ITCO101: Unit 1 Lab

Introduction

LabSim PC Pro is used to provide a simulated, hands-on laboratory for the purposes of learning about important hardware and software concepts. In an online environment, it is impossible for students to work directly with hardware or software in administrative scenarios. Therefore, LabSim is the tool that supports students in their pursuit to understand difficult concepts in an online environment.

Use of LabSim PC Pro requires a one-time registration process. You should have received an activation code from the bookstore (Words of Wisdom). Notify the bookstore immediately if you have not yet received your activation code. Contact Words of Wisdom at aiuonlinebooks@wordsofwisdombooks.com.

Instructions for accessing LabSim can be found in the Course Materials section. You can also contact your instructor with any questions. You will have access to LabSim PC Pro for 36 months (3 years) from the date of registration.

Note that LabSim PC Pro is aligned with CompTIA's A+ certification. Completing this lab will not qualify you to complete the exam. You must complete several courses to cover all the concepts included in the certification exam. Further, completing the coursework does not conclude with automatic certification. Those students who wish to pursue certification may do so outside the classroom. For those students that qualify, they may contact the Registrar's office for receipt of a discounted certification voucher honored by CompTIA.

Hardware requirements: Click here to verify that you meet the necessary hardware requirements. Note that you will need speakers.

Expected time for completion: It should take you six hours or more depending on the time necessary to familiarize yourself with the tools and the particular sections that you choose to complete. You may complete the tasks in numerous iterations. You do not need to complete all of the lab tasks in one sitting.

Lab Description

Upon completion, you will be able to do the following:

- Navigate LabSim modules
- Experience and utilize a variety of learning tools including videos, fact sheets, images, and so forth

- Interact with hardware and software in a simulated environment
- Describe the various types of computer system components
- Install various components including power supplies, motherboards, processors, memory, the basic input/output system (BIOS), the Unified Extensible Firmware Interface (UEFI), expansion cards, video cards, and sound cards

Lab Tasks

Each module contains numerous sections. Each section contains subsections. The last subsection contains practice questions that are related to the topic of that subsection. The practice questions are not required. Completing the practice questions is optional. The results of the practice questions do not impact your course grade one way or the other.

Module 1.0: Computer Hardware

Complete the following three sections and the specified subsections to become familiar with the LabSim environment and basic computer hardware. For example, for section 1.2, complete subsections 1.2.1, 1.2.2, 1.2.3, and 1.2.4.

- **Section 1.1:** Course Introduction
- **Section 1.2:** Using the Simulator (Review demos and complete subsections 1.2.1, 1.2.2, 1.2.3, and 1.2.4)
- **Section 1.3:** Hardware Basics (Review videos and complete subsections 1.3.1, 1.3.3, 1.3.6, and 1.3.7)

Module 3.0: System Components

Below are numerous sections covering system components. Many of these sections include hands-on simulations. You may complete any or all of these sections. You are required to choose 3 sections, at a minimum. Each section chosen for this lab must include 1 or more simulations. For example, you might choose section 3.5 (2 simulations), section 3.8 (2 simulations), and section 3.12 (1 simulation). Associated simulations and section names can be found at the end of this document. Review all videos, demos, and simulations included in the three sections that you choose to complete.

You are only required to choose and complete 3 sections, but you may choose to complete anywhere from three sections to all of the sections, depending upon

your time availability. Note that you are permitted to return to this module at any time throughout the course and the program if you wish to complete more than the three sections required for this assignment. However, the grade for this Unit 1 Discussion Board assignment will be determined based upon the chosen sections completed during Unit 1. Choose from the following sections:

- **Section 3.1:** Cases and Form Factors (Review video only: Subsection 3.1.1)
- **Section 3.2:** Power Supplies (Review videos and demos only: Subsections 3.2.1, 3.2.3, 3.2.4, and 3.2.5)
- **Section 3.3:** Motherboards and Buses (Review videos and simulation: Subsections 3.3.1, 3.3.3, and 3.3.5)
- **Section 3.5:** Processors (Review video, demo and simulations: Subsections 3.5.1, 3.5.5, 3.5.7, and 3.5.8)
- **Section 3.7:** Memory (Review videos and RAM Facts: Subsections 3.7.1, 3.7.2, and 3.7.4)
- **Section 3.8:** Memory Installation (Review video, demos, and complete simulations: Subsections 3.8.1, 3.8.3, 3.8.4, 3.8.5, and 3.8.7)
- **Section 3.10:** BIOS/UEFI (Review videos, demos, and complete simulations: Subsections 3.10.1, 3.10.2, 3.10.4, 3.10.5, 3.10.6, 3.10.7, 3.10.8, and 3.10.9)
- **Section 3.11:** Expansion Cards (Review videos and complete simulation: Subsections 3.11.1, 3.11.3, and 3.11.4)
- **Section 3.12:** Video (Review video, demo and complete simulation: Subsections 3.12.1, 3.12.4, and 3.12.6)
- **Section 3.13:** Audio (Review videos, demo and complete simulation: Subsections 3.13.1, 3.13.2, 3.13.4, and 3.13.7)
- **Section 3.14:** Cooling (Review video: Subsection 3.14.1)

The above sections include the following hands-on simulations:

- **1.2.2:** Explore the Lab Interface
- **1.2.4:** Connect Internal Components
- **1.3.6:** Set Up a Computer
- **3.2.5:** Install a Power Supply
- **3.3.5:** Choose and Install a Motherboard
- **3.5.7:** Select and Install a Processor 1
- **3.5.8:** Select and Install a Processor 2

- **3.8.3:** Select Memory by Sight
- **3.8.7:** Install Triple Channel Memory
- **3.10.8:** Find BIOS/UEFI Settings
- **3.10.9:** Clear CMOS Settings
- **3.11.4:** Install Expansion Cards
- **3.12.6:** Upgrade a Video Card
- **3.13.7:** Select and Install a Sound Card