

Tabs and spaces

Problem: Are tabs and spaces different? Compile the code and see the results. Modify as needed.

Hint: Use a better text editor to see tabs and spaces.

Given: secret.c

Steps:

1) We compile the given C file, executes it and get something meaningless.

y?[6c6pg>sfoſt_e`:[{cahf

```
[qijun@glap forensics]$ gcc -o secret secret.c
[qijun@glap forensics]$ ./secret
y?[6c6pg>sfoſt_e`:[{cahf
[qijun@glap forensics]$
```

2) With hidden characters turned on notice that most lines have indents in the whitespace but a few have tabs as indents. When viewed in a good editor (such as geany or sublimetext), spaces appear as dots when highlighted and tabs are represented by lines.

```
#include <ctype.h>
#include <string.h>
#include <stdio.h>

char secret_code[] = "dj_ey]3bcarumhq3er7e7)={";

void alter_digit(char *s)
{
    for (int i = 0; i < strlen(s); ++i)
    {
        if (isdigit(s[i]))
        {
            int x = 10;
            x += 4 * 3;
            x -= 7;
            s[i] = s[i] ^ x;
        }
    }
}

void rotate(char *s)
{
    char aux;
    int n = strlen(s);
    for (int i = 0; i < n / 2; ++i)
    {
        aux = s[i];
        s[i] = s[n - i - 1];
        s[n - i - 1] = aux;
    }
}

int main(int argc, char const *argv[])
{
    rotate(secret_code);
    for (int i = 0; i < strlen(secret_code); ++i)
    {
        if (i % 2 == 0)
            secret_code[i] -= 2;
        else
            secret_code[i] += 2;
    }

    alter_digit(secret_code);
    puts(secret_code);
    return 0;
}
```

3) The problem states “are tabs and spaces different”. In C, they are not different when they are used for indentation. Maybe, the lines with tabs and the lines with spaces are different in the code. So, let us comment out these lines to see if the code will produce different results. Obviously, if we comment out lines starting spaces, the code in the main function cannot be compiled. So, we comment out the lines starting with tabs...