

## Capstone Project (Python Internship)

### Project Title:

### ArcadeHub – Python based Program featuring Classic Games

### Objective:

To develop an engaging Python program that combines multiple classic games like Tic Tac Toe, Connect Four, and Hangman. It provides a fun way to improve logic, vocabulary, and strategic thinking through a colorful and interactive interface, all in one place.

### Features:

- Central main menu to navigate between games
- Tic Tac Toe – Two-player mode with win/draw logic
- Connect Four – Colorful 6x7 grid with vertical/horizontal/diagonal win detection
- Hangman – Random word guessing with a visual hangman drawing using canvas
- Restart and Exit options in each game
- Simple, consistent UI using Tkinter widgets

### Tools/Libraries:

- Python
- Tkinter – for GUI
- random – for Hangman word choice
- os, time – for animations or delay effects

### Timeline (Approx 1 Week):

Day	Task
Day 1	Finalize the idea, and make documentation
Day 2	Brainstorm and list all planned features for each game. Begin logic drafting and sketches
Day 3	Finalize logic for Tic Tac Toe, Connect Four, and Hangman
Day 4	Design the main menu and basic window layout using Tkinter
Day 5	Integrate all games into a single Tkinter interface and add styling
Day 6	Testing all games, fixing bugs
Day 7	Final review and official submission

### Team Members & Roles:

Member	Role
Zubia Tanoli	Hangman logic, word list, integration + testing
Kashaf Qureshi	UI design, Connect Four logic
Umama Jadoon	Tic Tac Toe logic, UI polish, documentation