

# BLM1011 Introduction to Computer Science

## Semester Project

**Due 29/12/2019 – 23:59**

**\* The presentations will be on 30th December at 14:00 in D-B26. You must attend to the presentations. The list will be announced on Monday morning.**

**Instructor: Assist. Prof. M. Amaç GÜVENSAN**

**Project Description:** Design a program, which a user could play the “TETRIS” game.

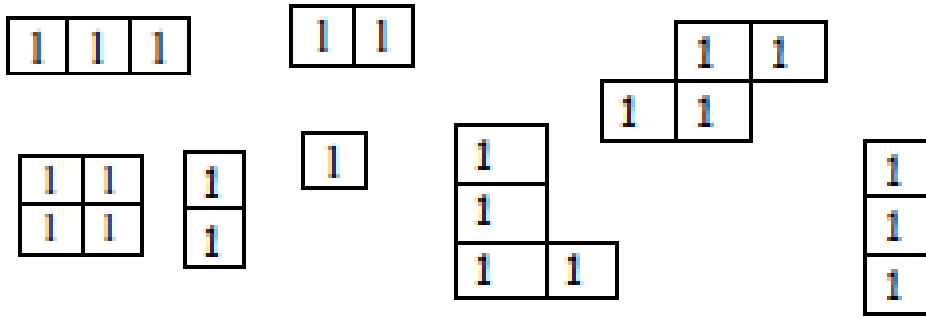
**About TETRIS:** Tetris® is the addictive puzzle game that started it all, embracing our universal desire to create order out of chaos. The Tetris game was created by Alexey Pajitnov in 1984—the product of Alexey’s computer programming experience and his love of puzzles. In the decades to follow, Tetris became one of the most successful and recognizable video games, appearing on nearly every gaming platform available.

The goal of Tetris is to score as many points as possible by clearing horizontal lines of Blocks. The player must rotate, move, and drop the falling Tetriminos inside the Matrix (playing field). Lines are cleared when they are filled with Blocks and have no empty spaces.

As lines are cleared, the level increases and Tetriminos fall faster, making the game progressively more challenging. If the Blocks land above the top of the playing field, the game is over.

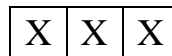
### **Project Details:**

- Your program should ask the size of the game board.
- Your program should create different pieces randomly at each round.
- Your program should rotate the given piece if the user demands.
- The user would give the (x,y) coordinates for placing the left up corner of the given puzzle piece.



- The program would place the given puzzle piece to the available most bottom part of the game board.

For example: The given block is



If the user would give the x and y coordinates as (1,8), the block should be placed at (7,8) as given below

							×	×	×
1	1			1		1	1		
1		1	1	1			1	1	1
1		1	1	1			1	1	1

- If any horizontal line is full with puzzle pieces, your program should break the line and let all the pieces placed in the upper line fall down until a piece occurs.
- Your program should also calculate the points obtained from the aforementioned lines.
- Your program also should save the highest score.
- The program should end if the upperline of the game board consists of any puzzle pieces.
- The user could terminate the game, whenever he/she wants.