

Gomoku (Five-in-a-Row) — User Manual

Introduction

This is a simple, terminal-based Gomoku game written in Python. You can play Player vs Player (PvP) or Player vs Computer (PvC) on a square board and try to be the first to connect five stones in a row: horizontally, vertically, or diagonally.

Features

- Player vs Player (PvP)
- Player vs Computer (PvC)
- Adjustable board size
- Printed board with coordinates
- Input validation and prompts

Requirements

- Python 3.8 or newer
- No external dependencies

Installation

1. Clone or download this repository.
2. Ensure your system has Python 3.8+ installed.
3. Save the code into a file named 'gomoku.py'.

How to Run

From the project folder, run:

```
python gomoku.py
```

You'll see a welcome message and the game menu.

Game Menu

```
=====
||  Game Menu  ||
=====
```

1. Start a Game
2. Print the Board
3. Place a Stone
4. Reset the Game
5. Exit

1. Choose option 1 to start a new game.
2. Enter board size (e.g., 9).
3. Select mode: PvP or PvC.
4. Place stones with option 3.
5. Print board with option 2.
6. Reset with option 4 or exit with option 5.

Input Format

- Use Row + Column format (e.g., 3A, 0C, 5F).
- Rows are 0-indexed (first row is 0).
- Columns are labeled A, B, C, ...
- On a 9×9 board, valid inputs range from 0A to 8I.

Symbols

- Player 1 / Human: ●
- Player 2 / Opponent or Computer: ○

Winning Condition

First player to connect five stones in a row wins. If the board fills with no winner, the game ends in a Draw.

Game Modes

- PvP: Two human players alternate moves.
- PvC: You (●) play first; computer (○) responds.

Computer Logic

The computer tries to place a stone near your last move. If no nearby spaces are free, it picks a random empty space.

Troubleshooting & FAQ

Q: The game says 'Please start the game first.'

A: Choose option 1 (Start a Game) before placing or printing.

Q: It says 'Invalid choice.'

A: Enter a number between 1–5 only.

Q: Can I play larger than 9×9?

A: Yes, but input parsing supports single-digit rows by default.

Known Limitations

- Input parsing supports single-digit rows only.
- Reset assumes a game has already started.
- Menu flow can be improved.
- Win checks work but may be optimized for very large boards.