Blokus description:

Blokus is a board game, where players place pieces on a board to occupy the board. Player who occupy most of the board wins. It is played on a 20 x 20 square board, for a total of 400 square tiles. There are a total of 84 game tiles, which breaks down to 21 shapes each in 4 colors: blue, yellow, red, and green.

The game is played with 4 players, each representing one of the four colors. Each player can only the shapes that matches the color that they are representing. The 21 shapes are based on free polyominoes of 1-5 squares (1 monomino, 1 domino, 2 trominoes/triominoes, 5 tetrominoes, and 12 pentominoes).

Rules:

The first piece played of each color needs to be placed in one of the board's four corners. Each new piece played must be placed so that it touches at least one piece of the same color, with only corner-to-corner contact allowed - edges cannot touch. Edge-to-edge contact is only allowed between pieces of different colors.

When a player cannot place a piece, they have to pass the turn. The game ends when no player can place a piece anymore. Scoring is based on the number of squares in each player's pieces played on the game board. The player with the highest score wins.

Python files description:

A JSON file with the pieces info is imported. There are 3 classes imported to main.py, Piece, Player and Board. The program will create an output file.txt to show player’s score in each round, and show which player(s) won. This game is played using a GUI.

**List** is used. e.g. winner\_result, storing the name of the player(s)

**Iteration type** is used. E.g. iterating through each player

**Conditional** is used. E.g. if there are multiple winners

**Try blocks** is used in Board.py. E.g. in is\_legal\_move()

**User-defined functions** are used.

**Output file** prints each player’s score each round, and it prints who is(are) the winner(s).

**User-defined class** Piece, Player, Board

**init() and repr ()** are used to write the output.txt.

**Unit test** are provided in each class.

This project is important to me because I used to play this game with my siblings when I was little (when there were no phones available to play with). But I can’t play Blokus anymore because we don’t have the physical game anymore. Another reason why it is important is that now I can now play this game with my friends and create more memories.

This project is useful because I would prefer not to spend money to play this game, because it is kind of expensive for a toy. Also me and my siblings lives in different countries, so if I further work on this project maybe I can deploy it online. And be able to play with them. For now, it is useful because I can play it with my friends without spending any money.