Omar Ahmad Watany

Education

Student at Computer Science, Ain Shams University (Expected Graduation: 2026)

Summer Training Experiences

Data Engineering and Data Analysis Training

In this training we learned ways to get data like **APIs** and **web scraping**. Gathering that data and filtering it with **pandas** and **numpy** .Then visualizing and getting important information out of the data using **PowerBi.**(Computer Science faculty, Summer 2023)

Projects

Gdslib

Generic Data Structure library written In C. It provides many useful and advanced data structures implemented using various low level programming concetps such as pointers and function pointers. Designed to be consistent, safe, effecient and easy to use.

Chess

A Chess Game implemented in two different UIs that share nearly the same engine that moves the soldiers. Implemented in **C** using **Structured Programming** with different **OOP** concepts. The two UIs are GUI implemented with **RAYLIB** and the other is TUI implemented using C strings functions to draw and color the board and soldiers.

Pacman

Clone of the very popular Game Pacman Implemented Using **C++** and **RAYLIB** library. The game has multiple worlds with different levels of difficulty. We used very cool algorithms in order to implement the levels of difficulty such as **BFS** algorithm for the max level, So the ghosts can find pacman, or moving randomly with different speeds in

the other levels. We made sure the player will not get bored by providing **Create Your Own Map** feature. The user experience designed to be intuitive and easy to use and we achived this using menus and "how to play" section.

Gym Management System

In order to learn **OOP** and get a grasp of its beauty, we created gym management system that allows its administrator to keep track of the gym's users , coaches, equipments and memberships .The program allows the user to create a new account , manage his membership , choose his coach , create and inbody and more.All while creating separate classes for each entity , using **java** and OOP's advantages like inheritance and encapsulation.

Vezeeta Database Design and Implementation

Designed a database for a Vezeeta-like healthcare system. The **database** kept track of the patients and their appointments. While keeping track of the doctors and the clinics they are available at. All while maintaining the relationship between those and adhering to the constraints. The database design included designing an **ERD** and a **schema** , then implementing it with **Oracle PL\SQL** , and the final step was to enter and access the data with **Oracle forms** .
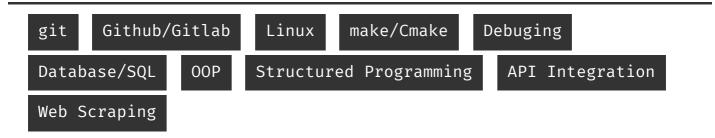
Fireboy and Watergirl Game

Created a clone for the Fireboy and Watergirl game with **C++** and the **SFML** library. The challenges brought by the game was creating a gravity for two 2D characters in a map(which we also created) and putting obstacles for them . The game had a full **GUI** experience containing menus and visuals all the way to the end. Allowing the 2 players to start ,pause and retry if they lose. The project was made with Structured programming, no classes , only functions and structs were used

Programming Languages

`C` `C++` `C#` `Java` `Python` `Html` `Css` `JavaScript`

`Bash/ShellScript`

Technologies/Tools

`git` `Github/Gitlab` `Linux` `make/Cmake` `Debuging`

`Database/SQL` `OOP` `Structured Programming` `API Integration`

`Web Scraping`

Extracurricular Activities

Regularly participated in coding competitions and enhanced problem-solving abilities using C++ (ACM-Ascis Club, Ain Shams University)

Contact Information

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