C/C++ Programming in UNIX

Lab 01

Note: No need to use array, function or any additional libraries

1. Write a program that inputs an n-digit number and then outputs its n digits from least to most significant:

```
Input: 132768
Output: 8 6 7 2 3 1
```

2. Write a program to input integers; the program ends when user input 0. Print the minimum (different from 0) and maximum number (different from 0) among the input numbers:

```
Input: -3 5 -2 9 8 10 5 -1 0
Min: -3
Max: 10
```

3. Write a program to find all prime number less than a given integer N (optional: provide an optimal solution)

```
N = 10
Output: 2 3 5 7
```

4. Rewrite the following code to make it clearer:

```
if (t = (x > y ? 0 : 1))
    x = 5;
else
    x = 10;
```

5. Given an initial number of chickens being raised on a farm and a weekly breeding rate, compute the number of chickens at the end of a certain number of weeks

6. Given numbers x and y. Use only basic math operator +, -, *, / to evaluate the following equation using no more than 16 operations:

$$3x^2y^2 - 2xy^2 - 7x^2y - 4y^2 + 15xy + 2x^2 - 3x + 10y + 6$$