

In the name of God

## Homework #1

Operating System - Shiraz University

fall 2021



- 1- Compare DMA and Memory - Mapped I/O.
- 2- Why are two modes (user and kernel) needed?
- 3- What resources are shared by all of the threads of a process?
- 4- Give three example of an interrupt. (when/where to use them)
- 5- In multi programming and time-sharing environment, several users can work with system simultaneous. This can cause some problems:
  - a) Express two main problem that can occurs.
  - b) Discuss about how can we resolve these problems.
- 6- PCB:
  - a) List three general categories of information in a process control block.
  - b) What does the a single PCB include? Name each one and describe them briefly.
- 7- what is memory hierarchy? What characteristics distinguish the various elements of a memory hierarchy?
- 8- What is Green Thread? With which kind of Programming language we can implement this kind of threading? Can we implement that with Python? Express your answers.
- 9- What a shell? What is a command interpreter? Search about C-shell and list 4 built-in commands in this Shell.
- 10- What common events lead to the creation of a process? What is Orphan process?

**Notice:** Any assignment with copy-paste answer from internet or similarity with other assignment will get Zero

Fell free to ask question if there is some ambiguity – Milad Barooni