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# Introduction

We are Gai and Naama, students in the last semester in the computer science faculty in the Technion – Israel's Institute of Technology.

During our studies at the Technion, we worked as partners in many courses, so it was clear to us that we would work together in our final project.
When we heard about the project in the lab, which includes building a virtual reality game, we were very excited and decided to choose it.

When we thought of an idea for a game, the idea of Tetris came up - a simple and fun game that has been familiar to everyone for years.
We thought that turning the game into 3D, so that the game cubes are flying around the room in front of the player could be very interesting and fun!

We have participated in a Virtual Reality project, conducted by Mr. Boaz Sternfeld, and Mr. Yaron Honen.

The project was fun and experiential, teaching and mostly satisfying.

# Development Environment:

### HTC Vive:
The HTC Vive is a virtual reality headset developed by HTC and Valve Corporation. The headset uses "room scale" tracking technology, allowing the user to move in 3D space and use motion-tracked handheld controllers to interact with the environment.

### Unity:
A cross-platform game engine that can be used to create both three-dimensional and two-dimensional games, as well as simulations for desktops and laptops, home consoles, smart televisions, and mobile devices. Unity is scripted with C# in Visual Studio.

### Visual Studio:
Microsoft Visual Studio is an integrated development environment (IDE) from Microsoft. It is used to develop computer programs, as well as websites, web apps, web services and mobile apps.
Visual Studio uses Microsoft software development platforms such as Windows API, Windows Forms, Windows Presentation Foundation, Windows Store and Microsoft Silverlight. It can produce both native code and managed code.
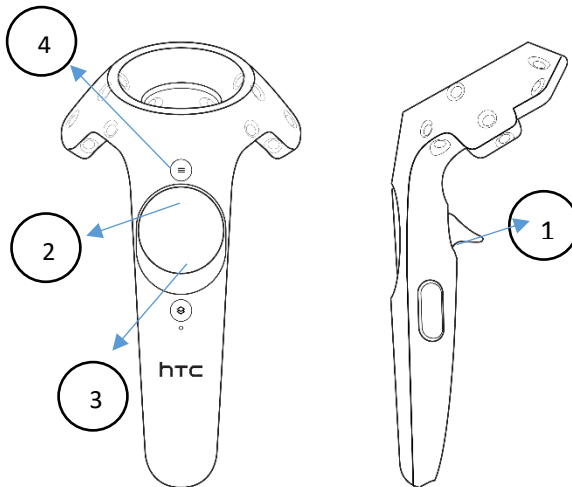
# Application Overview:

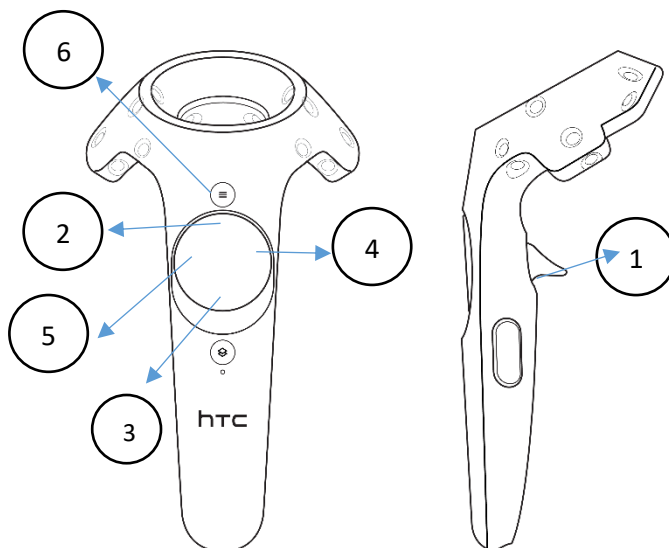In Our game there are 2 different modes – Movement and arrows.

1. **Movement**
   - In this mode the player moves the cubes by moving the controller.



1. Let the cube fall down
2. Flip the cube
3. Take the cube down
4. Return to the menu

2. **Arrows**
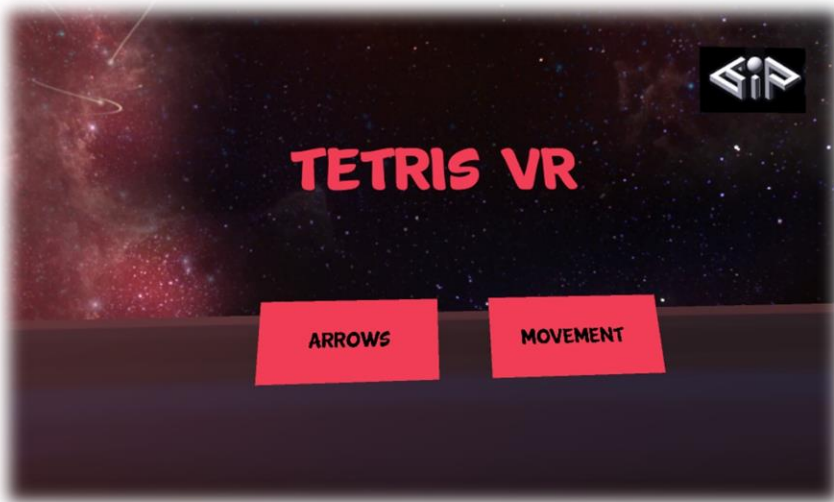   - In this mode the player moves the cubes by using the touchpad.



1. Let the cube fall down
2. Flip the cube
3. Take the cube down
4. Take the cube right
5. Take the cube left
6. Return to the menu

# Manual

## Menu screen

- Press 'Movement' to play the game with the controller movement.
- Press 'Arrows' to play the game with the controller touchpad arrows.

# Movement screen

- In this mode, the player plays the game while he is standing.

- The game cube moves according to the controller movement.

- Full lines will disappear and provide points

- If the player get 2 points he win the game

- After 2 minutes the game is over

## Arrows screen

- In this mode, the player plays the game while he is sitting

- The game cube moves due to the controller touchpad.

- Full lines will disappear and provide points

- If the player get 2 points he win the game

- After 2 minutes the game is over