Lab 12 (25-Aug, 2021)

```c
#include <stdio.h>        //Implement Task 0 (by writing & executing given code) before starting Task 1
#define EMPTYCELL ' '
void initialize(char b[][3]){
       int i,j;
       for (i=0;i<3;i++)
               for (j=0;j<3;j++)
                       b[i][j]=EMPTYCELL;
}
int main(){
       char board[3][3];
       initialize(board);
       printBoard(board);
       return 0;
}
```

Task 1: Build Tic-Tac-Toe game with following functions: (One-time game without play again option, no check for valid input (consider input will be valid always):

-   void printBoard
-   int checkFirstDiagonal
-   int checkSecondDiagonal
-   int checkFirstRow
-   int checkSecondRow
-   int checkThirdRow
-   int checkFirstColumn
-   int checkSecondColumn
-   int checkThirdColumn

Call these function from main to play game. Follow these guidelines:

-   Run a loop for 9 times
-   Take a variable player turn, check it and change to player 2 from player 1 and vice versa in each turn
-   Take input and store according to player's turn
-   Check for win according to player's turn
-   If player win, give message and terminate loop by using break statement
-   If loop terminates, print draw message by checking loop counter

Task 2: Add following functions:

-   int getValidInput
-   void play

Put loop until valid input is given that is values should be inside board and for empty position only.

Write play function and copy all the code from main into play function. From main put a loop, where call play function again & again, if user want to play again.

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