

МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ

Федеральное государственное автономное
образовательное учреждение высшего образования
«Национальный исследовательский университет ИТМО»
(Университет ИТМО)

Факультет систем управления и робототехники

ОТЧЕТ ПО ЛАБОРАТОРНОЙ РАБОТЕ №4
по дисциплине
«Операционная система Linux»

Студент:
Группа № R3435

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Предподаватель:
ассистент

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Санкт-Петербург
2025

1 ОСНОВЫ БЕЗОПАСНОСТИ В LINUX

1.1 Цель работы

Изучить управление пользователями и группами, права доступа к файлам, а также базовые операции с процессами. Зафиксировать ход работы в файлах записи терминала.

1.2 Краткий ход выполнения

1.2.1 Права root и системные файлы

- Просмотр `/etc/passwd` с пояснением полей: `: :UID:GID: : _-`
: - Использование `sudo` для безопасного выполнения привилегированных команд

1.2.2 Пользователи и группы

- Созданы пользователи: `user1`, `user2`, `user3` - Создана группа `Students`, добавлены `user1`, `user2` - `user3` получал root-права для административных шагов - Проверена принадлежность к группам командой `groups`

1.2.3 Файлы и права

- Под `user1` создан файл `schedule`, владельцем назначена группа `Students` (`chgrp`) - Под `user2` проверена доступность и выполнена попытка записи - Под `user3` создан файл `important`, права изменены `chmod` для доступа `Others` - Исследованы умолчания прав и отличия прав у файлов, созданных с `root`

1.2.4 Процессы

- Получен список процессов и сохранён в `proc_list` - Изучены `pstree`, `kill`, `killall`

1.2.5 Учебные файлы

10:00 Maths

11:40 Physics

13:30 Economics

15:20 Programming

17:00 Databases

All students need to be in recreation area at 18:00! Sign below
if you got this message.

All personal! University will be closed tomorrow!

1.2.6 Список процессов

PID	TTY	TIME	CMD
1	?	00:00:04	systemd
2	?	00:00:00	kthreadd
3	?	00:00:00	pool_workqueue_release
4	?	00:00:00	kworker/R-rcu_gp
5	?	00:00:00	kworker/R-sync_wq
6	?	00:00:00	kworker/R-kvfree_rcu_reclaim
7	?	00:00:00	kworker/R-slub_flushwq
8	?	00:00:00	kworker/R-netns
11	?	00:00:00	kworker/0:0H-events_highpri
13	?	00:00:00	kworker/R-mm_percpu_wq
14	?	00:00:00	rcu_tasks_kthread
15	?	00:00:00	rcu_tasks_rude_kthread
16	?	00:00:00	rcu_tasks_trace_kthread
17	?	00:00:00	ksoftirqd/0

18 ?	00:00:12	rcu_preempt
19 ?	00:00:00	rcu_exp_gp_kthread_worker/0
20 ?	00:00:00	rcu_exp_gp_kthread_worker
21 ?	00:00:00	migration/0
22 ?	00:00:00	idle_inject/0
23 ?	00:00:00	cpuhp/0
24 ?	00:00:00	cpuhp/1
25 ?	00:00:00	idle_inject/1
26 ?	00:00:00	migration/1
27 ?	00:00:00	ksoftirqd/1
29 ?	00:00:00	kworker/1:0H-events_highpri
30 ?	00:00:00	cpuhp/2
31 ?	00:00:00	idle_inject/2
32 ?	00:00:00	migration/2
33 ?	00:00:00	ksoftirqd/2
35 ?	00:00:00	kworker/2:0H-events_highpri
36 ?	00:00:00	cpuhp/3
37 ?	00:00:00	idle_inject/3
38 ?	00:00:00	migration/3
39 ?	00:00:00	ksoftirqd/3
41 ?	00:00:00	kworker/3:0H-events_highpri
42 ?	00:00:00	cpuhp/4
43 ?	00:00:00	idle_inject/4
44 ?	00:00:00	migration/4
45 ?	00:00:00	ksoftirqd/4
47 ?	00:00:00	kworker/4:0H-events_highpri
48 ?	00:00:00	cpuhp/5
49 ?	00:00:00	idle_inject/5
50 ?	00:00:00	migration/5
51 ?	00:00:00	ksoftirqd/5
53 ?	00:00:00	kworker/5:0H-events_highpri
56 ?	00:00:00	kdevtmpfs
57 ?	00:00:00	kworker/R-inet_frag_wq
58 ?	00:00:00	kauditd
59 ?	00:00:00	khungtaskd
60 ?	00:00:00	oom_reaper
63 ?	00:00:00	kworker/R-writeback
64 ?	00:00:01	kcompactd0
65 ?	00:00:00	ksmd
66 ?	00:00:00	khugepaged
67 ?	00:00:00	kworker/R-kintegrityd
68 ?	00:00:00	kworker/R-kblockd

69 ?	00:00:00	kworker/R-blkcg_punt_bio
70 ?	00:00:03	irq/9-acpi
72 ?	00:00:00	kworker/R-tpm_dev_wq
73 ?	00:00:00	kworker/R-ata_sff
75 ?	00:00:00	kworker/R-md
76 ?	00:00:00	kworker/R-md_bitmap
77 ?	00:00:00	kworker/R-edac-poller
79 ?	00:00:00	kworker/R-devfreq_wq
81 ?	00:00:00	watchdogd
82 ?	00:00:00	kworker/4:1H-kblockd
83 ?	00:00:00	irq/25-AMD-Vi0-Evt
84 ?	00:00:00	irq/26-AMD-Vi0-PPR
85 ?	00:00:00	irq/27-AMD-Vi0-GA
87 ?	00:00:00	kswapd0
88 ?	00:00:00	ecryptfs-kthread
89 ?	00:00:00	kworker/R-kthrotld
90 ?	00:00:00	kworker/u27:0-hci0
92 ?	00:00:00	kworker/R-acpi_thermal_pm
97 ?	00:00:00	kworker/R-mld
98 ?	00:00:00	kworker/R-ipv6_addrconf
99 ?	00:00:00	kworker/3:1H-kblockd
107 ?	00:00:00	kworker/R-kstrp
108 ?	00:00:01	kworker/2:1-events
124 ?	00:00:00	kworker/R-charger_manager
125 ?	00:00:00	kworker/0:1H-kblockd
183 ?	00:00:00	kworker/5:1H-kblockd
184 ?	00:00:00	kworker/2:1H-kblockd
185 ?	00:00:00	kworker/1:1H-kblockd
205 ?	00:00:02	kworker/0:2-events
209 ?	00:00:00	kworker/R-nvme-wq
210 ?	00:00:00	kworker/R-nvme-reset-wq
211 ?	00:00:00	kworker/R-nvme-delete-wq
212 ?	00:00:00	irq/48-PNP0C50:09
213 ?	00:00:00	kworker/R-nvme-auth-wq
214 ?	00:00:00	scsi_eh_0
215 ?	00:00:00	kworker/R-scsi_tmf_0
352 ?	00:00:03	jbd2/nvme0n1p6-8
353 ?	00:00:00	kworker/R-ext4-rsv-conversion
406 ?	00:00:05	systemd-journal
505 ?	00:00:00	systemd-udevd
508 ?	00:00:00	psimon
674 ?	00:00:00	kworker/R-cfg80211

747	?	00:00:00	kworker/R-cryptd
798	?	00:01:38	irq/65-rtw88_pci
940	?	00:00:05	systemd-oomd
950	?	00:00:03	systemd-resolve
951	?	00:00:00	systemd-timesyn
1048	?	00:00:00	kworker/R-amdgpu-reset-dev
1079	?	00:00:00	kworker/R-ttm
1186	?	00:00:00	avahi-daemon
1187	?	00:00:00	bluetoothd
1188	?	00:00:04	dbus-daemon
1192	?	00:00:00	gnome-remote-de
1197	?	00:00:00	lttng-sessiond
1211	?	00:00:01	polkitd
1217	?	00:00:00	power-profiles-
1223	?	00:00:09	snapd
1226	?	00:00:00	accounts-daemon
1230	?	00:00:00	cron
1231	?	00:00:00	switcheroo-cont
1233	?	00:00:00	systemd-logind
1237	?	00:00:01	udisksd
1250	?	00:00:00	avahi-daemon
1256	?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1257	?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1258	?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1259	?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1260	?	00:00:00	kworker/R-dm_vblank_control_workqueue
1261	?	00:00:00	rsyslogd
1269	?	00:00:00	lttng-runas
1311	?	00:00:00	card1-crtc0
1312	?	00:00:00	card1-crtc1
1313	?	00:00:00	card1-crtc2
1314	?	00:00:00	card1-crtc3
1319	?	00:00:00	kworker/R-gfx
1320	?	00:00:00	kworker/R-comp_1.0.0
1321	?	00:00:00	kworker/R-comp_1.1.0
1322	?	00:00:00	kworker/R-comp_1.2.0
1323	?	00:00:00	kworker/R-comp_1.3.0
1324	?	00:00:00	kworker/R-comp_1.0.1
1325	?	00:00:00	kworker/R-comp_1.1.1
1326	?	00:00:00	kworker/R-comp_1.2.1
1327	?	00:00:00	kworker/R-comp_1.3.1
1328	?	00:00:00	kworker/R-sdma0

1329	?	00:00:00	kworker/R-vcn_dec
1330	?	00:00:00	kworker/R-vcn_enc0
1331	?	00:00:00	kworker/R-vcn_enc1
1332	?	00:00:00	kworker/R-jpeg_dec
1689	?	00:00:03	NetworkManager
1690	?	00:00:00	wpa_supplicant
1739	?	00:00:00	ModemManager
1853	?	00:00:00	cupsd
1855	?	00:00:00	run-cups-browse
1856	?	00:00:00	run-cupsd
1858	?	00:00:00	unattended-upgr
1866	?	00:00:06	containerd
1961	?	00:00:00	gdm3
1982	?	00:00:00	gdm-session-wor
1996	?	00:00:00	winbindd
2017	?	00:00:02	systemd
2030	?	00:00:00	(sd-pam)
2059	?	00:00:00	wb[LEONIDAS-AX1
2138	?	00:00:00	cupsd
2139	?	00:00:00	cups-proxyd
2145	?	00:00:33	pipewire
2146	?	00:00:00	pipewire
2148	?	00:00:02	wireplumber
2149	?	00:00:41	pipewire-pulse
2150	?	00:00:00	gnome-keyring-d
2175	?	00:00:02	dbus-daemon
2188	?	00:00:00	rtkit-daemon
2189	?	00:00:00	xdg-document-po
2192	?	00:00:00	run-cups-browse
2205	?	00:00:00	xdg-permission-
2210	tty2	00:00:00	gdm-wayland-ses
2221	tty2	00:00:00	gnome-session-b
2225	?	00:00:00	fusermount3
2307	?	00:00:00	gcr-ssh-agent
2309	?	00:00:00	gnome-session-c
2329	?	00:00:00	gvfsd
2338	?	00:00:00	gvfsd-fuse
2341	?	00:00:00	gnome-session-b
2361	?	00:00:00	krfcommd
2384	?	00:06:02	gnome-shell
2386	?	00:00:00	at-spi-bus-laun
2397	?	00:00:00	dbus-daemon

2449	?	00:00:00	at-spi2-registr
2450	?	00:00:00	colord
2477	?	00:00:00	cups-browsed
2479	?	00:00:00	kerneloops
2482	?	00:00:00	kerneloops
2503	?	00:00:00	gnome-shell-cal
2519	?	00:00:00	evolution-sourc
2521	?	00:00:00	gjs
2523	?	00:00:03	upowerd
2535	?	00:00:17	ibus-daemon
2539	?	00:00:00	gsd-a11y-settin
2541	?	00:00:00	gsd-color
2546	?	00:00:00	gsd-datetime
2549	?	00:00:00	gsd-housekeepin
2551	?	00:00:00	gsd-keyboard
2552	?	00:00:00	gsd-media-keys
2560	?	00:00:00	gsd-power
2562	?	00:00:00	gsd-print-notif
2570	?	00:00:00	gsd-rfkill
2574	?	00:00:00	gsd-screensaver
2575	?	00:00:01	gsd-sharing
2576	?	00:00:00	gsd-smartcard
2577	?	00:00:00	gsd-sound
2578	?	00:00:00	gsd-wacom
2593	?	00:00:00	gsd-disk-utilit
2601	?	00:00:00	evolution-alarm
2616	?	00:00:47	gnome-software
2721	?	00:00:00	ibus-dconf
2722	?	00:00:01	gvfs-udisks2-vo
2733	?	00:00:05	ibus-extension-
2742	?	00:00:02	ibus-portal
2753	?	00:00:00	gvfs-gphoto2-vo
2769	?	00:00:00	snapd-desktop-i
2780	?	00:00:00	gvfs-mtp-volume
2822	?	00:00:00	gvfs-goa-volume
2854	?	00:00:00	goa-daemon
2859	?	00:00:00	snapd-desktop-i
2861	?	00:00:00	gsd-printer
2875	?	00:00:00	goa-identity-se
2888	?	00:00:00	gvfs-afc-volume
2916	?	00:00:00	gvfsd-metadata
2927	?	00:00:00	evolution-calen

2934	?	00:00:05	ibus-engine-sim
2962	?	00:00:00	dconf-service
2975	?	00:00:00	evolution-addre
3006	?	00:00:00	gvfsd-trash
3057	?	00:00:00	xdg-desktop-por
3083	?	00:00:03	com.docker.back
3084	?	00:00:00	tracker-miner-f
3086	?	00:00:00	xdg-desktop-por
3090	?	00:00:00	gjs
3134	?	00:00:00	xdg-desktop-por
3174	?	00:00:02	fwupd
3194	?	00:02:50	com.docker.back
3237	?	00:00:00	com.docker.dev-
3248	?	00:00:00	com.docker.buil
3249	?	00:00:16	Docker Desktop
3292	?	00:00:00	Docker Desktop
3294	?	00:00:00	Docker Desktop
3298	?	00:00:00	Docker Desktop
3668	?	00:00:34	Xwayland
3741	?	00:00:00	gsd-xsettings
3826	?	00:00:00	gvfsd-recent
3833	?	00:00:00	ibus-x11
3878	?	00:00:06	mutter-x11-fram
3922	?	00:00:02	Docker Desktop
3935	?	00:00:02	Docker Desktop
4157	?	00:02:09	cursor
4165	?	00:00:23	Cursor-1.0.0-x8
4188	?	00:00:00	cursor
4189	?	00:00:00	cursor
4207	?	00:00:00	cursor
4245	?	00:00:00	chrome_crashpad
4264	?	00:01:55	cursor
4270	?	00:00:05	cursor
4335	?	00:01:08	cursor
4393	?	00:02:37	cursor
4429	?	00:00:12	cursor
4430	?	00:00:08	cursor
4470	?	00:01:02	cursor
4557	?	00:01:30	cursor
4685	pts/1	00:00:00	bash
5169	?	00:00:00	update-notifier
7051	?	00:00:00	flatpak-session

7056	?	00:00:00	p11-kit-server
8814	?	00:00:00	psimon
9243	?	00:00:01	kworker/5:0-mm_percpu_wq
9698	?	00:10:59	cursor
9776	?	00:00:00	gvfsd-network
9785	?	00:00:00	gvfsd-dnssd
9942	?	00:03:20	cursor
9953	?	00:00:10	cursor
11422	?	00:00:01	kworker/1:1-mm_percpu_wq
11819	?	00:11:27	chrome
11826	?	00:00:00	cat
11827	?	00:00:00	cat
11829	?	00:00:00	chrome_crashpad
11831	?	00:00:00	chrome_crashpad
11837	?	00:00:00	chrome
11838	?	00:00:00	chrome
11847	?	00:00:01	chrome
11893	?	00:02:59	chrome
11905	?	00:01:20	chrome
11944	?	00:00:13	chrome
11963	?	00:02:36	chrome
12228	?	00:00:01	chrome
12302	?	00:00:53	chrome
12407	?	00:00:04	chrome
12542	?	00:04:24	chrome
12664	?	00:00:01	chrome
12674	?	00:00:01	chrome
12721	?	00:00:02	chrome
12888	?	00:00:14	chrome
13072	?	00:00:37	chrome
18496	?	00:00:31	chrome
18501	?	00:00:07	chrome
19365	?	00:16:34	chrome
22985	?	00:00:00	script
22986	pts/6	00:00:00	bash
26135	?	00:06:46	chrome
27404	?	00:00:01	kworker/4:1-cgroup_destroy
42431	pts/4	00:00:00	bash
44425	pts/5	00:00:00	bash
44480	pts/7	00:00:00	bash
46761	pts/4	00:00:00	script
46762	pts/8	00:00:00	bash

46865	pts/5	00:00:00	script
46866	pts/9	00:00:00	bash
46955	pts/7	00:00:00	script
46956	pts/10	00:00:00	bash
49342	pts/10	00:00:00	su
49364	pts/10	00:00:00	bash
50275	pts/10	00:00:00	su
50324	pts/10	00:00:00	bash
56677	?	00:00:02	chrome
68865	?	00:00:01	gnome-terminal-
78183	?	00:00:00	gnome-terminal
78186	?	00:00:00	gnome-terminal.
78192	pts/13	00:00:00	bash
79083	pts/9	00:00:00	su
79111	pts/9	00:00:00	bash
79253	pts/8	00:00:00	su
79294	pts/8	00:00:00	bash
80331	pts/10	00:00:00	su
80353	pts/10	00:00:00	bash
109042	?	00:00:01	kworker/u25:1-events_unbound
110360	?	00:00:00	bwrap
110368	?	00:00:00	bwrap
110369	?	00:00:00	xdg-dbus-proxy
110372	?	00:00:00	bwrap
110373	?	00:01:42	Telegram
121295	?	00:00:30	chrome
131706	?	00:00:00	kworker/4:2-mm_percpu_wq
135624	?	00:00:00	sleep
142110	?	00:00:03	kworker/u24:2-phy0
144814	?	00:00:00	kworker/5:2-cgroup_destroy
144815	?	00:00:00	kworker/u25:4-flush-259:0
144816	?	00:00:00	kworker/u25:5-kvfree_rcu_reclaim
144842	?	00:00:00	kworker/u29:0-rtw_tx_wq
144844	?	00:00:00	kworker/3:3-mm_percpu_wq
144857	?	00:00:00	kworker/u26:1-kvfree_rcu_reclaim
144859	?	00:00:00	kworker/u27:2-hci0
145273	?	00:00:00	kworker/u26:3-ext4-rsv-conversion
145376	?	00:00:00	gjs
145420	?	00:00:00	chrome
145443	?	00:00:00	kworker/u28:1-ttm
145469	?	00:00:00	kworker/u29:2-ttm
145537	?	00:00:00	kworker/u29:5-ttm

145715	?	00:00:00	kworker/u26:4-events_unbound
149698	?	00:00:00	kworker/u28:8-ttm
149699	?	00:00:00	kworker/u28:9-rtw_tx_wq
149700	?	00:00:00	kworker/u28:10-ttm
151997	?	00:00:01	kworker/u25:0-ext4-rsv-conversion
153872	?	00:00:00	kworker/2:3-events
155192	?	00:00:02	kworker/u24:0-gfx
155946	?	00:00:00	kworker/1:2-events
155957	?	00:00:00	kworker/u29:1-ttm
156718	?	00:00:00	obexd
156889	?	00:00:00	kworker/3:0-events
157196	?	00:00:01	kworker/u24:3-sdma0
157352	?	00:00:00	kworker/0:1-events
158655	?	00:00:04	chrome
158827	?	00:00:00	chrome
158894	?	00:02:33	chrome
159109	?	00:00:00	kworker/u25:2-ext4-rsv-conversion
159679	?	00:00:00	kworker/u26:0-kvfree_rcu_reclaim
160952	pts/8	00:00:00	sudo
161030	pts/11	00:00:00	sudo
161031	pts/11	00:00:00	su
161032	pts/11	00:00:00	bash
161558	?	00:00:00	kworker/4:0
161559	?	00:00:00	kworker/4:3
161603	?	00:00:00	chrome
161822	?	00:00:00	chrome
161831	?	00:00:00	chrome
161860	?	00:00:00	chrome
161928	?	00:00:00	sh
161929	?	00:00:00	cpuUsage.sh
161940	?	00:00:00	sleep
161941	pts/11	00:00:00	sudo
161942	pts/12	00:00:00	sudo
161943	pts/12	00:00:00	ps

1.3 Полученные файлы (фрагменты/полный вывод)

1.3.1 Файлы записи терминала


```

New password:
Retype new password:
passwd: password updated successfully
Changing the user information for ivanov2
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
info: Adding new user `ivanov2' to supplemental / extra groups `
    users' ...
info: Adding user `ivanov2' to group `users' ...
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
    os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
    :[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ sudo adduser
    ivanov2[K3
[?2004l
info: Adding user `ivanov3' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `ivanov3' (1003) ...
info: Adding new user `ivanov3' (1003) with group `ivanov3 (1003)
    ' ...
warn: The home directory `/home/ivanov3' already exists.  Not
    touching this directory.
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for ivanov3
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
info: Adding new user `ivanov3' to supplemental / extra groups `
    users' ...
info: Adding user `ivanov3' to group `users' ...

```

```

[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ su
[?2004l
Password:
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ su ivanov1
[?2004l
Password:
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
passwd
[?2004l
Changing password for ivanov1.
Current password:
New password:
Retype new password:
passwd: password updated successfully
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[7mggroups ivanov1[27mggroups ivanov1
[?2004l
ivanov1 : ivanov1 users Students
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
nano schedule
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[41[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
writable ][39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule
[1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^_(B[m
Replace (B[0;7m^U(B[m Paste
[2d[?12l[?25h[?25l[18d[K[1;32H(B[0;7m*[47G(B[m
[2d10:00 Maths
[4d11:40 Physics

```

```

[6d13:30 Economics
[8d15:20 Programming[?121[?25h[?251[19;13H(B[0;7mM-D(B[m DOS Form
    (B[0;7mM-A(B[m Append (B[0;7mM-B(B[m Backup F[20;2H(B[0;7mC(B
    [m Cancel (B[0;7mM-M(B[m Mac Form(B[0;7mM-P(B[m Prepend (B
    [0;7m^T(B[m Browse
[18d(B[0;7mFile Name to Write: schedule [18;29
    H(B[m[?121[?25h[?251
    (B[0;1m[37m[41m[ Error writing schedule: Permission denied
    ][39;49m(B[m[K[19;13H(B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
    Where Is (B[0;7m^K(B[m Cut[K[20;2H(B[0;7mX(B[m Exit (B
    [0;7m^R(B[m Read File(B[0;7m^(B[m Replace (B[0;7m^U(B[m
    Paste[K[?121[?25h[8;18H[?251
[18d(B[0;7mSave modified buffer? [19;1H
    Y(B[m Yes[K
[20d(B[0;7m N(B[m No (B[0;7m^C(B[m Cancel[K[18;23H[?121
    [?25h[?251
[19d(B[0;7m^G(B[m Help (B[0;7mM-D(B[m DOS Form(B[0;7mM-A(B[m
    Append (B[0;7mM-B(B[m Backup F[20;1H(B[0;7m^C(B[m Cancel (B
    [0;7mM-M(B[m Mac Form(B[0;7mM-P(B[m Prepend (B[0;7m^T(B[m
    Browse
[18d(B[0;7mFile Name to Write: schedule(B[m[?121[?25h[?251[?121
    [?25h[?251
    (B[0;1m[37m[41m[ Error writing schedule: Permission denied
    ][39;49m(B[m[K[19;13H(B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
    Where Is (B[0;7m^K(B[m Cut[K[20;2H(B[0;7mX(B[m Exit (B
    [0;7m^R(B[m Read File(B[0;7m^(B[m Replace (B[0;7m^U(B[m
    Paste[K[?121[?25h[8;18H[?251
[18d(B[0;7mSave modified buffer? [19;1H
    Y(B[m Yes[K
[20d(B[0;7m N(B[m No (B[0;7m^C(B[m Cancel[K[18;23H[?121
    [?25h[?251[17G[1K (B[0;7m[ Cancelled ])(B[m[K
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
    Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^(B[m
    Replace (B[0;7m^U(B[m Paste[?121[?25h[8;18H[?251
[18d(B[0;7mline 7/8 (87%), col 18/18 (100%), char 62/63 (9[19;1H
    (B[m[?121[?25h[8;18H[?251
[18d(B[0;7mSave modified buffer? [19;1H
    Y(B[m Yes[K
[20d(B[0;7m N(B[m No (B[0;7m^C(B[m Cancel[K[18;23H[?121
    [?25h[?251
[J[20d[?121[?25h[20;1H[?10491[23;0;0t

```



```

ivanov1 is not in the sudoers file.
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
sudo nano schedule[1P[1P[1P[1P[1P
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
writable ][39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule
[1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^\(B[m
Replace (B[0;7m^U(B[m Paste
[2d[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?11>[?2004l[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/
projects/itmo/os_linux_course/Lab4[01;32mivanov1@leonidas-
AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/
os_linux_course/Lab4[00m$ sudo su
[?2004l
[sudo] password for ivanov1:
ivanov1 is not in the sudoers file.
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
sudo su
[?2004l
[sudo] password for ivanov1:
ivanov1 is not in the sudoers file.
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
sudo sunano schedulesudo [C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[1Pource
~/.bashrc udo nano schedule[1Pource ~/.bashrc
[?2004l
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
source ~/.bashrc [10Pudo su
[?2004l
[sudo] password for ivanov1:
ivanov1 is not in the sudoers file.

```

```

[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
groups
[?2004l
ivanov1 users
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
exit
[?2004l
exit
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ su ic[
Kvanov1
[?2004l
Password:
To run a command as administrator (user "root"), use "sudo <
command>".
See "man sudo_root" for details.

[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
exitgroups
[?2004l
ivanov1 sudo users Students
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
nano impot[Krtant
[?2004l
[?2004h][?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
writable ][39;49m(B[m[H(B[0;7m GNU nano 7.2 important
[1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^_(B[m
Replace (B[0;7m^U(B[m Paste
[2d[?12l[?25h[?25l[18d[K[1;33H(B[0;7m*[47G(B[m

```

```

[2dAll students need to be in recreation area at 1(B[0;7m>[4;1H(B
  [m[?12l[?25h[?25l[19;13H(B[0;7mM-D(B[m DOS Form(B[0;7mM-A(B[m
  Append (B[0;7mM-B(B[m Backup F[20;2H(B[0;7mC(B[m Cancel (B
  [0;7mM-M(B[m Mac Form(B[0;7mM-P(B[m Prepend (B[0;7m^T(B[m
  Browse
[18d(B[0;7mFile Name to Write: important [18;30
  H(B[m[?12l[?25h[?25l
  (B[0;1m[37m[41m[ Error writing important: Permission denied
    ][39;49m(B[m[K[19;13H(B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
    Where Is (B[0;7m^K(B[m Cut[K[20;2H(B[0;7mX(B[m Exit (B
    [0;7m^R(B[m Read File(B[0;7m^(B[m Replace (B[0;7m^U(B[m
    Paste[K[?12l[?25h
[4d[?25l[18d(B[0;7mSave modified buffer?
                                [19;1H Y(B[m Yes[K
[20d(B[0;7m N(B[m No (B[0;7m^C(B[m Cancel[K[18;23H[?12l
  [?25h[?25l
[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/
  projects/itmo/os_linux_course/Lab4[01;32mivanov1@leonidas-
  AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/
  os_linux_course/Lab4[00m$ exit
[?2004l
exit
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
  os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
  :[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ su ivanov1
[?2004l
Password:
To run a command as administrator (user "root"), use "sudo <
  command>".
See "man sudo_root" for details.

[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
  /os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
  :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
  ps
[?2004l
      PID TTY          TIME CMD
      79294 pts/8        00:00:00 bash
      154095 pts/8        00:00:00 ps

```

[illegible]

[illegible]


```

]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K[Kps
[?2004l
      PID TTY          TIME CMD
      79294 pts/8        00:00:00 bash
      154624 pts/8        00:00:00 ps
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
ps -a
[?2004l
      PID TTY          TIME CMD
      2221 tty2         00:00:00 gnome-session-b
      46761 pts/4         00:00:00 script
      46865 pts/5         00:00:00 script
      46955 pts/7         00:00:00 script
      49342 pts/10        00:00:00 su
      49364 pts/10        00:00:00 bash
      50275 pts/10        00:00:00 su
      50324 pts/10        00:00:00 bash

```



```

79083 pts/9      00:00:00 su
79111 pts/9      00:00:00 bash
79253 pts/8      00:00:00 su
79294 pts/8      00:00:00 bash
80331 pts/10     00:00:00 su
80353 pts/10     00:00:00 bash
154820 pts/8      00:00:00 ps
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
ps -d
[?2004l
  PID TTY          TIME CMD
    2 ?           00:00:00 kthreadd
    3 ?           00:00:00 pool_workqueue_release
    4 ?           00:00:00 kworker/R-rcu_gp
    5 ?           00:00:00 kworker/R-sync_wq
    6 ?           00:00:00 kworker/R-kvfree_rcu_reclaim
    7 ?           00:00:00 kworker/R-slub_flushwq
    8 ?           00:00:00 kworker/R-netns
   11 ?           00:00:00 kworker/0:0H-events_highpri
   13 ?           00:00:00 kworker/R-mm_percpu_wq
   14 ?           00:00:00 rcu_tasks_kthread
   15 ?           00:00:00 rcu_tasks_rude_kthread
   16 ?           00:00:00 rcu_tasks_trace_kthread
   17 ?           00:00:00 ksoftirqd/0
   18 ?           00:00:11 rcu_preempt
   19 ?           00:00:00 rcu_exp_par_gp_kthread_worker/0
   20 ?           00:00:00 rcu_exp_gp_kthread_worker
   21 ?           00:00:00 migration/0
   22 ?           00:00:00 idle_inject/0
   23 ?           00:00:00 cpuhp/0
   24 ?           00:00:00 cpuhp/1
   25 ?           00:00:00 idle_inject/1
   26 ?           00:00:00 migration/1
   27 ?           00:00:00 ksoftirqd/1
   29 ?           00:00:00 kworker/1:0H-events_highpri
   30 ?           00:00:00 cpuhp/2
   31 ?           00:00:00 idle_inject/2
   32 ?           00:00:00 migration/2
   33 ?           00:00:00 ksoftirqd/2
   35 ?           00:00:00 kworker/2:0H-events_highpri

```

36 ?	00:00:00	cpuhp/3
37 ?	00:00:00	idle_inject/3
38 ?	00:00:00	migration/3
39 ?	00:00:00	ksoftirqd/3
41 ?	00:00:00	kworker/3:0H-events_highpri
42 ?	00:00:00	cpuhp/4
43 ?	00:00:00	idle_inject/4
44 ?	00:00:00	migration/4
45 ?	00:00:00	ksoftirqd/4
47 ?	00:00:00	kworker/4:0H-events_highpri
48 ?	00:00:00	cpuhp/5
49 ?	00:00:00	idle_inject/5
50 ?	00:00:00	migration/5
51 ?	00:00:00	ksoftirqd/5
53 ?	00:00:00	kworker/5:0H-events_highpri
56 ?	00:00:00	kdevtmpfs
57 ?	00:00:00	kworker/R-inet_frag_wq
58 ?	00:00:00	kauditd
59 ?	00:00:00	khungtaskd
60 ?	00:00:00	oom_reaper
63 ?	00:00:00	kworker/R-writeback
64 ?	00:00:01	kcompactd0
65 ?	00:00:00	ksmd
66 ?	00:00:00	khugepaged
67 ?	00:00:00	kworker/R-kintegrityd
68 ?	00:00:00	kworker/R-kblockd
69 ?	00:00:00	kworker/R-blkcg_punt_bio
70 ?	00:00:02	irq/9-acpi
72 ?	00:00:00	kworker/R-tpm_dev_wq
73 ?	00:00:00	kworker/R-ata_sff
75 ?	00:00:00	kworker/R-md
76 ?	00:00:00	kworker/R-md_bitmap
77 ?	00:00:00	kworker/R-edac-poller
79 ?	00:00:00	kworker/R-devfreq_wq
81 ?	00:00:00	watchdogd
82 ?	00:00:00	kworker/4:1H-kblockd
83 ?	00:00:00	irq/25-AMD-Vi0-Evt
84 ?	00:00:00	irq/26-AMD-Vi0-PPR
85 ?	00:00:00	irq/27-AMD-Vi0-GA
87 ?	00:00:00	kswapd0
88 ?	00:00:00	ecryptfs-kthread
89 ?	00:00:00	kworker/R-kthrotld

90 ?	00:00:00	kworker/u27:0-hci0
92 ?	00:00:00	kworker/R-acpi_thermal_pm
97 ?	00:00:00	kworker/R-mld
98 ?	00:00:00	kworker/R-ipv6_addrconf
99 ?	00:00:00	kworker/3:1H-kblockd
107 ?	00:00:00	kworker/R-kstrp
108 ?	00:00:01	kworker/2:1-events
124 ?	00:00:00	kworker/R-charger_manager
125 ?	00:00:00	kworker/0:1H-kblockd
183 ?	00:00:00	kworker/5:1H-kblockd
184 ?	00:00:00	kworker/2:1H-kblockd
185 ?	00:00:00	kworker/1:1H-kblockd
205 ?	00:00:01	kworker/0:2-events
209 ?	00:00:00	kworker/R-nvme-wq
210 ?	00:00:00	kworker/R-nvme-reset-wq
211 ?	00:00:00	kworker/R-nvme-delete-wq
212 ?	00:00:00	irq/48-PNP0C50:09
213 ?	00:00:00	kworker/R-nvme-auth-wq
214 ?	00:00:00	scsi_eh_0
215 ?	00:00:00	kworker/R-scsi_tmf_0
352 ?	00:00:03	jbd2/nvme0n1p6-8
353 ?	00:00:00	kworker/R-ext4-rsv-conversion
508 ?	00:00:00	psimon
674 ?	00:00:00	kworker/R-cfg80211
747 ?	00:00:00	kworker/R-cryptd
798 ?	00:01:34	irq/65-rtw88_pci
1048 ?	00:00:00	kworker/R-amdgpu-reset-dev
1079 ?	00:00:00	kworker/R-ttm
1250 ?	00:00:00	avahi-daemon
1256 ?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1257 ?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1258 ?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1259 ?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1260 ?	00:00:00	kworker/R-dm_vblank_control_workqueue
1269 ?	00:00:00	lttng-runas
1311 ?	00:00:00	card1-crtc0
1312 ?	00:00:00	card1-crtc1
1313 ?	00:00:00	card1-crtc2
1314 ?	00:00:00	card1-crtc3
1319 ?	00:00:00	kworker/R-gfx
1320 ?	00:00:00	kworker/R-comp_1.0.0
1321 ?	00:00:00	kworker/R-comp_1.1.0

1322	?	00:00:00	kworker/R-comp_1.2.0
1323	?	00:00:00	kworker/R-comp_1.3.0
1324	?	00:00:00	kworker/R-comp_1.0.1
1325	?	00:00:00	kworker/R-comp_1.1.1
1326	?	00:00:00	kworker/R-comp_1.2.1
1327	?	00:00:00	kworker/R-comp_1.3.1
1328	?	00:00:00	kworker/R-sdma0
1329	?	00:00:00	kworker/R-vcn_dec
1330	?	00:00:00	kworker/R-vcn_enc0
1331	?	00:00:00	kworker/R-vcn_enc1
1332	?	00:00:00	kworker/R-jpeg_dec
1982	?	00:00:00	gdm-session-wor
2030	?	00:00:00	(sd-pam)
2059	?	00:00:00	wb[LEONIDAS-AX1
2138	?	00:00:00	cupsd
2139	?	00:00:00	cups-proxyd
2192	?	00:00:00	run-cups-browse
2221	tty2	00:00:00	gnome-session-b
2338	?	00:00:00	gvfsd-fuse
2361	?	00:00:00	krfcommd
2386	?	00:00:00	at-spi-bus-laun
2397	?	00:00:00	dbus-daemon
2449	?	00:00:00	at-spi2-registr
2503	?	00:00:00	gnome-shell-cal
2521	?	00:00:00	gjs
2593	?	00:00:00	gsd-disk-utilit
2601	?	00:00:00	evolution-alarm
2616	?	00:00:47	gnome-software
2721	?	00:00:00	ibus-dconf
2733	?	00:00:05	ibus-extension-
2742	?	00:00:02	ibus-portal
2854	?	00:00:00	goa-daemon
2859	?	00:00:00	snapd-desktop-i
2861	?	00:00:00	gsd-printer
2875	?	00:00:00	goa-identity-se
2934	?	00:00:04	ibus-engine-sim
3006	?	00:00:00	gvfsd-trash
3090	?	00:00:00	gjs
3194	?	00:02:44	com.docker.back
3237	?	00:00:00	com.docker.dev-
3248	?	00:00:00	com.docker.buil
3249	?	00:00:15	Docker Desktop

3292	?	00:00:00	Docker Desktop
3294	?	00:00:00	Docker Desktop
3298	?	00:00:00	Docker Desktop
3668	?	00:00:32	Xwayland
3826	?	00:00:00	gvfsd-recent
3833	?	00:00:00	ibus-x11
3878	?	00:00:06	mutter-x11-fram
3922	?	00:00:02	Docker Desktop
3935	?	00:00:02	Docker Desktop
4157	?	00:02:03	cursor
4188	?	00:00:00	cursor
4189	?	00:00:00	cursor
4207	?	00:00:00	cursor
4245	?	00:00:00	chrome_crashpad
4264	?	00:01:50	cursor
4270	?	00:00:05	cursor
4335	?	00:01:05	cursor
4393	?	00:02:30	cursor
4429	?	00:00:12	cursor
4430	?	00:00:08	cursor
4470	?	00:01:00	cursor
4557	?	00:01:24	cursor
5169	?	00:00:00	update-notifier
8814	?	00:00:00	psimon
9243	?	00:00:01	kworker/5:0-events
9698	?	00:10:23	cursor
9776	?	00:00:00	gvfsd-network
9785	?	00:00:00	gvfsd-dnssd
9942	?	00:03:11	cursor
9953	?	00:00:09	cursor
11422	?	00:00:01	kworker/1:1-events
11819	?	00:10:05	chrome
11826	?	00:00:00	cat
11827	?	00:00:00	cat
11829	?	00:00:00	chrome_crashpad
11831	?	00:00:00	chrome_crashpad
11837	?	00:00:00	chrome
11838	?	00:00:00	chrome
11847	?	00:00:01	chrome
11893	?	00:02:10	chrome
11905	?	00:01:14	chrome
11944	?	00:00:13	chrome

11963	?	00:02:07	chrome
12228	?	00:00:01	chrome
12302	?	00:00:51	chrome
12407	?	00:00:04	chrome
12542	?	00:04:24	chrome
12664	?	00:00:01	chrome
12674	?	00:00:01	chrome
12721	?	00:00:02	chrome
12888	?	00:00:14	chrome
13072	?	00:00:36	chrome
18496	?	00:00:27	chrome
18501	?	00:00:06	chrome
19365	?	00:16:13	chrome
22985	?	00:00:00	script
26135	?	00:06:29	chrome
27404	?	00:00:01	kworker/4:1-cgroup_destroy
46761	pts/4	00:00:00	script
46865	pts/5	00:00:00	script
46955	pts/7	00:00:00	script
49342	pts/10	00:00:00	su
49364	pts/10	00:00:00	bash
50275	pts/10	00:00:00	su
50324	pts/10	00:00:00	bash
56677	?	00:00:01	chrome
78183	?	00:00:00	gnome-terminal
78186	?	00:00:00	gnome-terminal.
79083	pts/9	00:00:00	su
79111	pts/9	00:00:00	bash
79253	pts/8	00:00:00	su
79294	pts/8	00:00:00	bash
80331	pts/10	00:00:00	su
80353	pts/10	00:00:00	bash
99103	?	00:00:00	kworker/1:2-events
109042	?	00:00:01	kworker/u25:1-writeback
110360	?	00:00:00	bwrap
110368	?	00:00:00	bwrap
110369	?	00:00:00	xdg-dbus-proxy
110372	?	00:00:00	bwrap
110373	?	00:01:30	Telegram
110777	?	00:00:00	kworker/3:2-cgroup_destroy
121295	?	00:00:29	chrome
131706	?	00:00:00	kworker/4:2-events

```

135624 ?      00:00:00 sleep
140132 ?      00:00:00 kworker/2:0-events
142110 ?      00:00:01 kworker/u24:2-phy0
144814 ?      00:00:00 kworker/5:2-cgroup_destroy
144815 ?      00:00:00 kworker/u25:4-flush-259:0
144816 ?      00:00:00 kworker/u25:5-events_unbound
144821 ?      00:00:01 kworker/u25:10-flush-259:0
144841 ?      00:00:00 kworker/u26:0-flush-259:0
144842 ?      00:00:00 kworker/u29:0-ttm
144844 ?      00:00:00 kworker/3:3-mm_percpu_wq
144857 ?      00:00:00 kworker/u26:1-flush-259:0
144859 ?      00:00:00 kworker/u27:2-hci0
145075 ?      00:00:00 kworker/0:4-events
145273 ?      00:00:00 kworker/u26:3-flush-259:0
145376 ?      00:00:00 gjs
145420 ?      00:00:00 chrome
145443 ?      00:00:00 kworker/u28:1-ttm
145469 ?      00:00:00 kworker/u29:2-rtw_tx_wq
145535 ?      00:00:00 kworker/u29:3-ttm
145537 ?      00:00:00 kworker/u29:5-ttm
145538 ?      00:00:00 kworker/u29:6-ttm
145715 ?      00:00:00 kworker/u26:4-events_unbound
148729 ?      00:00:00 kworker/u24:0-gfx
148818 ?      00:00:00 kworker/u24:1-sdma0
149698 ?      00:00:00 kworker/u28:8-rtw_tx_wq
149699 ?      00:00:00 kworker/u28:9-rtw_tx_wq
149700 ?      00:00:00 kworker/u28:10-ttm
149701 ?      00:00:00 kworker/u28:11-ttm
150955 ?      00:00:00 kworker/1:0
150978 ?      00:00:00 kworker/2:2-cgroup_destroy
151346 ?      00:00:00 kworker/u26:2-flush-259:0
151849 ?      00:00:00 kworker/0:0-events
151997 ?      00:00:00 kworker/u25:0-flush-259:0
153872 ?      00:00:00 kworker/2:3-cgroup_destroy
154401 ?      00:00:00 chrome
154410 ?      00:00:00 chrome
154440 ?      00:00:00 chrome
154970 ?      00:00:00 chrome
155044 pts/8    00:00:00 ps
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m

```

```

: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
ps -d[Ke
[?20041

```

PID	TTY	TIME	CMD
1	?	00:00:04	systemd
2	?	00:00:00	kthreadd
3	?	00:00:00	pool_workqueue_release
4	?	00:00:00	kworker/R-rcu_gp
5	?	00:00:00	kworker/R-sync_wq
6	?	00:00:00	kworker/R-kvfree_rcu_reclaim
7	?	00:00:00	kworker/R-slub_flushwq
8	?	00:00:00	kworker/R-netns
11	?	00:00:00	kworker/0:0H-events_highpri
13	?	00:00:00	kworker/R-mm_percpu_wq
14	?	00:00:00	rcu_tasks_kthread
15	?	00:00:00	rcu_tasks_rude_kthread
16	?	00:00:00	rcu_tasks_trace_kthread
17	?	00:00:00	ksoftirqd/0
18	?	00:00:11	rcu_preempt
19	?	00:00:00	rcu_exp_par_gp_kthread_worker/0
20	?	00:00:00	rcu_exp_gp_kthread_worker
21	?	00:00:00	migration/0
22	?	00:00:00	idle_inject/0
23	?	00:00:00	cpuhp/0
24	?	00:00:00	cpuhp/1
25	?	00:00:00	idle_inject/1
26	?	00:00:00	migration/1
27	?	00:00:00	ksoftirqd/1
29	?	00:00:00	kworker/1:0H-events_highpri
30	?	00:00:00	cpuhp/2
31	?	00:00:00	idle_inject/2
32	?	00:00:00	migration/2
33	?	00:00:00	ksoftirqd/2
35	?	00:00:00	kworker/2:0H-events_highpri
36	?	00:00:00	cpuhp/3
37	?	00:00:00	idle_inject/3
38	?	00:00:00	migration/3
39	?	00:00:00	ksoftirqd/3
41	?	00:00:00	kworker/3:0H-events_highpri
42	?	00:00:00	cpuhp/4
43	?	00:00:00	idle_inject/4
44	?	00:00:00	migration/4

45 ?	00:00:00	ksoftirqd/4
47 ?	00:00:00	kworker/4:0H-events_highpri
48 ?	00:00:00	cpuhp/5
49 ?	00:00:00	idle_inject/5
50 ?	00:00:00	migration/5
51 ?	00:00:00	ksoftirqd/5
53 ?	00:00:00	kworker/5:0H-events_highpri
56 ?	00:00:00	kdevtmpfs
57 ?	00:00:00	kworker/R-inet_frag_wq
58 ?	00:00:00	kauditd
59 ?	00:00:00	khungtaskd
60 ?	00:00:00	oom_reaper
63 ?	00:00:00	kworker/R-writeback
64 ?	00:00:01	kcompactd0
65 ?	00:00:00	ksmd
66 ?	00:00:00	khugepaged
67 ?	00:00:00	kworker/R-kintegrityd
68 ?	00:00:00	kworker/R-kblockd
69 ?	00:00:00	kworker/R-blkcg_punt_bio
70 ?	00:00:02	irq/9-acpi
72 ?	00:00:00	kworker/R-tpm_dev_wq
73 ?	00:00:00	kworker/R-ata_sff
75 ?	00:00:00	kworker/R-md
76 ?	00:00:00	kworker/R-md_bitmap
77 ?	00:00:00	kworker/R-edac-poller
79 ?	00:00:00	kworker/R-devfreq_wq
81 ?	00:00:00	watchdogd
82 ?	00:00:00	kworker/4:1H-kblockd
83 ?	00:00:00	irq/25-AMD-Vi0-Evt
84 ?	00:00:00	irq/26-AMD-Vi0-PPR
85 ?	00:00:00	irq/27-AMD-Vi0-GA
87 ?	00:00:00	kswapd0
88 ?	00:00:00	ecryptfs-kthread
89 ?	00:00:00	kworker/R-kthrotld
90 ?	00:00:00	kworker/u27:0-hci0
92 ?	00:00:00	kworker/R-acpi_thermal_pm
97 ?	00:00:00	kworker/R-mld
98 ?	00:00:00	kworker/R-ipv6_addrconf
99 ?	00:00:00	kworker/3:1H-kblockd
107 ?	00:00:00	kworker/R-kstrp
108 ?	00:00:01	kworker/2:1-mm_percpu_wq
124 ?	00:00:00	kworker/R-charger_manager

125	?	00:00:00	kworker/0:1H-kblockd
183	?	00:00:00	kworker/5:1H-kblockd
184	?	00:00:00	kworker/2:1H-kblockd
185	?	00:00:00	kworker/1:1H-kblockd
205	?	00:00:01	kworker/0:2-events
209	?	00:00:00	kworker/R-nvme-wq
210	?	00:00:00	kworker/R-nvme-reset-wq
211	?	00:00:00	kworker/R-nvme-delete-wq
212	?	00:00:00	irq/48-PNP0C50:09
213	?	00:00:00	kworker/R-nvme-auth-wq
214	?	00:00:00	scsi_eh_0
215	?	00:00:00	kworker/R-scsi_tmf_0
352	?	00:00:03	jbd2/nvme0n1p6-8
353	?	00:00:00	kworker/R-ext4-rsv-conversion
406	?	00:00:04	systemd-journal
505	?	00:00:00	systemd-udevd
508	?	00:00:00	psimon
674	?	00:00:00	kworker/R-cfg80211
747	?	00:00:00	kworker/R-cryptd
798	?	00:01:35	irq/65-rtw88_pci
940	?	00:00:04	systemd-oomd
950	?	00:00:03	systemd-resolve
951	?	00:00:00	systemd-timesyn
1048	?	00:00:00	kworker/R-amdgpu-reset-dev
1079	?	00:00:00	kworker/R-ttm
1186	?	00:00:00	avahi-daemon
1187	?	00:00:00	bluetoothd
1188	?	00:00:04	dbus-daemon
1192	?	00:00:00	gnome-remote-de
1197	?	00:00:00	lttng-sessiond
1211	?	00:00:00	polkitd
1217	?	00:00:00	power-profiles-
1223	?	00:00:09	snapd
1226	?	00:00:00	accounts-daemon
1230	?	00:00:00	cron
1231	?	00:00:00	switcheroo-cont
1233	?	00:00:00	systemd-logind
1237	?	00:00:01	udisksd
1250	?	00:00:00	avahi-daemon
1256	?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1257	?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1258	?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq

1259	?	00:00:00	kworker/R-amdgpu_dm_hpd_rx_offload_wq
1260	?	00:00:00	kworker/R-dm_vblank_control_workqueue
1261	?	00:00:00	rsyslogd
1269	?	00:00:00	lttng-runas
1311	?	00:00:00	card1-crtc0
1312	?	00:00:00	card1-crtc1
1313	?	00:00:00	card1-crtc2
1314	?	00:00:00	card1-crtc3
1319	?	00:00:00	kworker/R-gfx
1320	?	00:00:00	kworker/R-comp_1.0.0
1321	?	00:00:00	kworker/R-comp_1.1.0
1322	?	00:00:00	kworker/R-comp_1.2.0
1323	?	00:00:00	kworker/R-comp_1.3.0
1324	?	00:00:00	kworker/R-comp_1.0.1
1325	?	00:00:00	kworker/R-comp_1.1.1
1326	?	00:00:00	kworker/R-comp_1.2.1
1327	?	00:00:00	kworker/R-comp_1.3.1
1328	?	00:00:00	kworker/R-sdma0
1329	?	00:00:00	kworker/R-vcn_dec
1330	?	00:00:00	kworker/R-vcn_enc0
1331	?	00:00:00	kworker/R-vcn_enc1
1332	?	00:00:00	kworker/R-jpeg_dec
1689	?	00:00:03	NetworkManager
1690	?	00:00:00	wpa_supplicant
1739	?	00:00:00	ModemManager
1853	?	00:00:00	cupsd
1855	?	00:00:00	run-cups-browse
1856	?	00:00:00	run-cupsd
1858	?	00:00:00	unattended-upgr
1866	?	00:00:05	containerd
1961	?	00:00:00	gdm3
1982	?	00:00:00	gdm-session-wor
1996	?	00:00:00	winbindd
2017	?	00:00:02	systemd
2030	?	00:00:00	(sd-pam)
2059	?	00:00:00	wb[LEONIDAS-AX1
2138	?	00:00:00	cupsd
2139	?	00:00:00	cups-proxyd
2145	?	00:00:33	pipewire
2146	?	00:00:00	pipewire
2148	?	00:00:01	wireplumber
2149	?	00:00:40	pipewire-pulse

2150	?	00:00:00	gnome-keyring-d
2175	?	00:00:02	dbus-daemon
2188	?	00:00:00	rtkit-daemon
2189	?	00:00:00	xdg-document-po
2192	?	00:00:00	run-cups-browse
2205	?	00:00:00	xdg-permission-
2210	tty2	00:00:00	gdm-wayland-ses
2221	tty2	00:00:00	gnome-session-b
2225	?	00:00:00	fusermount3
2307	?	00:00:00	gcr-ssh-agent
2309	?	00:00:00	gnome-session-c
2329	?	00:00:00	gvfsd
2338	?	00:00:00	gvfsd-fuse
2341	?	00:00:00	gnome-session-b
2361	?	00:00:00	krfcommd
2384	?	00:05:26	gnome-shell
2386	?	00:00:00	at-spi-bus-laun
2397	?	00:00:00	dbus-daemon
2449	?	00:00:00	at-spi2-registr
2450	?	00:00:00	colord
2477	?	00:00:00	cups-browsed
2479	?	00:00:00	kerneloops
2482	?	00:00:00	kerneloops
2503	?	00:00:00	gnome-shell-cal
2519	?	00:00:00	evolution-sourc
2521	?	00:00:00	gjs
2523	?	00:00:03	upowerd
2535	?	00:00:17	ibus-daemon
2539	?	00:00:00	gsd-a11y-settin
2541	?	00:00:00	gsd-color
2546	?	00:00:00	gsd-datetime
2549	?	00:00:00	gsd-housekeepin
2551	?	00:00:00	gsd-keyboard
2552	?	00:00:00	gsd-media-keys
2560	?	00:00:00	gsd-power
2562	?	00:00:00	gsd-print-notif
2570	?	00:00:00	gsd-rfkill
2574	?	00:00:00	gsd-screensaver
2575	?	00:00:01	gsd-sharing
2576	?	00:00:00	gsd-smartcard
2577	?	00:00:00	gsd-sound
2578	?	00:00:00	gsd-wacom

2593	?	00:00:00	gsd-disk-utilit
2601	?	00:00:00	evolution-alarm
2616	?	00:00:47	gnome-software
2721	?	00:00:00	ibus-dconf
2722	?	00:00:01	gvfs-udisks2-vo
2733	?	00:00:05	ibus-extension-
2742	?	00:00:02	ibus-portal
2753	?	00:00:00	gvfs-gphoto2-vo
2769	?	00:00:00	snapd-desktop-i
2780	?	00:00:00	gvfs-mtp-volume
2822	?	00:00:00	gvfs-goa-volume
2854	?	00:00:00	goa-daemon
2859	?	00:00:00	snapd-desktop-i
2861	?	00:00:00	gsd-printer
2875	?	00:00:00	goa-identity-se
2888	?	00:00:00	gvfs-afc-volume
2916	?	00:00:00	gvfsd-metadata
2927	?	00:00:00	evolution-calen
2934	?	00:00:04	ibus-engine-sim
2962	?	00:00:00	dconf-service
2975	?	00:00:00	evolution-addre
3006	?	00:00:00	gvfsd-trash
3057	?	00:00:00	xdg-desktop-por
3083	?	00:00:03	com.docker.back
3084	?	00:00:00	tracker-miner-f
3086	?	00:00:00	xdg-desktop-por
3090	?	00:00:00	gjs
3134	?	00:00:00	xdg-desktop-por
3174	?	00:00:02	fwupd
3194	?	00:02:44	com.docker.back
3237	?	00:00:00	com.docker.dev-
3248	?	00:00:00	com.docker.buil
3249	?	00:00:15	Docker Desktop
3292	?	00:00:00	Docker Desktop
3294	?	00:00:00	Docker Desktop
3298	?	00:00:00	Docker Desktop
3668	?	00:00:32	Xwayland
3741	?	00:00:00	gsd-xsettings
3826	?	00:00:00	gvfsd-recent
3833	?	00:00:00	ibus-x11
3878	?	00:00:06	mutter-x11-fram
3922	?	00:00:02	Docker Desktop

3935	?	00:00:02	Docker Desktop
4157	?	00:02:03	cursor
4165	?	00:00:22	Cursor-1.0.0-x8
4188	?	00:00:00	cursor
4189	?	00:00:00	cursor
4207	?	00:00:00	cursor
4245	?	00:00:00	chrome_crashpad
4264	?	00:01:50	cursor
4270	?	00:00:05	cursor
4335	?	00:01:06	cursor
4393	?	00:02:30	cursor
4429	?	00:00:12	cursor
4430	?	00:00:08	cursor
4470	?	00:01:00	cursor
4557	?	00:01:24	cursor
4685	pts/1	00:00:00	bash
5169	?	00:00:00	update-notifier
7051	?	00:00:00	flatpak-session
7056	?	00:00:00	p11-kit-server
8814	?	00:00:00	psimon
9243	?	00:00:01	kworker/5:0-events
9698	?	00:10:27	cursor
9776	?	00:00:00	gvfsd-network
9785	?	00:00:00	gvfsd-dnssd
9942	?	00:03:12	cursor
9953	?	00:00:09	cursor
11422	?	00:00:01	kworker/1:1-mm_percpu_wq
11819	?	00:10:06	chrome
11826	?	00:00:00	cat
11827	?	00:00:00	cat
11829	?	00:00:00	chrome_crashpad
11831	?	00:00:00	chrome_crashpad
11837	?	00:00:00	chrome
11838	?	00:00:00	chrome
11847	?	00:00:01	chrome
11893	?	00:02:10	chrome
11905	?	00:01:14	chrome
11944	?	00:00:13	chrome
11963	?	00:02:07	chrome
12228	?	00:00:01	chrome
12302	?	00:00:51	chrome
12407	?	00:00:04	chrome

12542	?	00:04:24	chrome
12664	?	00:00:01	chrome
12674	?	00:00:01	chrome
12721	?	00:00:02	chrome
12888	?	00:00:14	chrome
13072	?	00:00:36	chrome
18496	?	00:00:27	chrome
18501	?	00:00:06	chrome
19365	?	00:16:13	chrome
22985	?	00:00:00	script
22986	pts/6	00:00:00	bash
26135	?	00:06:29	chrome
27404	?	00:00:01	kworker/4:1-cgroup_destroy
42431	pts/4	00:00:00	bash
44425	pts/5	00:00:00	bash
44480	pts/7	00:00:00	bash
46761	pts/4	00:00:00	script
46762	pts/8	00:00:00	bash
46865	pts/5	00:00:00	script
46866	pts/9	00:00:00	bash
46955	pts/7	00:00:00	script
46956	pts/10	00:00:00	bash
49342	pts/10	00:00:00	su
49364	pts/10	00:00:00	bash
50275	pts/10	00:00:00	su
50324	pts/10	00:00:00	bash
56677	?	00:00:01	chrome
68865	?	00:00:01	gnome-terminal-
78183	?	00:00:00	gnome-terminal
78186	?	00:00:00	gnome-terminal.
78192	pts/13	00:00:00	bash
79083	pts/9	00:00:00	su
79111	pts/9	00:00:00	bash
79253	pts/8	00:00:00	su
79294	pts/8	00:00:00	bash
80331	pts/10	00:00:00	su
80353	pts/10	00:00:00	bash
99103	?	00:00:00	kworker/1:2-events
109042	?	00:00:01	kworker/u25:1-flush-259:0
110360	?	00:00:00	bwrap
110368	?	00:00:00	bwrap
110369	?	00:00:00	xdg-dbus-proxy

110372	?	00:00:00	bwrap
110373	?	00:01:30	Telegram
110777	?	00:00:00	kworker/3:2-cgroup_destroy
121295	?	00:00:29	chrome
131706	?	00:00:00	kworker/4:2-events
135624	?	00:00:00	sleep
140132	?	00:00:00	kworker/2:0-events
142110	?	00:00:01	kworker/u24:2-
			dm_vblank_control_workqueue
144814	?	00:00:00	kworker/5:2-cgroup_destroy
144815	?	00:00:00	kworker/u25:4-flush-259:0
144816	?	00:00:00	kworker/u25:5-events_unbound
144821	?	00:00:01	kworker/u25:10-flush-259:0
144841	?	00:00:00	kworker/u26:0-flush-259:0
144842	?	00:00:00	kworker/u29:0-ttm
144844	?	00:00:00	kworker/3:3-events
144857	?	00:00:00	kworker/u26:1-events_power_efficient
144859	?	00:00:00	kworker/u27:2-hci0
145075	?	00:00:00	kworker/0:4-events
145273	?	00:00:00	kworker/u26:3-events_unbound
145376	?	00:00:00	gjs
145420	?	00:00:00	chrome
145443	?	00:00:00	kworker/u28:1-ttm
145469	?	00:00:00	kworker/u29:2-ttm
145535	?	00:00:00	kworker/u29:3-ttm
145537	?	00:00:00	kworker/u29:5-ttm
145538	?	00:00:00	kworker/u29:6-ttm
145715	?	00:00:00	kworker/u26:4-flush-259:0
148818	?	00:00:00	kworker/u24:1-sdma0
149698	?	00:00:00	kworker/u28:8-ttm
149699	?	00:00:00	kworker/u28:9-rtw_tx_wq
149700	?	00:00:00	kworker/u28:10-ttm
150955	?	00:00:00	kworker/1:0
150978	?	00:00:00	kworker/2:2-cgroup_destroy
151346	?	00:00:00	kworker/u26:2-flush-259:0
151849	?	00:00:00	kworker/0:0-events
151997	?	00:00:00	kworker/u25:0-events_unbound
153872	?	00:00:00	kworker/2:3-cgroup_destroy
154401	?	00:00:00	chrome
154410	?	00:00:00	chrome
154440	?	00:00:00	chrome
154970	?	00:00:00	chrome


```

155192 ?          00:00:00 kworker/u24:0-sdma0
155303 ?          00:00:00 sh
155304 ?          00:00:00 cpuUsage.sh
155311 ?          00:00:00 sleep
155312 pts/8      00:00:00 ps
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
ps -o
[?2004l
error: format specification must follow -o

Usage:
ps [options]

Try 'ps --help <simple|list|output|threads|misc|all>'
or 'ps --help <s|l|o|t|m|a>'
for additional help text.

For more details see ps(1).
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
ps -o[Ku
[?2004l
USER          PID %CPU %MEM    VSZ   RSS TTY      STAT START
TIME COMMAND
ivanov1      79294   0.0   0.0  11584   5480 pts/8    S      16:12
0:00 bash
ivanov1     155766   0.0   0.0  13944   4596 pts/8    R+     20:41
0:00 ps -u
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m

```

[illegible]

```

update.go:85: cannot change mount namespace according to change
mount (/var/lib/snapd/hostfs/usr/share/xubuntu-docs /usr/share
/xubuntu-docs none bind,ro 0 0): cannot write to "/var/lib/
snapd/hostfs/usr/share/xubuntu-docs" because it would affect
the host in "/var/lib/snapd"
touch: cannot touch '/root/snap/firefox/common/.cache/desktop-
runtime-date': No such file or directory
mkdir: cannot create directory '/run/user'/0: Permission denied
Authorization required, but no authorization protocol specified
Error: cannot open display: :0
^C[?2004l
[?2004h[?2004l

[1]+  Exit 1                  firefox
[?2004h]0;root@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4root@leonidas-AX1540SD:/home/leonidas/
projects/itmo/os_linux_course/Lab4# [7mfirefox[27mfirefox
[?2004l
mkdir: cannot create directory '/run/user'/0: Permission denied
Authorization required, but no authorization protocol specified
Error: cannot open display: :0
[?2004h]0;root@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4root@leonidas-AX1540SD:/home/leonidas/
projects/itmo/os_linux_course/Lab4# exit
[?2004l
exit
[?2004h]0;ivanov1@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov1@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
exit
[?2004l
exit
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ firefox
[?2004l
Gtk-[1;32mMessage[0m: [34m20:54:24.368[0m: Not loading module "
atk-bridge": The functionality is provided by GTK natively.
Please try to not load it.
^CExiting due to channel error.
Exiting due to channel error.
Exiting due to channel error.

```

```

Exiting due to channel error.
Exiting due to channel error.

[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ [K[K[
Kfirefox
[?2004l
Gtk-[1;32mMessage[0m: [34m20:55:50.702[0m: Not loading module "
atk-bridge": The functionality is provided by GTK natively.
Please try to not load it.
^CExiting due to channel error.
Exiting due to channel error.
Exiting due to channel error.
Exiting due to channel error.
Exiting due to channel error.

[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ firefox &
[?2004l
[1] 167975
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ Gtk-[1;32
mMessage[0m: [34m20:55:57.930[0m: Not loading module "atk-
bridge": The functionality is provided by GTK natively. Please
try to not load it.

[?2004l
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ ps
[?2004l

```

PID	TTY	TIME	CMD
46762	pts/8	00:00:00	bash
167975	pts/8	00:00:04	firefox
168193	pts/8	00:00:00	forkserver
168198	pts/8	00:00:00	Socket Process
168228	pts/8	00:00:00	Privileged Cont
168238	pts/8	00:00:00	RDD Process
168341	pts/8	00:00:00	WebExtensions

```

168451 pts/8      00:00:00 Utility Process
168496 pts/8      00:00:00 Web Content
168503 pts/8      00:00:00 Web Content
168526 pts/8      00:00:00 Web Content
168832 pts/8      00:00:00 ps
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ kill -0 16
16      164539  166334  167922  167954  168526
161559  164701  166335  167923  167975  1689
162113  164811  166336  167924  168071  1690
162212  164848  166337  167925  168193  169087
162805  164849  166487  167926  168198  169138
162897  164850  166740  167927  168228  169139
163009  165922  167107  167928  168238
163010  166330  167116  167929  168341
163011  166331  167145  167930  168451
163061  166332  167680  167931  168496
163448  166333  167921  167932  168503
]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/os_linux_course/
Lab4[01;32mleonidas@leonidas-AX1540SD[00m:[01;34m~/projects/
itmo/os_linux_course/Lab4[00m$ kill -0 167975
[?2004l
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ kill -0
167975 sudo
[?2004l
[sudo] password for leonidas:
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ ps
[?2004l
      PID TTY          TIME CMD
      46762 pts/8      00:00:00 bash
      167975 pts/8      00:00:05 firefox
      168193 pts/8      00:00:00 forkserver
      168198 pts/8      00:00:00 Socket Process
      168228 pts/8      00:00:00 Privileged Cont
      168238 pts/8      00:00:00 RDD Process
      168341 pts/8      00:00:00 WebExtensions
      168451 pts/8      00:00:00 Utility Process

```

[illegible]

```

-n,--ns PID          match processes that belong to the same
                      namespaces
                      as PID
-Z,--context REGEXP kill only process(es) having context
                      (must precede other arguments)

[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ killall -u
ivanov3
[?2004l
bash(49364): Operation not permitted
su(50275): Operation not permitted
bash(80353): Operation not permitted
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ killall -u
ivanov3sudo
[?2004l
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ sudo killall
-u ivanov3[K1
[?2004l
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ exit
[?2004l
exit

Script done on 2025-10-01 20:59:11+03:00 [COMMAND_EXIT_CODE="1"]

```

```

Script started on 2025-10-01 15:35:26+03:00 [TERM="xterm-256color
" TTY="/dev/pts/5" COLUMNS="48" LINES="20"]
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ su ivanov2
[?2004l
Password:
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m

```

```

: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
[7mgroups ivanov1 [27m[1Pgroups ivanov2
[?2004l
ivanov2 : ivanov2 users Students
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4 [01;32mivanov2@leonidas-AX1540SD [00m
: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
cd /root/
[?2004l
bash: cd: /root/: Permission denied
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4 [01;32mivanov2@leonidas-AX1540SD [00m
: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
nano schedule
[?2004l
[?2004h][?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
writable ][39;49m(B[m[18;10H(B[0;1m[37m[41mFile 'schedule' is
un[41G[39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule
[1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^_(B[m
Replace (B[0;7m^U(B[m Paste
[3d10:00 Maths
[5d11:40 Physics
[7d13:30 Economics
[9d15:20 Programming
[2d[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/
projects/itmo/os_linux_course/Lab4 [01;32mivanov2@leonidas-
AX1540SD [00m: [01;34m/home/leonidas/projects/itmo/
os_linux_course/Lab4 [00m$ [7mls -l schedule[27mls -l schedule
[?2004l
-rw-r--r-- 1 root Students 65 Oct 1 15:47 schedule
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4 [01;32mivanov2@leonidas-AX1540SD [00m
: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
ls -l schedule
[?2004l
-rw-rw-r-- 1 root Students 65 Oct 1 15:47 schedule

```



```

[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
  nano schedule
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
  [39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
  writable ][39;49m(B[m[18;10H(B[0;1m[37m[41mFile 'schedule' is
  un[41G[39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule
  [1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
  Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^(B[m
  Replace (B[0;7m^U(B[m Paste
[3d10:00 Maths
[5d11:40 Physics
[7d13:30 Economics
[9d15:20 Programming
[2d[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/
  projects/itmo/os_linux_course/Lab4[01;32mivanov2@leonidas-
  AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/
  os_linux_course/Lab4[00m$ nano schedule
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
  [39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
  writable ][39;49m(B[m[18;10H(B[0;1m[37m[41mFile 'schedule' is
  un[41G[39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule
  [1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
  Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^(B[m
  Replace (B[0;7m^U(B[m Paste
[3d10:00 Maths
[5d11:40 Physics
[7d13:30 Economics
[9d15:20 Programming
[2d[?12l[?25h[?25l[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049
  l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/
  projects/itmo/os_linux_course/Lab4[01;32mivanov2@leonidas-
  AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/

```

```
os_linux_course/Lab4[00m$ [7msudo chown ivanov1:[27m[7mS[27m[7mtstudents schedule[27mA[C[C[C[C[C[C[C[C[C[C[C[C[C[sudo chown ivanov1:Students schedule  
[?2004l  
[sudo] password for ivanov2:  
ivanov2 is not in the sudoers file.  
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$ nano schedule  
[?2004l  
[?2004h[?1049h[22;0;t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l  
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not writable ] [39;49m(B[m[18;10H(B[0;1m[37m[41mFile 'schedule' is un[41G[39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule  
[1;47H(B[m  
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m Where Is (B[0;7m^K(B[m Cut  
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^(B[m Replace (B[0;7m^U(B[m Paste  
[3d10:00 Maths  
[5d11:40 Physics  
[7d13:30 Economics  
[9d15:20 Programming  
[2d[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;t[?1l>[?2004l[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$ ls -l schedule  
[?2004l  
-rw-rw-r-- 1 ivanov1 Students 65 Oct 1 15:47 schedule  
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$ ls -l schedule [1Pnano[C[C[C[C[C[C[C[C[C[C[C[C  
[?2004l  
[?2004h[?1049h[22;0;t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l  
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not writable ] [39;49m(B[m[18;10H(B[0;1m[37m[41mFile 'schedule' is un[41G[39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule  
[1;47H(B[m
```

```

[19d(B[0;7m^G(B[m Help      (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
  Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit      (B[0;7m^R(B[m Read File(B[0;7m^\(B[m
  Replace  (B[0;7m^U(B[m Paste
[3d10:00 Maths
[5d11:40 Physics
[7d13:30 Economics
[9d15:20 Programming
[2d[?12l[?25h[?25l[?12l[?25h[3d[?25l[?12l[?25h[4d[?25l[?12l[?25h
  [5d[?25l[?12l[?25h[6d[?25l[?12l[?25h[7d[?25l[?12l[?25h[8d[?25l
  [?12l[?25h[9d[?25l[?12l[?25h[10d[?25l[?12l[?25h[11d[?25l[?12l
  [?25h[?25l[?12l[?25h[?25l[?12l[?25h[?25l[?12l[?25h[?25l[?12l
  [?25h[?25l[18d[K[1;32H(B[0;7m*[47G(B[m
[11d17:00 Databases[?12l[?25h[?25l[19;13H(B[0;7mM-D(B[m DOS Form(
  B[0;7mM-A(B[m Append  (B[0;7mM-B(B[m Backup F[20;2H(B[0;7mC(B[
  m Cancel  (B[0;7mM-M(B[m Mac Form(B[0;7mM-P(B[m Prepend (B
  [0;7m^T(B[m Browse
[18d(B[0;7mFile Name to Write: schedule [18;29
  H(B[m[?12l[?25h[?25l
  (B[0;1m[37m[41m[ Error writing schedule: Permission denied
  ][39;49m(B[m[K[19;13H(B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
  Where Is (B[0;7m^K(B[m Cut[K[20;2H(B[0;7mX(B[m Exit      (B
  [0;7m^R(B[m Read File(B[0;7m^\(B[m Replace  (B[0;7m^U(B[m
  Paste[K[?12l[?25h[11;16H[?25l
[18d(B[0;7mSave modified buffer? [19;1H
  Y(B[m Yes[K
[20d(B[0;7m N(B[m No      (B[0;7m^C(B[m Cancel[K[18;23H[?12l
  [?25h[?25l
[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?11>[?2004l[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/
  projects/itmo/os_linux_course/Lab4[01;32mivanov2@leonidas-
  AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/
  os_linux_course/Lab4[00m$ [7mgroups[27mgroups
[?2004l
ivanov2 users
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
  /os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
  :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
  [K[K[K[Knano schedule
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
  [39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not

```

```

writable ][39;49m(B[m[18;10H(B[0;1m[37m[41mFile 'schedule' is
un[41G[39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule
[1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^\(B[m
Replace (B[0;7m^U(B[m Paste
[3d10:00 Maths
[5d11:40 Physics
[7d13:30 Economics
[9d15:20 Programming
[2d[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/
projects/itmo/os_linux_course/Lab4[01;32mivanov2@leonidas-
AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/
os_linux_course/Lab4[00m$ nano schedule [8Pgroups
[?2004l
ivanov2 users
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
source de[K[K~/.bash
[?2004l
bash: /home/ivanov2/.bash: No such file or directory
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
source ~/.bashrc
[?2004l
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
source ~/.bashrc [K[8Pgroupsnano schedule
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
writable ][39;49m(B[m[18;10H(B[0;1m[37m[41mFile 'schedule' is
un[41G[39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule
[1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut

```

```

[20d(B[0;7m^X(B[m Exit      (B[0;7m^R(B[m Read File(B[0;7m^\(B[m
  Replace  (B[0;7m^U(B[m Paste
[3d10:00 Maths
[5d11:40 Physics
[7d13:30 Economics
[9d15:20 Programming
[2d[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/
  projects/itmo/os_linux_course/Lab4[01;32mivanov2@leonidas-
  AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/
  os_linux_course/Lab4[00m$ nano schedule source ~/.bashrc[C[K[8
  Pgroupsnano schedule [8Pgroupsnano schedule [8Pgroups
[?2004l
ivanov2 users
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
  /os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
  :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
  nano schedule
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
  [39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
  writable ][39;49m(B[m[18;10H(B[0;1m[37m[41mFile 'schedule' is
  un[41G[39;49m(B[m[H(B[0;7m GNU nano 7.2          schedule
  [1;47H(B[m
[19d(B[0;7m^G(B[m Help      (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
  Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit      (B[0;7m^R(B[m Read File(B[0;7m^\(B[m
  Replace  (B[0;7m^U(B[m Paste
[3d10:00 Maths
[5d11:40 Physics
[7d13:30 Economics
[9d15:20 Programming
[2d[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/
  projects/itmo/os_linux_course/Lab4[01;32mivanov2@leonidas-
  AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/
  os_linux_course/Lab4[00m$ nano schedule [8Pgroupsnano schedule
  source ~/.bashrc[C
[?2004l
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
  /os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m

```

```

: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
source ~/.bashrc [3Pnano schedule[C
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
writable ] [39;49m(B[m[18;10H(B[0;1m[37m[41mFile 'schedule' is
un[41G[39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule
[1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^_(B[m
Replace (B[0;7m^U(B[m Paste
[3d10:00 Maths
[5d11:40 Physics
[7d13:30 Economics
[9d15:20 Programming
[2d[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/
projects/itmo/os_linux_course/Lab4 [01;32mivanov2@leonidas-
AX1540SD [00m: [01;34m/home/leonidas/projects/itmo/
os_linux_course/Lab4 [00m$ groups
[?2004l
ivanov2 users
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4 [01;32mivanov2@leonidas-AX1540SD [00m
: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
exit
[?2004l
exit
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4 [01;32mleonidas@leonidas-AX1540SD [00m
: [01;34m~/projects/itmo/os_linux_course/Lab4 [00m$ su ivanov2
[?2004l
Password:
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4 [01;32mivanov2@leonidas-AX1540SD [00m
: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
exitgroups nano schedule[C
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not

```

```

writable ][39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule
[1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^\(B[m
Replace (B[0;7m^U(B[m Paste
[3d10:00 Maths
[5d11:40 Physics
[7d13:30 Economics
[9d15:20 Programming
[2d[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/
projects/itmo/os_linux_course/Lab4[01;32mivanov2@leonidas-
AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/
os_linux_course/Lab4[00m$ groups
[?2004l
ivanov2 users Students
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
groups nano schedule[C
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
writable ][39;49m(B[m[H(B[0;7m GNU nano 7.2 schedule
[1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^\(B[m
Replace (B[0;7m^U(B[m Paste
[3d10:00 Maths
[5d11:40 Physics
[7d13:30 Economics
[9d15:20 Programming
[2d[?12l[?25h[?25l[?12l[?25h[3d[?25l[?12l[?25h[4d[?25l[?12l[?25h
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[?12l[?25h[9d[?25l[?12l[?25h[10d[?25l[?12l[?25h[11d[?25l[?12l
[?25h[?25l[?12l[?25h[?25l[?12l[?25h[?25l[?12l[?25h[?25l[18d[K
[1;32H(B[0;7m*[47G(B[m
[11d17:00 Databases[?12l[?25h[?25l[19;13H(B[0;7mM-D(B[m DOS Form(
B[0;7mM-A(B[m Append (B[0;7mM-B(B[m Backup F[20;2H(B[0;7mC(B[

```



```

[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
exit
[?2004l
exit
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ su ivanov2
[?2004l
Password:
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
nan[K[K[Kgroups
[?2004l
ivanov2 users leonidas Students
[?2004h]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
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:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K

```

```

[A[K
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os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
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[A[K
]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo/
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:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
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:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
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[A[K
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:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
[A[K
]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K

```

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[A[K
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]0;ivanov2@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov2@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
exit
[?2004l
exit
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ exit
[?2004l
exit

Script done on 2025-10-01 20:59:28+03:00 [COMMAND_EXIT_CODE="0"]

```

```

Script started on 2025-10-01 15:35:30+03:00 [TERM="xterm-256color
" TTY="/dev/pts/7" COLUMNS="48" LINES="20"]
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4[01;32mleonidas@leonidas-AX1540SD[00m
:[01;34m~/projects/itmo/os_linux_course/Lab4[00m$ su ivanov3
[?2004l
Password:
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
sudo su
[?2004l
[sudo] password for ivanov3:
ivanov3 is not in the sudoers file.
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[7msudo usermod -aG su[27m[7md[27m[7mo ivanov3[27m[A[C[C[C[C[C[
C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[C[sudo usermod -aG sudo ivanov3
[?2004l
[sudo] password for ivanov3:
ivanov3 is not in the sudoers file.

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[illegible]

[illegible]


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: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$  
    [K[K[K[K[Ksudo [7mchmod g+w sche[27m[7md[27m[7mule[27m[A[C  
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Cchmod g+w schedule  
[?2004l  
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/  
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m  
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$  
[7msudo chown ivanov1:[27m[7mS[27m[7mtudents schedule[27m[A[C  
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:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$  
[7msudo usermod -aG St[27m[7mu[27m[7mdents ivanov2[27m  
  
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:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$  
sudo usermod -aG Students ivanov2[K1  
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os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m  
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$  
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[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not  
writable ][39;49m(B[m[H(B[0;7m GNU nano 7.2 important  
[1;47H(B[m  
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m  
Where Is (B[0;7m^K(B[m Cut  
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^(B[m  
Replace (B[0;7m^U(B[m Paste  
[2d[?12l[?25h[?25l[18d[K[1;33H(B[0;7m*[47G(B[m
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[?25l[?12l[?25h
[Ca at 18:00! Sign below if you got this messa[?25l[?12l[?25h
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DOS Form(B[0;7mM-A(B[m Append (B[0;7mM-B(B[m Backup F[20;2H(B
[0;7mC(B[m Cancel (B[0;7mM-M(B[m Mac Form(B[0;7mM-P(B[m
Prepend (B[0;7m^T(B[m Browse
[18d(B[0;7mFile Name to Write: important [18;30
H(B[m[?12l[?25h[?25l
(B[0;1m[37m[41m[ Error writing important: Permission denied
][39;49m(B[m[K[19;13H(B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut[K[20;2H(B[0;7mX(B[m Exit (B
[0;7m^R(B[m Read File(B[0;7m^(B[m Replace (B[0;7m^U(B[m
Paste[K[?12l[?25h[2;9H[?25l
[18d(B[0;7mSave modified buffer? [19;1H
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[?25h[?25l
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Lab4': Permission denied
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
ls -ld /home/leonidas/projects/itmo/os_linux_course/Lab4[ Als
-ld /home/leonidas/projects/itmo/os_linux_course/Lab4[ Als -
ld /home/leonidas/projects/itmo/os_linux_course/Lab4[ Als -ld
/home/leonidas/projects/itmo/os_linux_course/Lab4[ Als -ld /
home/leonidas/projects/itmo/os_linux_course/Lab4[A ls -ld /
home/leonidas/projects/itmo/os_linux_course/Lab4[Als -ld /home
/leo[1Pnidas/projects/itmo/os_linux_course/Lab4[Als -ld /home/
leon[1Pidias/projects/itmo/os_linux_course/Lab4[Als -ld /home/
leoni[1Pdais/projects/itmo/os_linux_course/Lab4[Als -ld /home/
leonid[1Pas/projects/itmo/os_linux_course/Lab4[Als -ld /home/
leonida[1Ps/projects/itmo/os_linux_course/Lab4[Asls -ld /home/
leonidas/projects/itmo/os_linux_course/Lab4[Auls -ld /home/
leonidas/projects/itmo/os_linux_course/Lab4[Adls -ld /home/
leonidas/projects/itmo/os_linux_course/Lab4[Aols -ld /home/
leonidas/projects/itmo/os_linux_course/Lab4[A ls -ld /home/
leonidas/projects/itmo/os linux course/Lab4[A
```

[illegible]


```

: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
an[K[Knano important
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;8H(B[0;1m[37m[41m[ Directory '.' is not
writable ][39;49m(B[m[H(B[0;7m GNU nano 7.2 important
[1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^(B[m
Replace (B[0;7m^U(B[m Paste
[2d[?12l[?25h[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/
projects/itmo/os_linux_course/Lab4 [01;32mivanov3@leonidas-
AX1540SD [00m: [01;34m/home/leonidas/projects/itmo/
os_linux_course/Lab4 [00m$ exit
[?2004l
exit
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4 [01;32mleonidas@leonidas-AX1540SD [00m
: [01;34m~/projects/itmo/os_linux_course/Lab4 [00m$ su ivanov3
[?2004l
Password:
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4 [01;32mivanov3@leonidas-AX1540SD [00m
: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
exitnano important
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;19H(B[0;7m[ New File ](B[m[H(B[0;7m GNU
nano 7.2 important [1;47H(B[m
[19d(B[0;7m^G(B[m Help (B[0;7m^O(B[m Write Out(B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit (B[0;7m^R(B[m Read File(B[0;7m^(B[m
Replace (B[0;7m^U(B[m Paste
[2d[?12l[?25h[?25l[18d[K[1;33H(B[0;7m*[47G(B[m
[2d(B[0;7m<(B[mmessage.[?12l[?25h[?25l[19;13H(B[0;7mM-D(B[m DOS
Form(B[0;7mM-A(B[m Append (B[0;7mM-B(B[m Backup F[20;2H(B[0;7
mC(B[m Cancel (B[0;7mM-M(B[m Mac Form(B[0;7mM-P(B[m Prepend
(B[0;7m^T(B[m Browse
[18d(B[0;7mFile Name to Write: important [18;30
H(B[m[?12l[?25h[?25l[18;17H[1K (B[0;7m[ Writing... ](B[m[K

```

```

[1;33H(B[0;7m [47G(B[m[18;17H(B[0;7m[ Wrote 1 line ](B[m[19;13
H(B[0;7m^O(B[m Write Out(B[0;7m^W(B[m Where Is (B[0;7m^K(B[m
Cut[K[20;2H(B[0;7mX(B[m Exit      (B[0;7m^R(B[m Read File(B[0;7
m^\(B[m Replace  (B[0;7m^U(B[m Paste[K[?12l[?25h[2;9H[?25l
[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/
projects/itmo/os_linux_course/Lab4[01;32mivanov3@leonidas-
AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/
os_linux_course/Lab4[00m$ ls -la
[?2004l
total 136
drwxrwxr-x 4 leonidas leonidas 4096 Oct  1 16:13 [0m[01;34m.[0m
drwxrwxr-x 9 leonidas leonidas 4096 Oct  1 15:05 [01;34m..[0m
-rw-rw-r-- 1 leonidas leonidas 1154 Sep 17 20:01 1_title.tex
-rw-rw-r-- 1 leonidas leonidas    0 Sep 17 19:41 2_main.tex
drwxrwxr-x 2 leonidas leonidas 4096 Sep 17 20:38 [01;34mimages[0
m
-rw-rw-r-- 1 ivanov3 ivanov3    89 Oct  1 16:13 important
-rw-rw-r-- 1 leonidas leonidas 12288 Oct  1 16:04 l4_result_u1
-rw-rw-r-- 1 leonidas leonidas 16384 Oct  1 16:03 l4_result_u2
-rw-rw-r-- 1 leonidas leonidas 20480 Oct  1 16:13 l4_result_u3
-rw-rw-r-- 1 leonidas leonidas 18597 Sep 17 20:51 OS_lab4_report.
tex
-rw-rw-r-- 1 ivanov1 Students   81 Oct  1 16:03 schedule
drwxrwxr-x 2 leonidas leonidas 4096 Sep 18 15:09 [01;34mwork[0m
-rw-rw-r-- 1 leonidas leonidas 33455 Sep 17 19:28 SLinuxLab4.
docx
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K

```

[illegible]

```

]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
chmod o+r important
[?2004l
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
chmod o+r important
[C[C[C[C[C[Cls -la[K
[?2004l
total 148
drwxrwxr-x 4 leonidas leonidas 4096 Oct 1 16:13 [0m[01;34m.[0m
drwxrwxr-x 9 leonidas leonidas 4096 Oct 1 15:05 [01;34m..[0m
-rw-rw-r-- 1 leonidas leonidas 1154 Sep 17 20:01 1_title.tex
-rw-rw-r-- 1 leonidas leonidas 0 Sep 17 19:41 2_main.tex

```

```

drwxrwxr-x 2 leonidas leonidas 4096 Sep 17 20:38 [01;34mimages[0
m
-rw-rw-r-- 1 ivanov3 ivanov3 89 Oct 1 16:13 important
-rw-rw-r-- 1 leonidas leonidas 12288 Oct 1 16:04 l4_result_u1
-rw-rw-r-- 1 leonidas leonidas 20480 Oct 1 16:18 l4_result_u2
-rw-rw-r-- 1 leonidas leonidas 24576 Oct 1 16:18 l4_result_u3
-rw-rw-r-- 1 leonidas leonidas 18597 Sep 17 20:51 OS_lab4_report.
tex
-rw-rw-r-- 1 ivanov1 Students 81 Oct 1 16:03 schedule
drwxrwxr-x 2 leonidas leonidas 4096 Sep 18 15:09 [01;34mwork[0m
-rw-rw-r-- 1 leonidas leonidas 33455 Sep 17 19:28 SLinuxLab4.
docx
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
ls -lchmod o+r important [1Pw
[?2004l
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo
/os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
chmod o+w important
[C[C[C[C[C[ClS -la[K
[?2004l
total 148
drwxrwxr-x 4 leonidas leonidas 4096 Oct 1 16:13 [0m[01;34m.[0m
drwxrwxr-x 9 leonidas leonidas 4096 Oct 1 15:05 [01;34m..[0m
-rw-rw-r-- 1 leonidas leonidas 1154 Sep 17 20:01 1_title.tex
-rw-rw-r-- 1 leonidas leonidas 0 Sep 17 19:41 2_main.tex
drwxrwxr-x 2 leonidas leonidas 4096 Sep 17 20:38 [01;34mimages[0
m
-rw-rw-rw- 1 ivanov3 ivanov3 89 Oct 1 16:13 important
-rw-rw-r-- 1 leonidas leonidas 12288 Oct 1 16:04 l4_result_u1
-rw-rw-r-- 1 leonidas leonidas 20480 Oct 1 16:18 l4_result_u2
-rw-rw-r-- 1 leonidas leonidas 24576 Oct 1 16:18 l4_result_u3
-rw-rw-r-- 1 leonidas leonidas 18597 Sep 17 20:51 OS_lab4_report.
tex
-rw-rw-r-- 1 ivanov1 Students 81 Oct 1 16:03 schedule
drwxrwxr-x 2 leonidas leonidas 4096 Sep 18 15:09 [01;34mwork[0m
-rw-rw-r-- 1 leonidas leonidas 33455 Sep 17 19:28 SLinuxLab4.
docx

```

[illegible]

```

]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
:[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K[K[K[Knano important
[?2004l
[?2004h[?1049h[22;0;0t[1;20r(B[m[4l[?7h[39;49m[?1h=[?1h=[?25l
[39;49m(B[m[H[2J[18;20H(B[0;7m[ Reading... ](B[m[18;19H(B[0;7m
[ Read 1 line ](B[m[H(B[0;7m GNU nano 7.2 important
[1;51H(B[m
[19d(B[0;7m^G(B[m Help[14G(B[0;7m^O(B[m Write Out (B[0;7m^W(B[m
Where Is (B[0;7m^K(B[m Cut
[20d(B[0;7m^X(B[m Exit[14G(B[0;7m^R(B[m Read File (B[0;7m^(B[m
Replace (B[0;7m^U(B[m Paste
[2dAll students need to be in recreation area at 18:00(B[0;7m
>[2;1H(B[m[?12l[?25h[?25l[?12l[?25h[3d[?25l[18d[K[1;35H(B[0;7m
*[51G(B[m
[3dAll personal! University will be closed tomorrow!
[5d[?12l[?25h[?25l[19;14H(B[0;7mM-D(B[m DOS Forma(B[0;7mM-A(B[m
Append (B[0;7mM-B(B[m Backup Fi[20;2H(B[0;7mC(B[m Cancel
(B[0;7mM-M(B[m Mac Forma(B[0;7mM-P(B[m Prepend (B[0;7m^T(B[m
Browse
[18d(B[0;7mFile Name to Write: important
[18;30H(B[m[?12l[?25h[?25l[18;19H[1K (B[0;7m[ Writing... ](B[m
[K[1;35H(B[0;7m [51G(B[m[18;18H(B[0;7m[ Wrote 3 lines ](B[m
[19;14H(B[0;7m^O(B[m Write Out (B[0;7m^W(B[m Where Is (B[0;7m
^K(B[m Cut[K[20;2H(B[0;7mX(B[m Exit (B[0;7m^R(B[m Read
File (B[0;7m^(B[m Replace (B[0;7m^U(B[m Paste[K[?12l[?25h

```

```

[5d[?25l[18d[J[20d[?12l[?25h[20;1H[?1049l[23;0;0t
[?1l>[?2004l[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/
  projects/itmo/os_linux_course/Lab4[01;32mivanov3@leonidas-
  AX1540SD[00m:[01;34m/home/leonidas/projects/itmo/
  os_linux_course/Lab4[00m$ ls - la
[?2004l
ls: cannot access '-': No such file or directory
ls: cannot access 'la': No such file or directory
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo
  /os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
  :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
  ls - la important
[?2004l
ls: cannot access '-': No such file or directory
ls: cannot access 'la': No such file or directory
important
[?2004h]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo
  /os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
  :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
  os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
  :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
  os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
  :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
  os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
  :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
  os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
  :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K
]0;ivanov3@leonidas-AX1540SD: /home/leonidas/projects/itmo/
  os_linux_course/Lab4[01;32mivanov3@leonidas-AX1540SD[00m
  :[01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4[00m$
[K
[A[K

```



```

: [01;34m/home/leonidas/projects/itmo/os_linux_course/Lab4 [00m$
e [?20041

xexit
it
[?20041

exit
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4 [01;32mleonidas@leonidas-AX1540SD [00m
: [01;34m~/projects/itmo/os_linux_course/Lab4 [00m$ it
[?20041
it: command not found
[?2004h]0;leonidas@leonidas-AX1540SD: ~/projects/itmo/
os_linux_course/Lab4 [01;32mleonidas@leonidas-AX1540SD [00m
: [01;34m~/projects/itmo/os_linux_course/Lab4 [00m$ exit
[?20041
exit

Script done on 2025-10-01 20:59:23+03:00 [COMMAND_EXIT_CODE
="127"]

```

1.4 Вывод

Выполнены основные действия по управлению пользователями/группами, настройке прав доступа к файлам и работе с процессами. Результаты шагов зафиксированы в приложенных файлах записи.