

REPORT

In this program, the first issue that confronts us is the representation of the maze .In this maze we have found exit .But we have so many way , obstacles ,keys and doors.

Firstly we have to find to key so we can open the doors but we have so many way and we don't know which way we can use for this when we use a way, we have to leave a mark like Hansel & Gretel story .

Actually firstly , in this assignment we have to read txt file. I read and make a matrix in "read_file(FILE *inp, int maze[][MAX])" function. Also I return size of matrix in this function. After that, I have to know where I am. Start Location is row is 0(zero) but column is static so in "FindStartLocation(int maze[][MAX],int size)" function I make a for loop and I detect start column number .Now turn of find way, I make it with this funtion "Walk(int maze[][MAX],int row, int column, int keys[MAX],int numberofkey , int checkedopendoor ,FILE *path)"

maze = matrix;

row =start row;

column =start column;

keys=where i put keys;

numberofkeys =In this variable i put keys in keys array;

checkedopendoor =when my program sees a door and doesn't have the door key, it every time tries to open this door with this variable. I just let it try one time ;

path=where i record path;

firstly, I check , I arrived the exit or not, if i don't arrived yet I try to move. My move is that firstly , check east way and how many times I used this way .If this way never used and no have block I get it,(when I get new block I checked this new block have key or not ,if in this new block I found a key ,I added this key in keys array and when I try to open a door I try all this keys) Otherwise, I checked south and how many times I used this this way and have block or not ,west and north is like both them ,In First checked and if all of this is blocked I passed check to again east and two time used and my function have 4 loop like that .if I passed on a way more than 4 I don't use this again because this way is blocked. If I don't have any way I wrote on txt file "don't have any way". What I learnt from this assignment? This program is my first C program I learnt how I can use recursion function, Multiple array in C, in basic statements of C languages and more thing of all this of course.