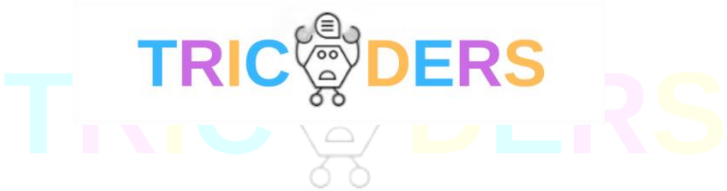
BEYKOZ UNIVERSITY

ENGINEERING PROJECT III



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Project Name:

- Real Life Game - A Python Project for Hand Gesture-Based In-Game Control

System Scope of Definition:

- Real Life Game is a Python project that enables players to control the game through hand gestures captured by a camera. The game's motto is "Your game address for fun."

FR - Functional Requirements:

FR-001
Platform with 3 different games for user entertainment and fun.

FR-002
User can choose between the games available on the platform.

FR-003
Easy-to-use interface to access the games.

FR-004
Camera included to allow users to see their hand movements better, enhancing the gaming experience.

FR-005
The product shall be accessible over all browsers.

FR-006
The product should not require a game console for a real-time gaming experience.

FR-007
Kinematic lines will be displayed in neon colors.

1.1 Fruit ninja game:

FR-FRG-101
The game consists of 8 different fruits.

FR-FRG-102
When it touches 3 bombs, the game is over.

FR-FRG-103
Adds 1 point to the user score every time the user cuts fruit.

FR-FRG-104
When the user touches the fruit or the bomb, a sound will be heard indicating this.

FR-FRG-105
Background music is added to increase user motivation and retention.

TRICODERS

1.2 Tetris game:

FR-TTRS-201
The user will be able to move the blocks to the right and left, rotate them around.

FR-TTRS-202
In Tetris, players try to complete the lines by moving the different shaped pieces that land on the playing field.

FR-TTRS-203
Completed lines disappear and the player is awarded points, and the player continues to fill in the empty spaces.

FR-TTRS-204
The game ends when the clear lines reach the top of the playing field.

FR-TTRS-205
Can play music in the background of the game.

1.3 Catching Fish:

FR-CFG-301
The user's aim is to catch fish with the help of shark.

FR-CFG-302
Blowfish are deceptive targets that can ruin the game.

FR-CFG-303
Each time a user catches a fish, the user's score increases.

FR-CFG-304
Score drop when the user catches the blowfish in the game.

NFR-Non-Functional Requirements:

NFR-S-401
The platform must be accessible for all user segments.

NFR-P-501
Minimum 2 numbers of 2D images per second on the game

NFR-P-502
Maximum 6 numbers of 2D images per second on the game

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HRD-Hardware Requirements:

HRD-601
The graphics card supports 2D graphics.

HRD-602
Sound Card.

HRD-603
Network Connection.

ESR End-User Requirements:

ESR-701
The logo will be displayed at the game entrance.

ESR-702
Users can personalize their experience using the platform settings.

ESR-703
The number of targets will increase over time to ensure the game's sustainability.

TRICODERS