

In this course, you will learn some important tools about computer sciences. In fact, you will learn how to make your own website, how to write your first code and how internet works. We will do projects like how to do calculator, drawing graphs and making websites.

**Step 1:** Use online resources or print resources to find appropriate CS definitions of each of the following terms. You may use **khan Academy website**. Please if you have any questions email me. (daidai@longleafschool.com)

1. Binary numbers.
2. Decimal numbers.
3. Arithmetic expressions.
4. Data types.
5. Type of networks.
6. IP address.
7. Browser and make sure to write some examples.
8. HTTP protocol.

**Step 2:** Let  $a=45$ .

- a. Write  $a$  in binary base.
- b. What's the type of  $a$ ?
- c. Let  $a=a+2$ . We repeat the operation 5 times. Write your result.

**Step 3:** Find the ASCII code of the following:

- A, a.
- B, b.
- C, c.

**Step 4:** Security data is very important in computer science. Make sure to give definitions to the following:

- Cryptography.
- Cookies.

**Step 5:** Write a few sentences about the impact of communication innovations.

## Step 6:

- Explain what an algorithm is and how it is used in creation of video games and cybersecurity, it is important to provide some examples. The number of sentences should be at least 6 lines.
- Describe the rule of a list (array in JavaScript) in computer science.