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          | Tic Tac Toe |
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Code:

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        for (int j = 0; j < 50; j++)
        {
            Sleep(20);

            cout << character;

        }

        cout << endl;

    }

    cout << endl;

}

void settheboard()
{
    int k = 1;
    for (int i = 0; i < 3; i++)
    {
        for (int j = 0; j < 3; j++)
        {
            board[i][j] = '0' + k;

            k++;

        }

    }

}

void printtheboard()
{
    HANDLE colors = GetStdHandle(STD_OUTPUT_HANDLE);
    SetConsoleTextAttribute(colors, 7);

    for (int i = 0; i < 3; i++)
    {
        cout << "\t\t\t\t\t";

        for (int j = 0; j < 3; j++)
        {
            if (j < 2)
            {

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        cout << board[i][j];

        SetConsoleTextAttribute(colors, 12);

        cout << " | ";

        SetConsoleTextAttribute(colors, 7);
    }
    else
    {
        cout << board[i][j] << endl;
    }
}
}

void computerInput(char Players)
{
    HANDLE colors = GetStdHandle(STD_OUTPUT_HANDLE);

    bool wrongturn = true;

    int pos;

    pos = 49 + (rand() % 9);

    for (int i = 0; i < 3; i++)
    {
        for (int j = 0; j < 3; j++)
        {
            if (board[i][j] == pos)
            {
                board[i][j] = Players;

                wrongturn = false;
            }
        }
    }
}

void PlayerTurn(char number, char Players)
{

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HANDLE colors = GetStdHandle(STD_OUTPUT_HANDLE);

bool wrongturn = true;

for (int i = 0; i < 3; i++)
{
    for (int j = 0; j < 3; j++)
    {
        if (board[i][j] == number)
        {
            board[i][j] = Players;
            wrongturn = false;
        }
    }
}

if (wrongturn == true)
{
    SetConsoleTextAttribute(colors, 12);
    cout << "\t\t\t Please press or enter the number which was print on the board." << endl;
}

}

bool CheckResult(char Player, bool GameOver)
{
    HANDLE colors = GetStdHandle(STD_OUTPUT_HANDLE);

    for (int i = 0; i < 3; i++)
    {
        if (board[i][0] == board[i][1] && board[i][1] == board[i][2])
            GameOver = true;
    }

    for (int i = 0; i < 3; i++)
    {
        if (board[0][i] == board[1][i] && board[1][i] == board[2][i])
            GameOver = true;
    }
}

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if (board[0][0] == board[1][1] && board[1][1] == board[2][2])
{
    GameOver = true;
}
if (board[0][2] == board[1][1] && board[1][1] == board[2][0])
{
    GameOver = true;
}
if (GameOver == true)
{
    cout << endl << endl;
    SetConsoleTextAttribute(colors, 10);
    cout << "\t\t\t\t Player : " << Player << " win the match." << endl << endl;
    cout << "\t\t\t\t\t ////////// CONGRATULATIONS ////////// " << endl;
    SetConsoleTextAttribute(colors, 7);
}
return GameOver;
}

bool CheckDraw(bool GameOver)
{
    HANDLE colors = GetStdHandle(STD_OUTPUT_HANDLE);
    int k = 1;
    int counter = 0;

    for (int i = 0; i < 3; i++)
    {
        for (int j = 0; j < 3; j++)
        {
            if (board[i][j] == '0' + k)
            {
                counter++;
            }
        }
    }
}

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        k++;
    }
}

if (counter < 1)
{
    SetConsoleTextAttribute(colors, 10);

    cout << "\t\t\t\t\t Match is draw now continue it." << endl << endl;

    GameOver = true;

    SetConsoleTextAttribute(colors, 7);
}

return GameOver;
}

void instructions()
{
    HANDLE colors = GetStdHandle(STD_OUTPUT_HANDLE);

    SetConsoleTextAttribute(colors, 12);

    Sleep(500);

    cout << "\t\t\t\t\t _____ " << endl;

    cout << "\t\t\t\t\t | " << endl;

    cout << "\t\t\t\t\t | ";

    SetConsoleTextAttribute(colors, 7);

    Sleep(500);

    cout << "These game is for 2 players ";

    SetConsoleTextAttribute(colors, 12);

    cout << "| " << endl;

    cout << "\t\t\t\t\t | ";

    SetConsoleTextAttribute(colors, 7);

    Sleep(500);

    cout << "First player = 'X' ";

    SetConsoleTextAttribute(colors, 12);

    cout << "| " << endl;

    cout << "\t\t\t\t\t | ";
}

```

```

SetConsoleTextAttribute(colors, 7);
Sleep(500);
cout << "Second player = 'O'      ";
SetConsoleTextAttribute(colors, 12);
cout << "| " << endl;
cout << "\t\t\t\t\t|";
SetConsoleTextAttribute(colors, 7);
Sleep(500);
cout << " Press Number which was display on screen ";
SetConsoleTextAttribute(colors, 12);
cout << "| " << endl;
cout << "\t\t\t\t\t| ";
SetConsoleTextAttribute(colors, 7);
Sleep(500);
cout << "Make a diagonal, row or column to win  ";
SetConsoleTextAttribute(colors, 12);
cout << "| " << endl;
Sleep(500);
cout << "\t\t\t\t\t|_____|" << endl;
SetConsoleTextAttribute(colors, 7);
}

void credits()
{
HANDLE colors = GetStdHandle(STD_OUTPUT_HANDLE);
SetConsoleTextAttribute(colors, 13);
Sleep(500);
cout << " \t\t\t\t _____ " << endl;
Sleep(500);
cout << "\t\t\t\t\t|";
SetConsoleTextAttribute(colors, 7);
Sleep(500);
cout << "      || It was created by Ali Asjad ||      ";

```

```

SetConsoleTextAttribute(colors, 13);
Sleep(500);
cout << "| " << endl;
Sleep(500);
cout << "\t\t\t\t\t ";
SetConsoleTextAttribute(colors, 7);
Sleep(500);
cout << "|| Student of fast university || ";
SetConsoleTextAttribute(colors, 13);
Sleep(500);
cout << "| " << endl;
Sleep(500);
cout << " \t\t\t\t\t| " << endl;
SetConsoleTextAttribute(colors, 7);
}

```

```

int main()
{
    int choice, i = 0;
    char choice2;
    do
    {
        int variable = 3;
        char character = '#';
        header(variable, character);

        HANDLE colors = GetStdHandle(STD_OUTPUT_HANDLE);
        SetConsoleTextAttribute(colors, 7);
        int arr[100];
        bool turn = false, GameOver = false;
        char Player = 'O', number;
        cout << endl << endl;
    }
}

```



```

int computer;

SetConsoleTextAttribute(colors, 10);

cout << "\t\t\t\t\t _____ " << endl;
cout << "\t\t\t\t\t|          |" << endl;
cout << "\t\t\t\t\t| 1. (Player 1 game.) |" << endl;
cout << "\t\t\t\t\t| 2. (Player 2 game.) |" << endl;
cout << "\t\t\t\t\t| 3. (Instruction.)  |" << endl;
cout << "\t\t\t\t\t| 4. (Credits.)    |" << endl;
cout << "\t\t\t\t\t| 5. (EXIT)      |" << endl;
cout << "\t\t\t\t\t|_____|" << endl;
cout << endl;

SetConsoleTextAttribute(colors, 12);

cout << "\t\t\t\t\t _____ " << endl;

SetConsoleTextAttribute(colors, 7);

cout << "\t\t\t\t\tEnter choice : ";

cin >> choice;

cout << endl;

switch (choice)
{
case 1:
    settheboard();

    do
    {
        if (Player == 'X')
        {
            Player = 'O';
        }
        else
        {
            Player = 'X';
        }
    }

    printtheboard();

```

```

    cout << endl;
    SetConsoleTextAttribute(colors, 7);
    cout << "\t\t\t\t\t Player ";
    SetConsoleTextAttribute(colors, 12);
    cout << Player;
    SetConsoleTextAttribute(colors, 7);
    cout << " | it's your turn : ";
    if (Player == 'O')
    {
        cout << endl;
        computerInput(Player);
    }
    else
    {
        cin >> number;
        cout << endl;
        PlayerTurn(number, Player);
    }
    GameOver = CheckResult(Player, GameOver);
    GameOver = CheckDraw(GameOver);
    if (GameOver == true)
    {
        return 0;
        GameOver = false;
    }
} while (!turn);
break;
case 2:
    settheboard();
    do
    {
        if (Player == 'X')

```

```

    {
        Player = 'O';
    }
else
    {
        Player = 'X';
    }
    printtheboard();
    cout << endl;
    SetConsoleTextAttribute(colors, 7);
    cout << "\t\t\t\t\t Player ";
    SetConsoleTextAttribute(colors, 12);
    cout << Player;
    SetConsoleTextAttribute(colors, 7);
    cout << " | it's your turn : ";
    cin >> number;
    cout << endl;
    PlayerTurn(number, Player);
    GameOver = CheckResult(Player, GameOver);
    GameOver = CheckDraw(GameOver);
    if (GameOver == true)
    {
        return 0;
        GameOver = false;
    }
} while (!turn);
break;
case 3:
    instructions();
    break;
case 4:
    credits();

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        break;
    case 5:
        cout << "\t\t\t EXIT/EXIT" << endl;
        break;
    }
    SetConsoleTextAttribute(colors, 7);
    cout << endl;
    cout << "\t\t\t You want to check again (MENU)." << endl;
    cout << "\t\t\t Enter choice : ";
    cin >> choice2;
    if (choice2 == 'Y' || choice2 == 'y')
    {
        system("cls");
    }
} while (choice != 5);
}

```

Output:

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#####
| Tic Tac Toe |
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1. (Player 1 game.)
2. (Player 2 game.)
3. (Instruction.)
4. (Credits.)
5. (EXIT)

Enter choice : 4

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Enter choice : 4

```
|| It was created by Ali Asjad ||  
|| Student of fast university ||
```

You want to check again (MENU).
Enter choice : y

Enter choice : 3

```
These game is for 2 players  
First player = 'X'  
Second player = 'O'  
Press Number which was display on screen  
Make a diagonal, row or column to win
```

You want to check again (MENU).
Enter choice : y

Enter choice : 2

```
1 | 2 | 3  
4 | 5 | 6  
7 | 8 | 9
```

Player X | it's your turn : 2

```
1 | X | 3  
4 | 5 | 6  
7 | 8 | 9
```

Player O | it's your turn : 5

```
1 | X | 3  
4 | 0 | 6  
7 | 8 | 9
```

Player X | it's your turn : 1

```
X | X | 3  
4 | 0 | 6  
7 | 8 | 9
```

Player X | it's your turn : 4

```
X | X | 0  
X | 0 | 6  
7 | 8 | 9
```

Player O | it's your turn : 7

Player : O win the match.

////////// CONGRATULATIONS //////////

Enter choice : 1

1		2		3
4		5		6
7		8		9

Player X | it's your turn : 2

1		X		3
4		5		6
7		8		9

Player O | it's your turn :

1		X		3
4		5		O
7		8		9

Player X | it's your turn : 7

1		X		3
4		5		O
X		8		9

Player O | it's your turn :

1		X		X
X		O		O
X		O		O

Player X | it's your turn : 1

Player : X win the match.

////////// CONGRATULATIONS ///////////
Match is draw now continue it.