```c
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#include "processControlFcmuh.h"

// The following is a small part of a very sensitive
// program used to modify the temperature of a chemical process
// in a water cleaning plant. Sometimes the process is too warm
// and the process needs to be cooled. Two externally defined
// functions are used
// int readTemperature() returns the current temperature of the process
// void lowerTemperatureOneDegree() lowers the temperature one degree

/* This program is accessible via a web interface, but it is protected
by a secret password. To lower the temperature several degrees, we
* call lowerTemperatureDegree() through a loop. This function should
* never be called more than 9 times in a row because then the system
* breaks and the water is no longer cleaned.
*/

int convertToNum(char chr) {
    // convert character chr to a number using the underlying ASCII
    // encoding. Each character is encoded using the ASCII-code, so a '0'
    // is coded as 48, a '1' as code 49, an 'A' as code 65 etc.
    int num = -1;
    if (chr>=48 && chr<58) {
        // chr is a CHAR = printable letter where
        // code 48= numerical 0; code 57=numerical 9
        num = chr-48; // num is an INT containing the corresponding number
    }
    return num;
}

int main(void) {
    char secret[] = "pa33";
    char userName[6];
    char userPassword[9];
    char lowerTempChr[4];
    int lowerTemp;
    int lowerTempChr;
    // check if user is authorized to run program
    printf("Enter username:");
gets(userName);
    printf("Enter password:");
gets(userPassword);
    if (strcmp(userPassword, secret) != 0) {
        printf("You are not allowed to run this program\n");
        exit(1);
    }
    printf("Current temperature of process is %d degrees\n", readTemperature());
    printf("Enter degrees to lower temperature (0 to 9):");
gets(lowerTempChr);
    lowerTemp = convertToNum(lowerTempChr[0]); // only convert first char
    printf("The temperature will now be lowered one degree at a time, for a total of %d degrees,\n", lowerTemp);
    lowerTemp = lowerTemp - 1;
}
```