# ICS 140 Computational Thinking with Programming

# Class Exercise 1

## Lecture

1. What category of hardware do the keyboard, mouse and camera belong to?

Input devides

1. List 3 examples of output devices:

Monitor, Speakers, printer

1. What type of memory is used to store a program while running?

RAM / Main Storage

1. What type of memory is used for long term storage?

Hard drive (Solid state/spinning), Secondary storage

1. How many bits are in a byte?

8

1. What are the only possible values that can be stored in a bit?

0 or 1

1. What is ASCII?

Standard for converting characters to numeric code

1. What type of encoding system supports additional characters to support more languages?

Unicode

1. What type of memory does the CPU read instructions from?

Main storage / RAM

1. What programming language uses an assembler to convert mnemonics to machine code?

Assembly language

1. What are three examples of high-level programming languages?

Java, C++, Python

1. What is the difference between a compiled and interpreted programming language?

Compiled languages are compiled to machine code to be run on the system

Interpreted languages are interpreted into machine code in real time

1. What is the command used to run python in interactive mode?

Python3

## Computer Setup

For the following exercises we need to install python and an IDE. We will go through this process in class. Visual Studio Code will be used for all coding examples so I recommend it for the students as well. You can download Visual Studio Code here: <https://code.visualstudio.com/Download>

You can download Python here: <https://www.python.org/downloads/>

In visual Studio Code click the extensions icon, select the python extension and install it.

To test out the installation, create a file called helloworld.py and enter the following line:

print(“hello world!”)

Save the file and run it. It should print out: hello world!

Paste a screenshot of your code running below and then save this file as a PDF and upload it to D2L.

**Paste screenshot of hello world program here.**

Text

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