Final problem set

1. Write a program that given a sequence of 10 integers, find out and delete the maximum and minimum number, then compute the average of the rest.

2. Write a program to find out all 3-digit Narcissistic number. A number n is a 3-digit Narcissistic number if: (a) $100 \leq n \leq 999$, (b) The sum of its own digits each raised to the power of 3 equals to itself. For example: 153 is a Narcissistic number because $153 = 1^3 + 5^3 + 3^3$.

3. Given a function:

$$y = \begin{cases} x & x < 1 \\ 2x - 1 & 1 \leq x < 10 \\ 3x - 11 & x \geq 10 \end{cases}$$

Write a program to compute y given an input x.

4. Complete the function `copyString`, copy elements from array src to array dest.
```c
#include <stdio.h>
void copyString(char *src, char *dest)
{
    // Complete this copyString function here.

}
int main()
{
    char inputString[100];
    char Acopy[100];
    scanf("%s", inputString);
    copyString(inputString, Acopy);
    return 0;
}
```

5. Write a program that checks the strength of passwords. Each password is enough strong if it meets ALL of the following conditions:
   a. Contains at least 8 character
   b. Contains at least one lower case letter
   c. Contains at least one upper case character
   d. Contains at least one digit (0,1,2,…, 8 and 9)

   Your program should accept a string input and check whether it is strong or not.
   Here are some sample runs:

   Your program: Please input your password

   User: 123456

   Your program: This password is not strong enough!

   Your program: Please input your password

   User: S@s12222

   Your program: This password is strong enough!