

LABWORK RULES

- Labwork ends 18.50.
- **Name of your file should be in the format: labwork1_name_surname.c**
 - Name: is your own name
 - Surname: is your own surname
 - Example: labwork1_name_surname.c
 - If you do not know how to create a c file, please look at “how to run your code” file
- **Your file should be on the desktop**
- **At 18.50**, we collect your works from your desktop. Do not turn off your computer until you are told to do so...
- You will not have an internet connection until we collect your works. When the access is permitted, submit your work on coadsys.
- The work we collect and you submitted on coadsys should be exactly the same.
- Read your labwork documents carefully and listen to the explanation of your assistant.
- There can be restrictions on your labwork, obey them if you want to get a full grade.
- If you did not understand the labwork or there is an unclear point, do not make assumptions and ask your assistant immediately.
- There will be some example input and output for each labwork. Do not write a program that only runs for the given example input. Be sure you understand the question well.

FORBIDDEN

- Talking with your friends
- Looking at your friend's monitor
- Using any mobile phone or smart devices
- Books, notebooks, papers or notes
- Usb or any kind of device that is used to share information
- Internet

LABWORK 1

Write 3 functions and a main function.

Function 1: (25 pts)

- **Function name:** squared_diff1
- **Function parameter:** 2 integer parameters; x and y
- **Return type:** integer
- Function calculates and returns $x^2 - y^2$, if the result is negative, then multiply it with -1.

Function 2: (25 pts)

- **Function name:** squared_diff2
- **Function parameter:** 2 integer parameters; x and y
- **Return type:** integer
- Function calculates and returns $(x - y) * (x + y)$, if the result is negative, then multiply it with -1.

The main function :

1. Ask x and y values from the user **(5 pts)**
2. Call squared_diff1 function and calculate its result. **(5 pts)**
3. If the result from step 2 is smaller than 20, ask another y value from the user. Otherwise, continue with step 6. **(10 pts)**
4. Call squared_diff1 function again and calculate its result with the new y value. **(5 pts)**
5. If the result from step4 is also smaller than 20, then set the y value to x+5. Otherwise, continue with step 6. **(10 pts)**
6. Call squared_diff2 function and calculate its result **(5 pts)**
7. Print "SAME" if both of the values returned from the functions match, print "DIFFERENT" otherwise **(10 pts)**
8. Do the printf and scanf operations **only** in the main function.

```
kperente@KPERENTE-PC:~/Desktop/CSE 114/Lab1$ gcc labwork1.c
kperente@KPERENTE-PC:~/Desktop/CSE 114/Lab1$ ./a.out
Enter x:
2
Enter y:
3
squared_diff1 returns 5
Result is smaller than 20. Enter y again:
4
squared_diff1 returns 12
Result is smaller than 20. Setting y value to x + 5
squared_diff1 returns 45
SAME
kperente@KPERENTE-PC:~/Desktop/CSE 114/Lab1$ ./a.out
Enter x:
11
Enter y:
10
squared_diff1 returns 21
SAME
kperente@KPERENTE-PC:~/Desktop/CSE 114/Lab1$ ./a.out
Enter x:
5
Enter y:
7
squared_diff1 returns 24
SAME
kperente@KPERENTE-PC:~/Desktop/CSE 114/Lab1$
```