In this lab, you will learn to build, run and debug small C programs involving decisions and loops.

The basic objectives are:

(1) Understand the basic instructions in C.

(2) Think of ways to implement a given problem in C.

(3) Get familiar with your IDE.

Task 1: Children like chocolates. We need to distribute 72 chocolates among 8 children. Find the max n for which the statement, "there is at least one child who gets at least n chocolates" is sure to be true. Write a C program to compute n.

Input: None.
Output: The value of n.

Task 2: Having known that we distribute chocolates, every day, more and more children have started coming to us. Extend the above program for x children.

Input: Number of children.
Output: The value of n.

Task 3: Implement a change vending machine. The machine stocks up change in the denominations of Rs. 100, Rs. 50, Rs. 20, Rs. 10 and Rs. 1. Given any amount between Rs. 1 and Rs. 1000, vend the change such that you end up giving the least number of notes. For this problem, assume that all denominations are available in the form of currency notes.

Sample Input: 542
Sample Output: 5 * 100, 2 * 20, 2 * 1.

In this case, you gave out nine (5 + 2 + 2) notes. Any other way of vending notes would increase this number. For example, 542 * 1 is a wrong answer. You need to give the highest denomination first wherever possible.