

# Mohamed Alharouni

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## EDUCATION

### ALEXANDRIA UNIVERSITY BS IN COMPUTER AND COMMUNICATION ENGINEERING

September 2016 - June 2021

Faculty of Engineering

GPA: 3.26 / 4.0

## LINKS

Github: mharouni

LinkedIn: mohamedharouni

Website: Mohamed Alharouni

## COURSEWORK

### UNDERGRADUATE

Operating Systems Implementation

Data Structures and Algorithms

Computer Networks

Computer Organization and Architecture

Database Systems

Artificial Intelligence

Microprocessors

Embedded Systems

### ONLINE COURSES

IBM Cloud Application Developer

The Complete 2020 Web Development Bootcamp

The Complete iOS Development Bootcamp

## SKILLS

### LANGUAGES

English • Arabic

### TECHNICAL SKILLS

Programming Languages:

C/C++ • Assembly • Java • Swift

Scripting Languages:

Python • Javascript • Bash

Other:

Linux • Docker • Kubernetes • MySQL

Git • HTML • Node.js • AWS

## PROJECTS

### HUFFMAN COMPRESSION | JAVA COMPRESSION ENGINE

Developed a Java Application that uses Huffman coding Algorithm to compress files.

### FILE SYSTEM AND PIPE DEVICE | XINU OS FILE SYSTEM

Implemented a Unix-like File system on a RAM device, added shell features and commands to use it and incorporated a Pipe device.

### READERS/WRITER LOCKS | SOLUTION FOR READERS/WRITER PROBLEM IN XINU

Implemented a solution to solve the readers/writer problem and handle priority inversion in XINU using locks and priority inheritance.

### DEADLOCK DETECTION AND PREVENTION | XINU

#### DEADLOCK DETECTION AND PREVENTION MECHANISM

Solved the Deadlock problem by implementing a mechanism to detect and handle deadlocks caused by Readers/Writer locks in XINU.

### HTTP PROXY SERVER | PARALLEL HTTP PROXY SERVER

Implemented a python proxy server that handles HTTP GET requests, and uses the asyncio module to handle multiple clients simultaneously.

### CLIMA | IOS WEATHER APP

Developed an application that displays the weather information based on the GPS location, and it is also possible to search for a city and display the current weather in that city.

### BITCOINTRACKER | IOS APP THAT TRACKS THE REAL-TIME VALUE OF THE BITCOIN

Developed an IOS App that tracks the real-time value of bitcoins and displays it in one of several currencies the user can choose from.

### SIMPLE TFTP SERVER | SIMPLE TEXT FILE TRANSFER SERVER

Implemented a simple server that handles Trivial File Transfer Protocol requests from TFTP clients using Python.

### OS SCHEDULER | XINU OS SHORT-TERM SCHEDULER

Incorporated aging and the proportional share scheduling policies in the XINU kernel.

## EXTRACURRICULAR ACTIVITIES

2016	present	Rotaract club of Alexandria Sunrise Member
2016	2017	Community Service Committee Director
2017	2018	Club Treasurer
2018	2019	Club Service Committee Director