

Предмет	ТРПО
Курс	4
Семестр	1
Работа	10
Дата	27.11.2020
Группа	473
Фамилия	Студентова
Имя	Варя
Отчество	Олеговна

Отчет

Написанный код на lua (Рис.1-4).

The screenshot shows a text editor window titled "Text Editor" with a timestamp of "Wed 17:29". The file name is "Studentova473lab-10.lua" and the path is "~/xas". The code is as follows:

```

1
2 mod = require 'Studentova473lab-10-mod'
3
4 a = 2
5 b = 4
6
7 print ('before swap')
8 print (a, b)
9
10 a,b = mod.lua_swap(a, b)
11
12 print ('after swap using lua module')
13 print (a, b)

```

At the bottom of the window, there is a terminal window with the prompt "user@debian:~\$ " and a cursor.

Рис-1

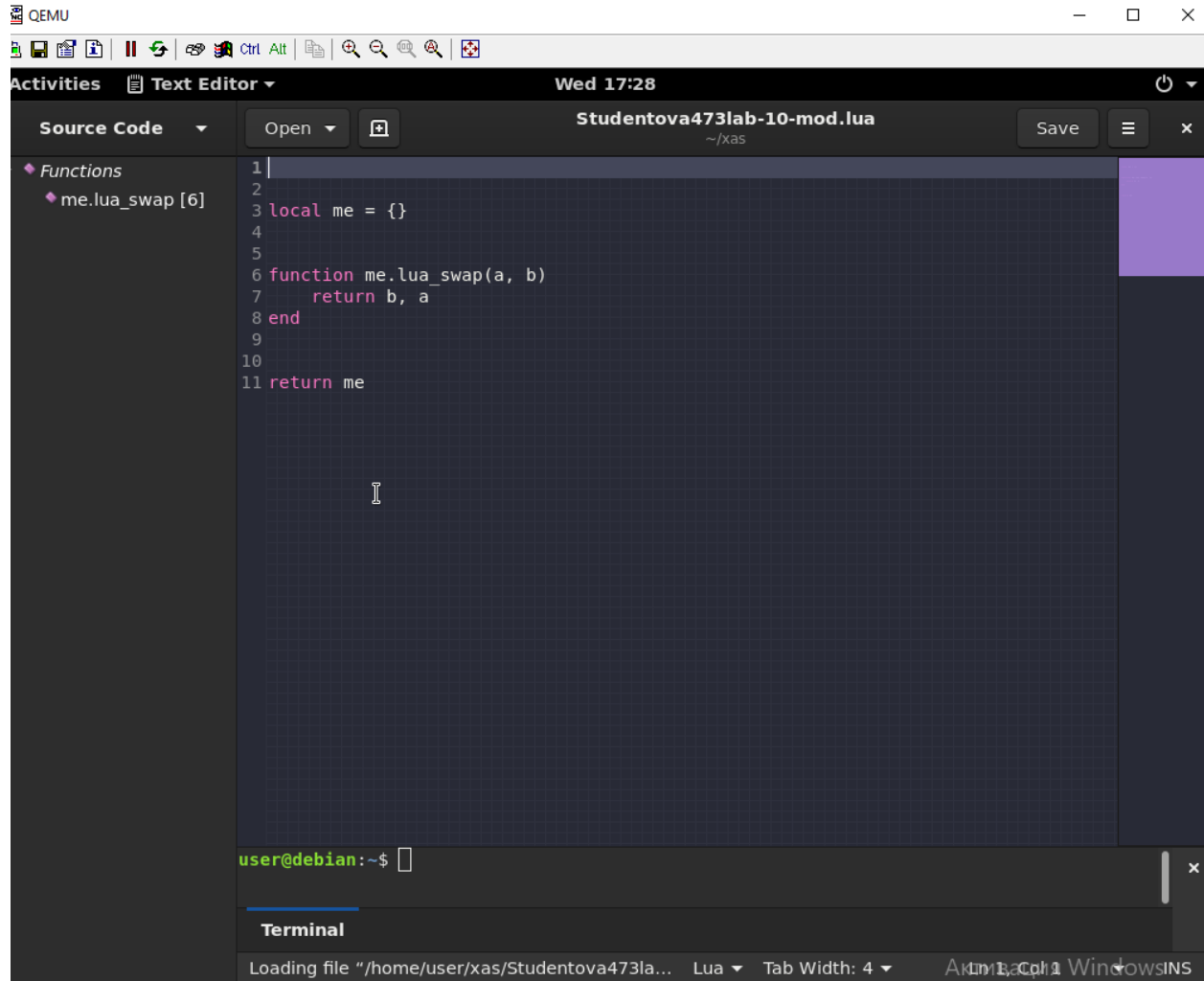


Рис-2

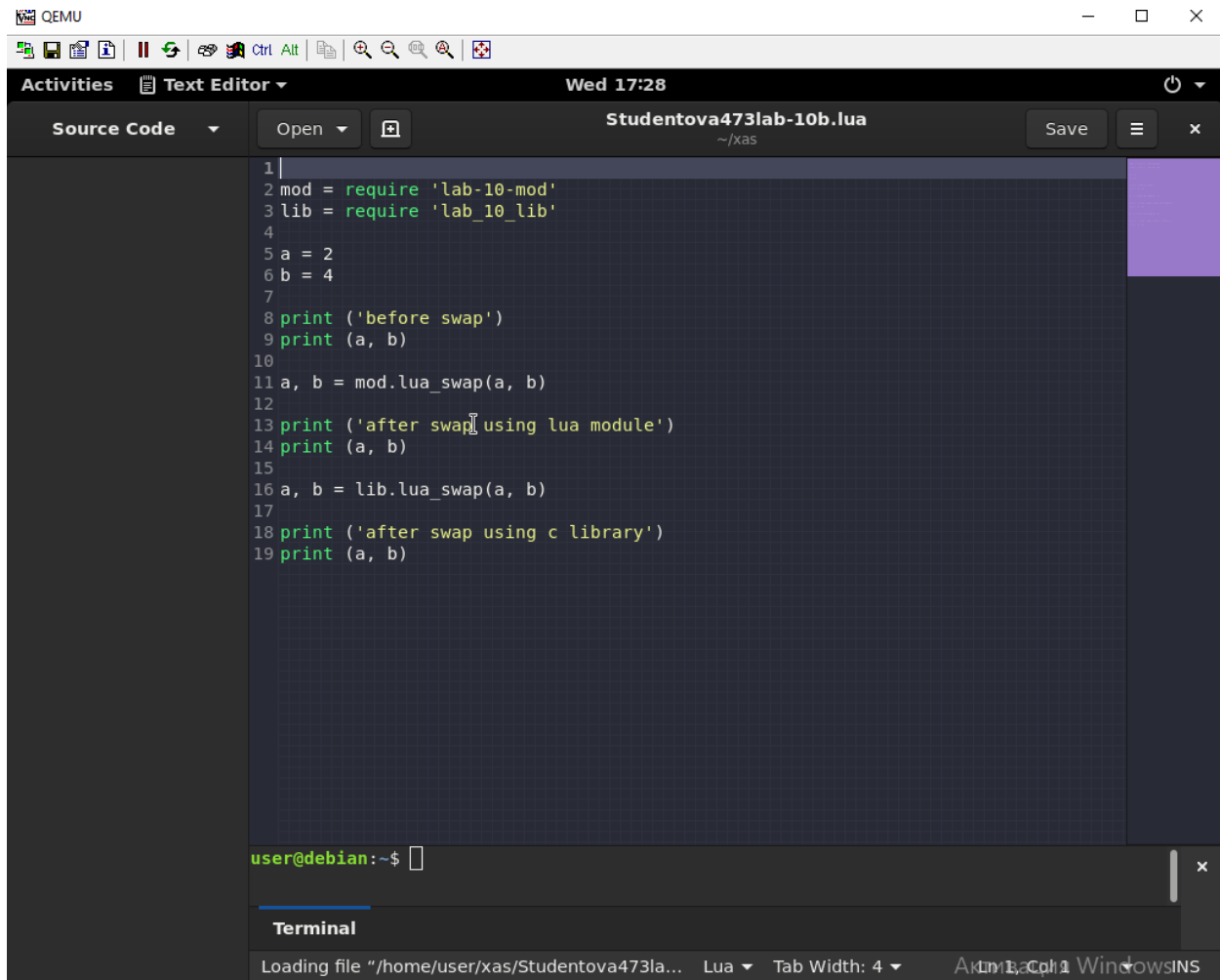


Рис-3

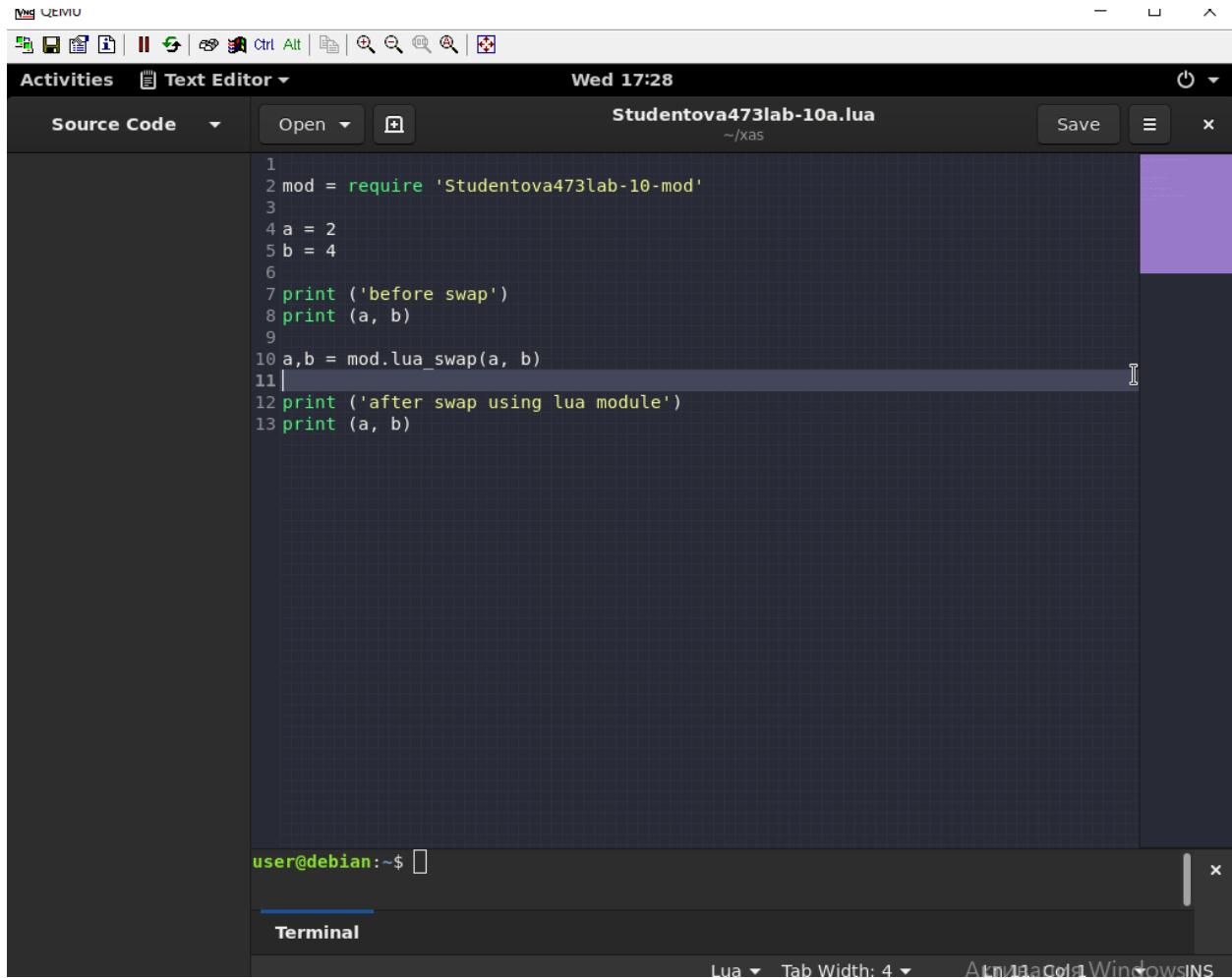
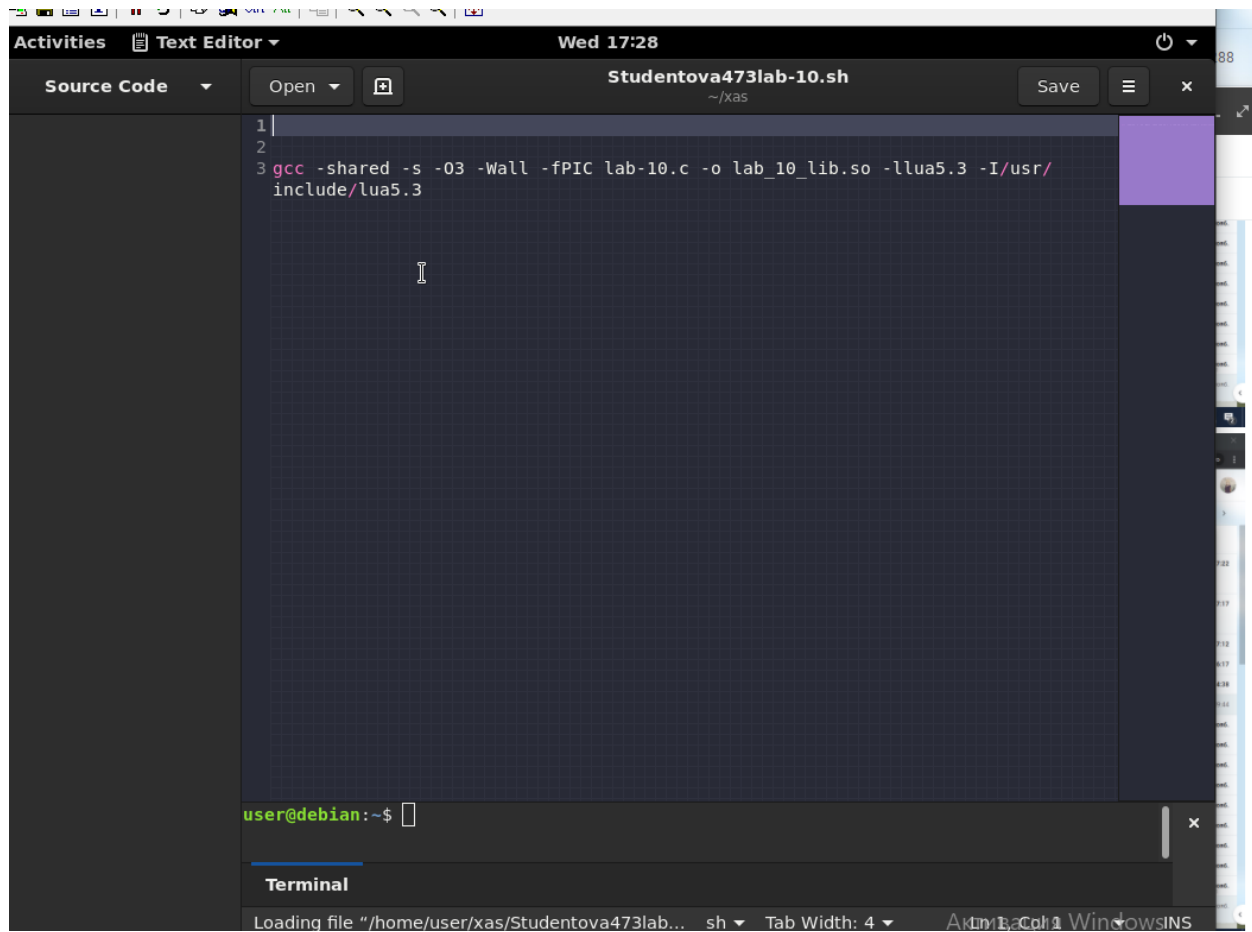


Рис-4

Код на power shell.(Рис.5)



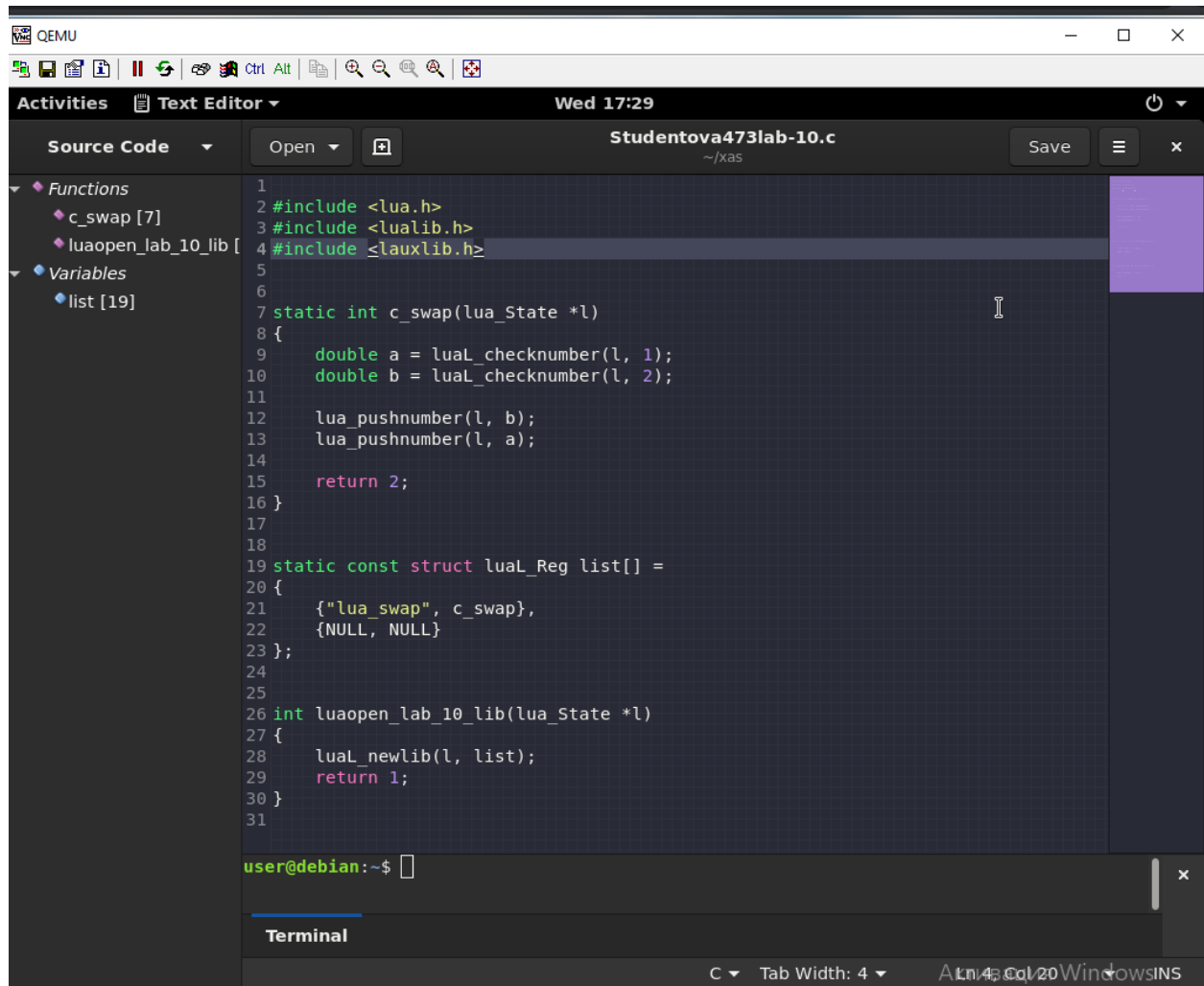
The screenshot shows a Linux desktop environment. At the top, there is a panel with the date and time 'Wed 17:28'. Below this, a text editor window titled 'Studentova473lab-10.sh' is open, showing the following code:

```
1 |
2 |
3 gcc -shared -s -O3 -Wall -fPIC lab-10.c -o lab_10_lib.so -llua5.3 -I/usr/
  include/lua5.3
```

Below the text editor, a terminal window is open, showing the prompt 'user@debian: ~\$' and a cursor. The terminal window also displays the message 'Loading file "/home/user/xas/Studentova473lab...' and 'sh'. The bottom of the screen shows a taskbar with icons for 'Activities', 'Text Editor', and 'Terminal'.

Рис-5

Код на C.(Рис.6)



The image shows a QEMU virtual machine window. The top bar indicates 'QEMU' and the system clock is 'Wed 17:29'. The main window is a text editor titled 'Studentova473lab-10.c' with a file icon, 'Open' button, and 'Save' button. The editor displays C code for a Lua module. A sidebar on the left shows a project tree with 'Functions' (c_swap [7]), 'Variables' (list [19]), and 'luaopen_lab_10_lib'. The code includes headers for lua.h, luaL.h, and lauxlib.h. It defines a static function c_swap that checks and pushes two numbers onto the Lua stack. A static list of Lua registrations is defined, and the luaopen_lab_10_lib function is implemented to register the module. A terminal at the bottom shows the prompt 'user@debian:~\$'.

```
1
2 #include <lua.h>
3 #include <lualib.h>
4 #include <lauxlib.h>
5
6
7 static int c_swap(lua_State *l)
8 {
9     double a = luaL_checknumber(l, 1);
10    double b = luaL_checknumber(l, 2);
11
12    lua_pushnumber(l, b);
13    lua_pushnumber(l, a);
14
15    return 2;
16 }
17
18
19 static const struct luaL_Reg list[] =
20 {
21     {"lua_swap", c_swap},
22     {NULL, NULL}
23 };
24
25
26 int luaopen_lab_10_lib(lua_State *l)
27 {
28     luaL_newlib(l, list);
29     return 1;
30 }
31
```

user@debian:~\$

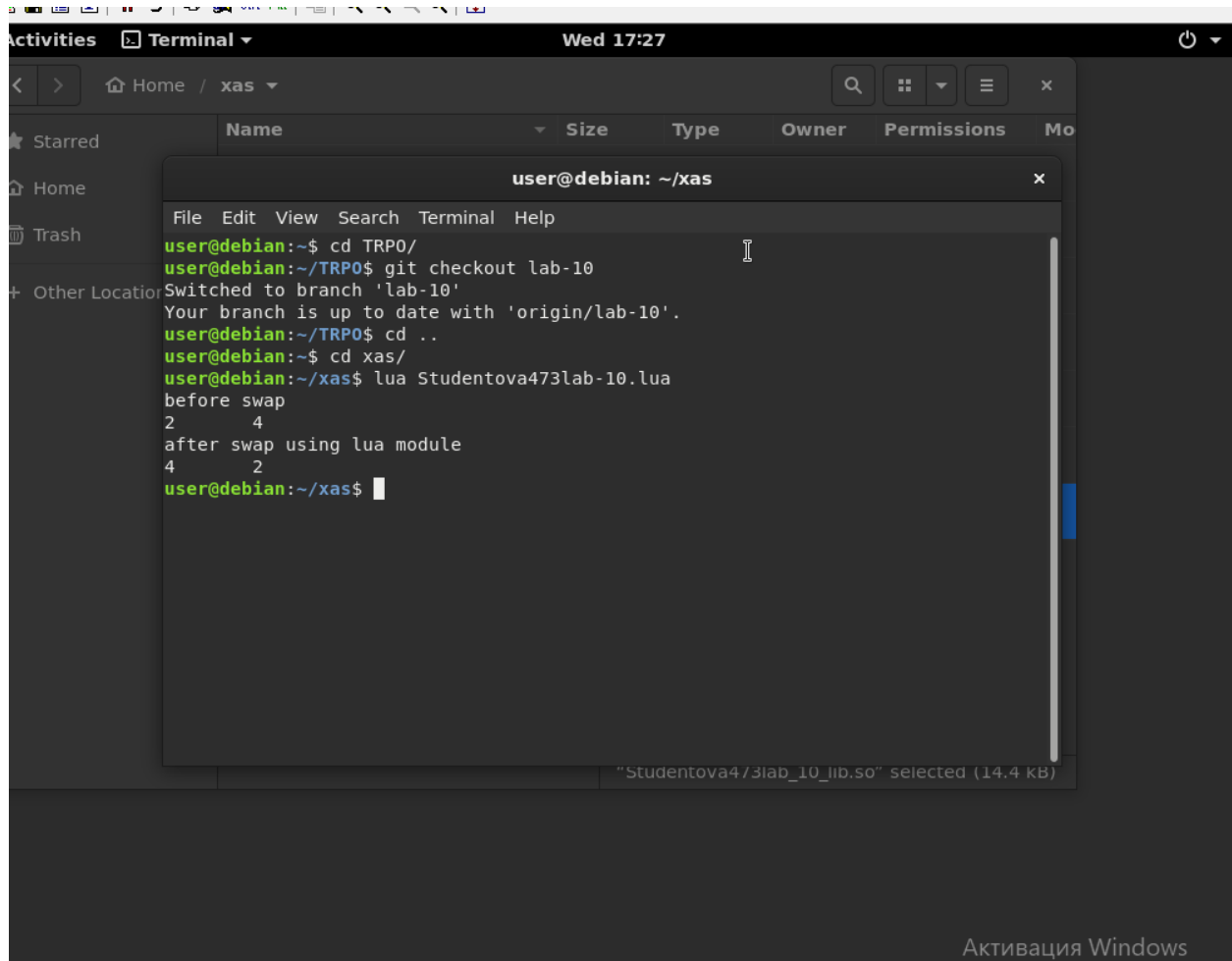
Terminal

Tab Width: 4

Alt+Ctrl+WindowsINS

Рис-6

Работа приложения.(Рис.-7)



```
user@debian: ~/xas
File Edit View Search Terminal Help
user@debian:~$ cd TRP0/
user@debian:~/TRP0$ git checkout lab-10
Switched to branch 'lab-10'
Your branch is up to date with 'origin/lab-10'.
user@debian:~/TRP0$ cd ..
user@debian:~$ cd xas/
user@debian:~/xas$ lua Studentova473lab-10.lua
before swap
2      4
after swap using lua module
4      2
user@debian:~/xas$
```

"Studentova473lab_10_lib.so" selected (14.4 kB)

Активация Windows

Рис-7

