



# BLM1011 Introduction to Computer Science Project Assignment

**Assignment Submission Deadline: 02/01/2024 –  
23:59**

## Course Coordinators

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TÜRKMEN

**Question:** Design a program where the user can play the TETRIS game.

Tetris® is an addictive puzzle game that appeals to our desire to create order out of chaos. The Tetris game was created by Alexey Pajitnov in 1984 as a product of Pajitnov's computer programming experience and interest in puzzles. Tetris became one of the most successful and recognizable video games in the decades that followed, and it was featured on almost all gaming platforms.

The goal of Tetris is to score as many points as possible by creating uninterrupted horizontal lines on the playing field with blocks, clearing them. The player must rotate, carry and drop the fallen Tetriminos inside the Matrix (playing field). Lines are cleaned when they are filled with blocks without running out of space.

As the lines are cleared, the level increases and the Tetriminos drop faster, making the game increasingly challenging. If the blocks fall on the top line of the playing field, the game is over.

## Explanation:

- A MENU must be created for the game.
- When your program is run, you should be asked about the size of the game board.
- Different pieces must be randomly generated in each round.

1	1	1
---	---	---

1	1
1	1

1
1

1
---

1	
1	
1	1

1
1
1

	1	1
1	1	

- The given part must be returned when the user requests it.
- To place the upper left corner of the given part, the user must specify the coordinate of the region to be placed.
- Program, Given Track game Board in under Located appropriate should place it on the ground.

**For example:** The given block is as follows:

X	X	X
---	---	---

If user x coordinate 8 as see yourself, block following like (7,8).

1	1								
1									
1							X	X	X
1	1			1		1	1		
1		1	1	1			1	1	1
1		1	1	1			1	1	1

- If any horizontal line is filled with pieces, your program should break the line so that all the pieces on the line fall down.
- Your program should also calculate the scores obtained from the lines mentioned above.
- Your program should also record the highest score.
- If there is any piece on the top line of the game board, the program must end.
- The user can end the game at any time.

### **Suggestions:**

- Start with easy parts to implement the game.
- Don't forget to show intermediate steps using printf. When we check your program, we, or you during the design phase, need to understand whether your program works without any logical errors. For example, you should show the before and after state of the game board after the placement of any puzzle piece.

## Matters needing attention

1. Write the program **in C** language and **store it in the** StudentNumber.c file.
2. Shoot a short video (maximum 5 minutes) of your application and upload it to the video sharing site. You can also voice the details you want to tell.
3. Keep your work, problem description, screenshots of the solution you have performed, the report containing the details of your algorithm, and the video link in **StudentNumber.pdf** format.
4. **Important Note:** **At the** beginning of the video shoot, you can introduce yourself with a video

**PLEASE REMEMBER :)**

### **Deliverables Template:**

- a. StudentNumber.zip || StudentNumber.rar (Ex: 18011001.zip)
    - i. OgresciNumarasi.c (Ex: 18011001.c)
    - ii. StudentNumber.pdf (Ex: 18011001.pdf)
5. Assignments that are more than a certain percentage similar to another assignment or a resource on the internet are evaluated as "0".
  6. The time given also includes file uploads.
  7. Assignments sent via email will not be accepted.
  8. If the file format and naming rules are not followed, your assignment will be evaluated out of 50.

### Copy Rules:

- In case of copying, collaborative solution and cheating from ready-made sources / others in assignments, quizzes, projects or exams in any way, all parties involved receive a **"0"** from the assignment / exam.
- Such actions will be considered in accordance with the disciplinary regulations.