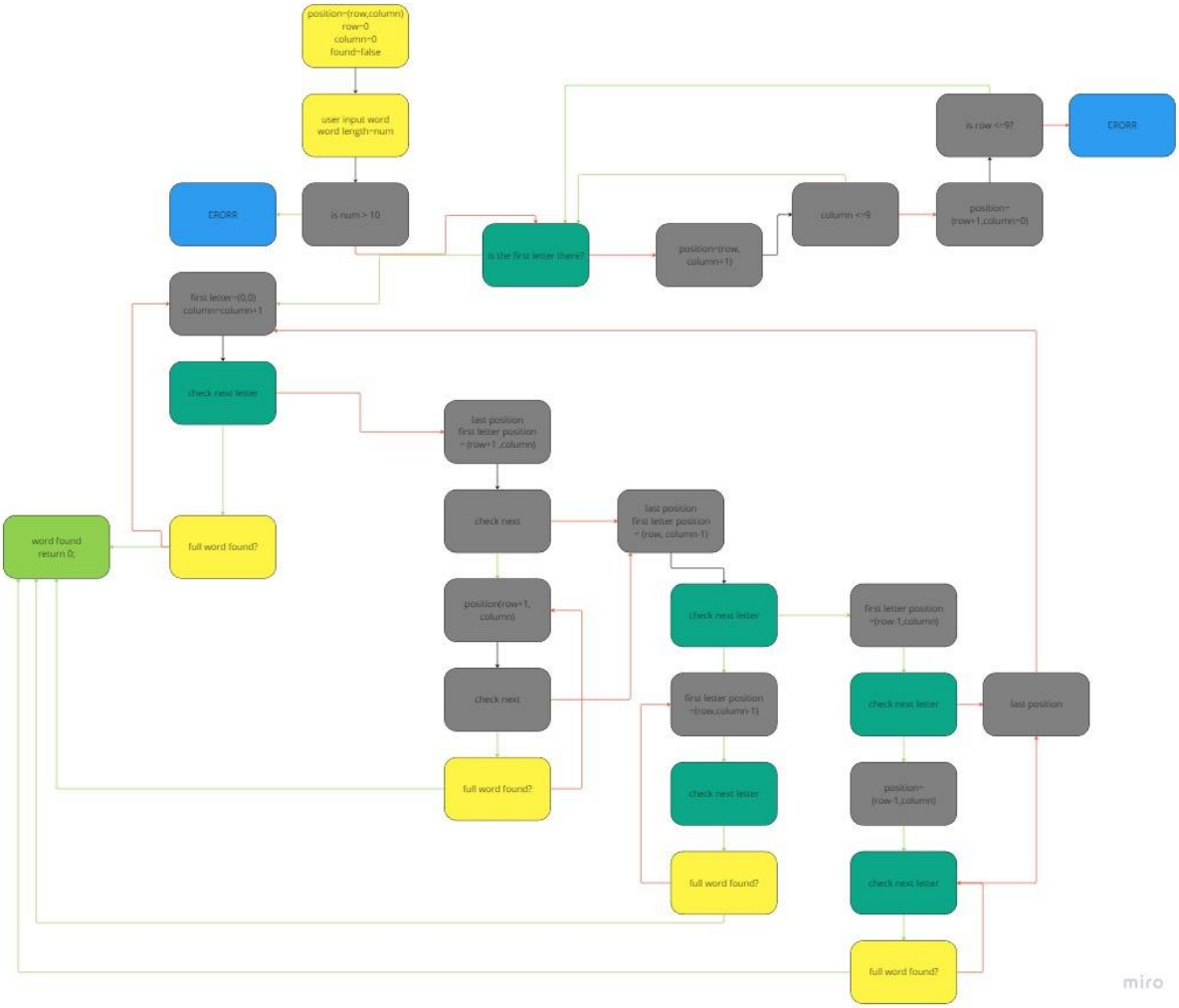
Assumption: 24 rows, each row has 4 seats. Each seat has status: avalible/reserved.

Answer:



In this flowchart, we start by initializing all the variables to 0 since we start count at 0. First it checks if the seat is avalible, if it is then it adds 1 to the count, and then moves to the next seat. If not avalible, it still moves to the next seat. It then checks if the seats are less or equal to 3. Then it checks if the next seat is available. Once the seats in that row are equal to three it sets the seat count back to 0, and then moves onto the next row until it counts 23 rows. Looping the algorithm until it reaches the last row and seat where it will return the counted number of seats.

Question 2:



In this flowchart the user will input a word. It was figure out how many characters there are. It will search up,down,left,right. It will also determine if the word was not found. It uses repetition and loops so if the first letter is not found it keeps looping until the first letter is found until the full word is found.

Self-Assessment: In this lab I learned how to make flow charts and use pseudo code to organize thoughts and algorithm processes. In the future I can see how this would help me code and implement loops to determine an end goal.