

# Operating System And Synchronisation

Rabah Chabane Chaouche

October 2, 2024

# 1 Introduction

## 1.1 Operation System

### 1.1.1 What's An Operating System ?

An operating system (OS) is a software program designed to manage and optimize the use of a machine's resources. It provides an easy to use **VM** virtual Machine to interact with the hardware and efficiently execute tasks. A typical machine consists of three main components:

- **Memory:** Includes random access memory (RAM), registers, and storage devices such as hard drives and solid-state drives (SSD).
- **CPU:** The central processing unit (CPU) consists of the Arithmetic Logic Unit (ALU) and the Control Unit (CU), which process and execute instructions.
- **Peripherals:** External devices such as keyboards, mice, displays, printers, and storage media.

### 1.1.2 Types Of Operating Systems

### 1.1.3 Core Functions Of An Operating System

### 1.1.4 History And Evolution Of Operating System