Welcome to CS 105!

In this course you will find out how a computer handles data and uses it to compute useful information. We will talk a little about hardware and networks and then dive into programming. You will understand the basic concepts of how computers think and learn how to teach them to do amazing things in very short times. Finally we will take a closer look at one of the most important computing applications in the business world.

Important things to remember:

In addition to lecture, you must attend the appropriate lab section each week.

The course website is your single most important source of information. You can simply search for CS 105 in your favorite search engine (Google, Yahoo, Bing, etc). This course is usually the first result. Or you can enter the URL directly: cs105.cs.illinois.edu

Your instructor is Martin Hellwig. You can reach him at mhellwig@illinois.edu

For questions about the material, you should first look at Piazza, our forum. You will find a link on the course website.

If you need additional help or have confidential questions regarding grading or other personal issues, please email the TA who is running your weekly lab section.

It is also a great idea to attend any of our many office hours which will be posted on the web site soon.

Things to take home from today's lecture:

Internally, a computer only stores zeroes and ones. All larger numbers are translated into this binary system. More complex data types (images, videos, sound files, spreadsheets etc.) are represented using the same binary number system.

Computers store all data at predefined locations in memory or on storage media. You can think of these locations as cubbies on a shelf. Whenever you have some data to store, you specify the address of the said cubby and the computer will store it there.

Review Questions

1) What is the decimal equivalent of the binary 101010 ?

2) How about the binary representation of 172 ?

3) What two states can a bit assume?

4) How many bits are in a byte?

5) In JavaScript, what do we call the "boxes" in which we can store numbers, strings or other useful things for later retrieval?