# **Mohamed Sayed Kamel**

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#### **Education**

## Pharos Institute of Computer Science | Giza

**Bachelor of Computer Science** 

September 2021 – Present Expected Graduation, June 2025

### **Projects**

## EpicGamerStore - Spring Boot, Spring Data JPA, Redis, Thymeleaf

- Built a Spring Boot web application from which the user can buy a video game physically or digitally
- Used the State Design Pattern which resulted in different behavior depending on the type of product the customer buys
- Secured the application by integrating the Spring Security module which upgraded the level of security of the website
- Integrated Redis with the application to implement caching which increased the performance of the application
- Implemented test cases for all functionalities of the application which ensured the application is working 100% bug-free
- Documented the application using UML diagrams to demonstrate how the application works easily to other developers

#### Computers4Sale - Servlet, MySQL, Hibernate, JSP

- Programmed a Servlet web application from which the user can buy computer components
- Used MySQL as the application database, Hibernate to perform operations to the database and JSP for user interface
- Constructed the website into four layers which resulted into more flexibility and extendibility
- Applied SOLID design principles which made the application flexible and maintainable
- Created a notification feature which notifies the user when a product becomes in stock

#### BookStore101 - Python, Flask, SQLite, Bootstrap

- Built a Book store website from which the user can buy books
- Developed and designed the website using Python, Flask as the web framework and SQLite as the database
- Implemented a refund functionality which allowed the user to refund the book before 7 days of purchase date and time
- Programmed a referral system which gives the referrer a discount on some books if the referee bought a certain amount of books

#### Skills

Programming Languages: Java, C, C++, PHP, Python, JavaScript

**Frameworks:** Spring Framework (Core – MVC – Boot – REST API – Security), Hibernate, JUnit, Flask

Database: MySQL, SQLite, MongoDB

Web Servers: Apache Tomcat, Nginx, Apache

**Other Technologies:** Servlet, JSP, Maven, Git, SVN, XML, JSON, HTML, CSS **Other skills:** Data Structures, Object-Oriented Design, Design Patterns

Software: Postman, IntelliJ IDEA, Eclipse, Visual Studio Code

## **Courses**

## CS50's introduction to computer science course by Harvard University

- Gained a solid foundation on programming fundamentals by learning low level concepts using the C language
- Took several problem-sets which improved my problem-solving skills and deepened my knowledge of several programming concepts such as memory management and pointers
- Developed a book store web application using Python and flask framework as the final project of the course

#### **Certificate Link**

#### Spring framework specialization by Coursera

- Took several problem-sets and labs which helped me gaining a deep understanding of the how spring framework works
- Developed a video game store web application as the final project of the specialization