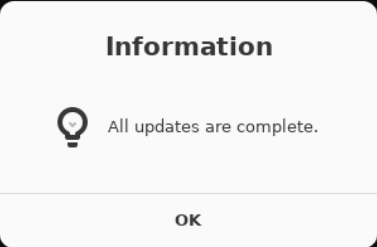


Lab 3 OS

Name: Basil khowaja bk08432

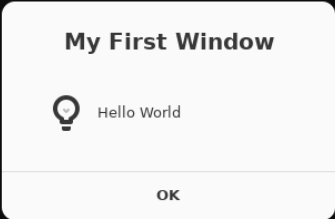
Chapter 11:

```
bk08432@DESKTOP-BRH2KGI x + v
bk08432@DESKTOP-BRH2KGB:~$ zenity --version
4.0.1
bk08432@DESKTOP-BRH2KGB:~$ zenity--info
zenity--info: command not found
bk08432@DESKTOP-BRH2KGB:~$ zenity --info
MESA: error: ZINK: failed to choose pdev
libEGL warning: egl: failed to create dri2 screen
MESA: error: ZINK: failed to choose pdev
glx: failed to create drisw screen
```



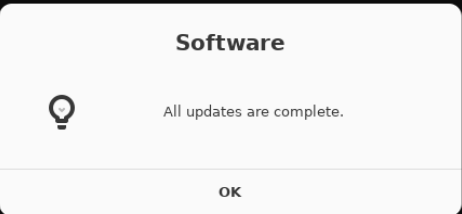
An information dialog box with a lightbulb icon and the text "All updates are complete." and an "OK" button.

```
bk08432@DESKTOP-BRH2KGB:~$ zenity --info --title="My First Window" --text="Hello World"
--height="100" --width="300"
MESA: error: ZINK: failed to choose pdev
libEGL warning: egl: failed to create dri2 screen
MESA: error: ZINK: failed to choose pdev
glx: failed to create drisw screen
```



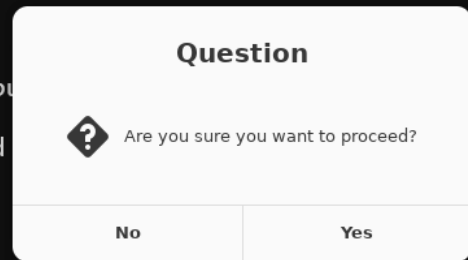
A dialog box titled "My First Window" with a lightbulb icon and the text "Hello World" and an "OK" button.

```
bk08432@DESKTOP-BRH2KGB:~$ zenity --info --title="Software" --height="100" --width="300"
--text="Installation is finished. Click Finish to continue."
--ok-label="Finish"
MESA: error: ZINK: failed to choose pdev
libEGL warning: egl: failed to create dri2 screen
MESA: error: ZINK: failed to choose pdev
glx: failed to create drisw screen
```

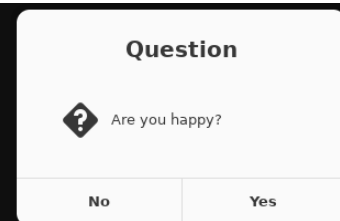


A dialog box titled "Software" with a lightbulb icon and the text "All updates are complete." and an "OK" button.

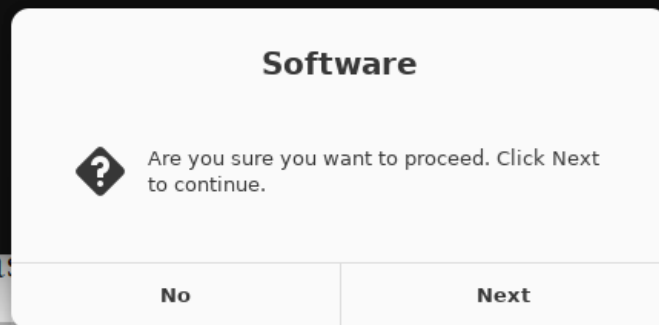
```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
zenity is already the newest version (4.0.1-1bu
zenity set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and
bk08432@DESKTOP-BRH2KGB:~$ zenity --question
^C
bk08432@DESKTOP-BRH2KGB:~$ zenity --question
```



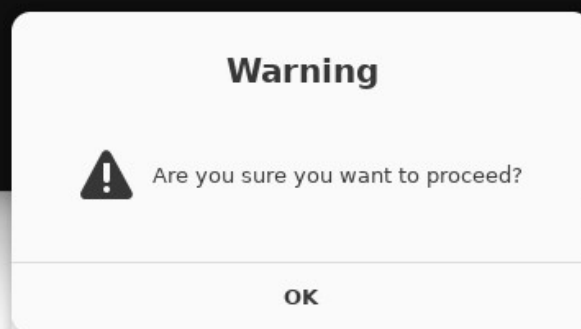
```
bk08432@DESKTOP-BRH2KGB:~$ zenity --question
^C
bk08432@DESKTOP-BRH2KGB:~$ zenity --question --text="Are you happy?"
```



```
bk08432@DESKTOP-BRH2KGB:~$ zenity --question --title="Software" --height="100" --width="300" \
--text="Are you sure you want to proceed. Click Next to continue." \
--ok-label="Next" --cancel-label="Quit"
```



```
bk08432@DESKTOP-BRH2KGB:~$ zenity --warning
```



```
bk08432@DESKTOP-BRH2KGB:~$ zenity --error
```

Error



An error has occurred.

OK

```
bk08432@DESKTOP-BRH2KGB:~$ zenity --error --title="Software" --height="100" --width="300" \
--text="You don not have sufficient space to install. The \
Installation will now terminate."
```

Software



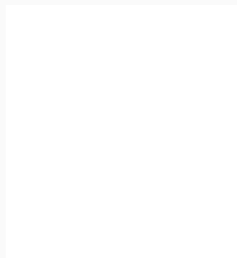
You don not have sufficient space to install.
The Installation will now terminate.

OK

```
bk08432@DESKTOP-BRH2KGB:~$ zenity --text-info --title="Software" \
--filename="/home/hasaniqbal/Desktop/License"
```

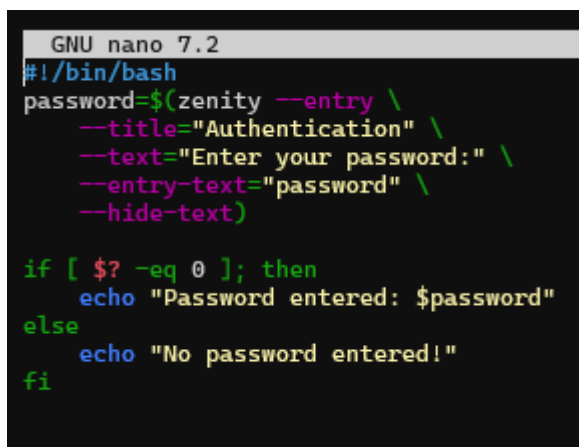
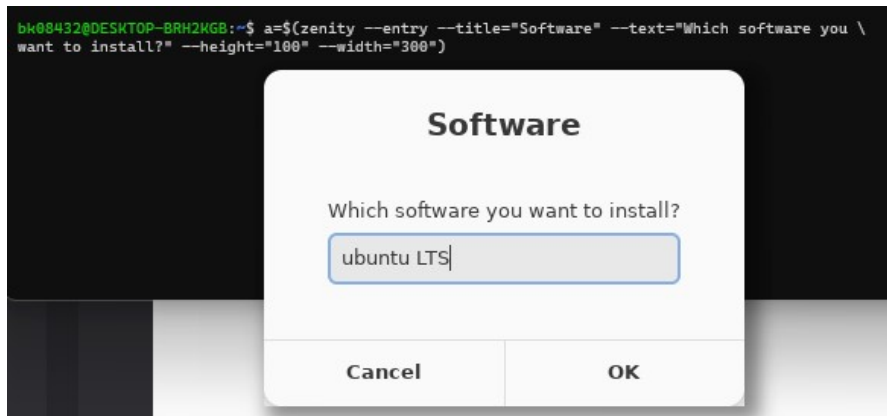
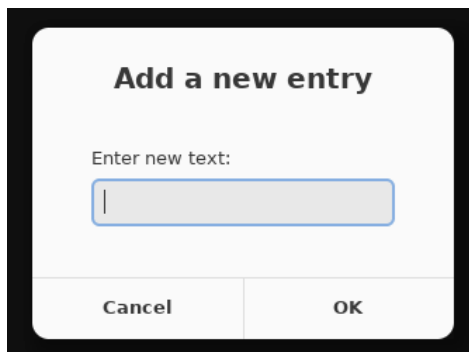
```
(zenity:2096): Zenity-WARNING **: 16:12:48.953: Cannot open file '/home/hasaniqbal/Desktop/License': No such file or directory
```

Software

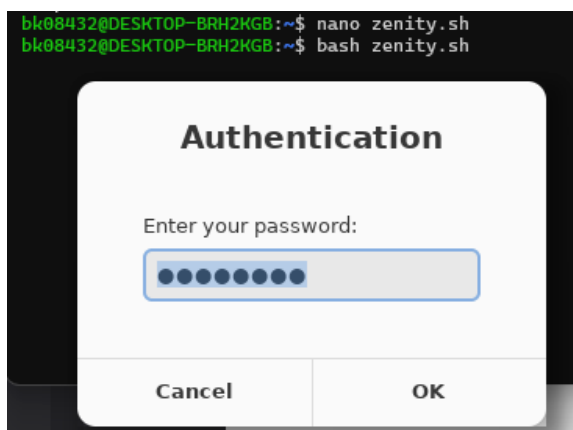


Cancel

OK



Result:



```
bk08432@DESKTOP-BRH2KGB:~$ zenity --list --title="Software Selection Screen" \
--height="200" --width="300" \
--column="Name" --column="Size(MBs)" \
"Atom" "145" "Code::Blocks" "90.3"
```

Software Selection Screen

Select items from the list below.

Name	Size(MBs)
Atom	145
Code::Blocks	90.3

Cancel OK

```
bk08432@DESKTOP-BRH2KGB:~$ zenity --list --title="Software Selection Screen" --radiolist \
--height="200" --width="300" \
--column=Check --column="Name" --column="Size(MBs)" \
TRUE "Atom" "145" \
FALSE "Code::Blocks" "90.3"
```

Software Selection Screen

Select items from the list below.

Check	Name	Size(MBs)
<input checked="" type="radio"/>	Atom	145
<input type="radio"/>	Code::Blocks	90.3

Cancel OK

```
bk08432@DESKTOP-BRH2KGB:~$ zenity --scale
```

Adjust the scale value

Adjust the scale value

26

Cancel OK

```
bk08432@DESKTOP-BRH2KGB:~$ zenity --scale --text="How do you want to rate this software?" --value=20 --min-value=0 --max-value=90 --step=5
```

Adjust the scale value

How do you want to rate this software?

68

Cancel OK

```
bk08432@DESKTOP-BRH2KGB:~$ zenity --forms
```

Forms dialog

Cancel OK

```
bk08432@DESKTOP-BRH2KGB:~$ zenity --forms --title="Software" --add-entry=Username
```

Software

Sign in

Username

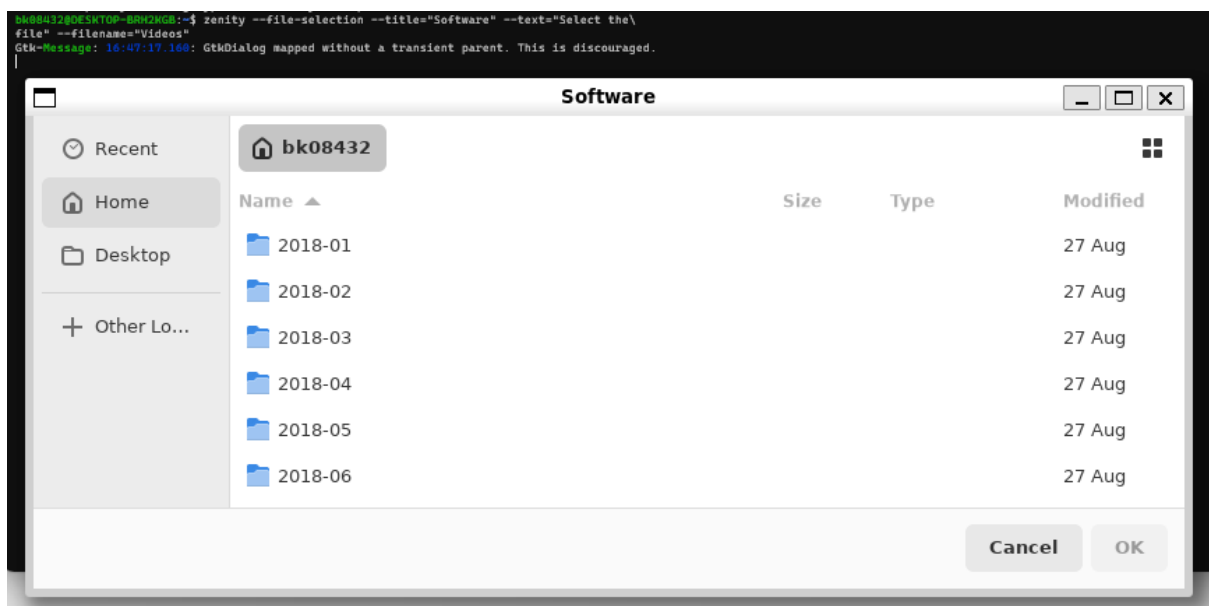
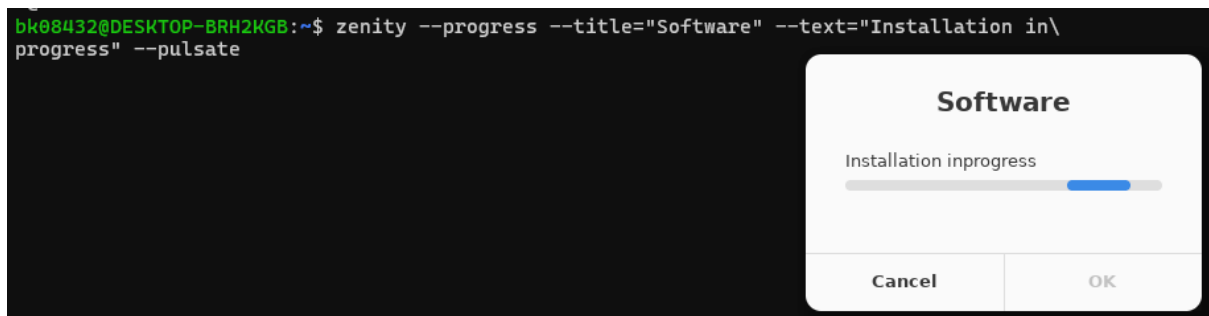
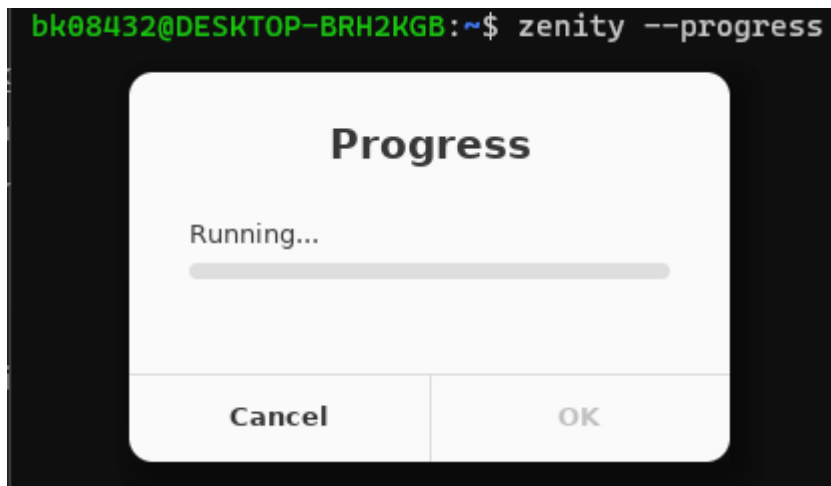
Password

Date

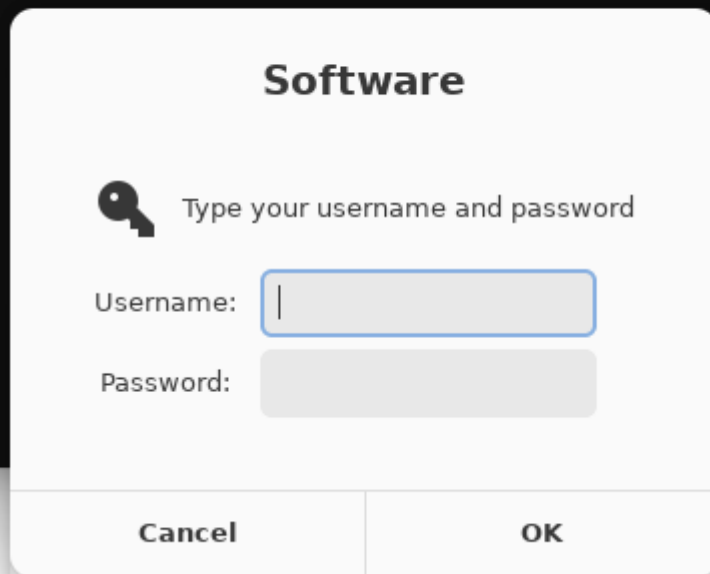
◀ September ▶ 2024 ▶

Sun	Mon	Tue	Wed	Thu	Fri	Sat
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Cancel OK

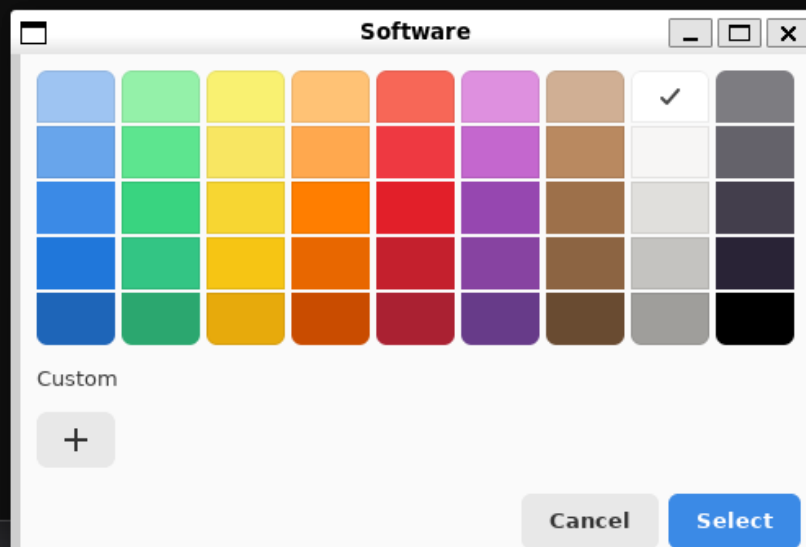


```
bk08432@DESKTOP-BRH2KGB:~$ zenity --password
You must specify a dialog type. See 'zenity --help' for details
bk08432@DESKTOP-BRH2KGB:~$ zenity --password --username --title="Software"
```



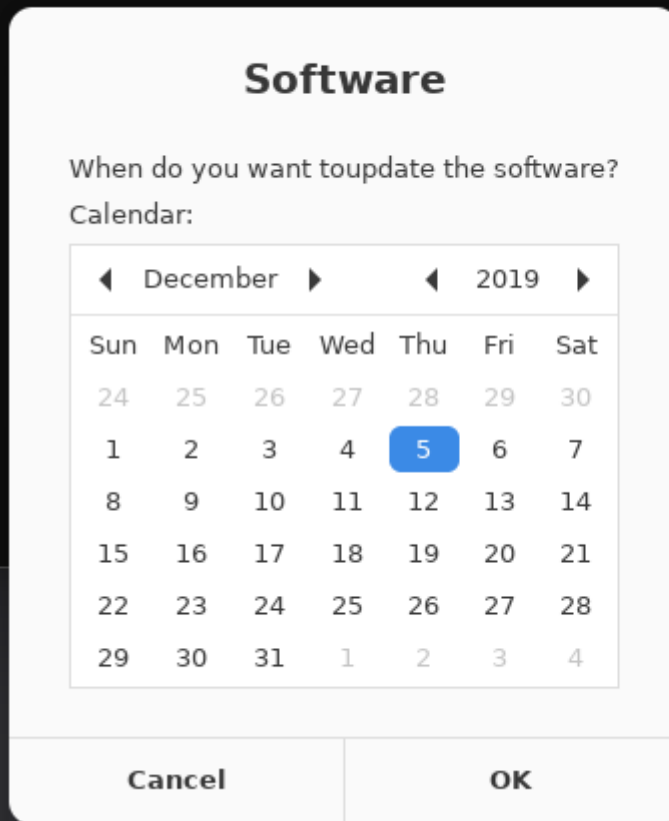
A dialog box titled "Software" with a key icon. It prompts the user to "Type your username and password". It contains two input fields: "Username:" and "Password:". At the bottom are "Cancel" and "OK" buttons.

```
bk08432@DESKTOP-BRH2KGB:~$ zenity --color-selection --title="Software" --show-palette
Gtk-Message: 17:01:20.765: GtkDialog mapped without a transient parent. This is discouraged.
```



A color selection dialog box titled "Software". It features a grid of 40 color swatches (8 columns by 5 rows). The first column contains various shades of blue, green, yellow, orange, red, and purple. The second column contains various shades of brown and gray. The third column contains a checkmark icon. Below the grid is a "Custom" section with a "+" button. At the bottom are "Cancel" and "Select" buttons.


```
bk08432@DESKTOP-BRH2KGB:~$ zenity --calendar --title="Software" --text="When do you want to\
update the software?" --day=5 --month=12 --year=2019 --date-\
format=%A%d%my
```



Chapter 12:

```
bk08432@DESKTOP-BRH2KGB:~$ mkdir src; cd src
bk08432@DESKTOP-BRH2KGB:~/src$ wget https://ftp.gnu.org/gnu/gnubik/gnubik-2.4.3.tar.gz
--2024-09-03 17:20:59-- https://ftp.gnu.org/gnu/gnubik/gnubik-2.4.3.tar.gz
Resolving ftp.gnu.org (ftp.gnu.org)... 209.51.188.20, 2001:470:142:3::b
Connecting to ftp.gnu.org (ftp.gnu.org)|209.51.188.20|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 438451 (428K) [application/x-gzip]
Saving to: 'gnubik-2.4.3.tar.gz'

gnubik-2.4.3.tar.gz      100%[=====>] 428.17K  432KB/s   in 1.0s

2024-09-03 17:21:01 (432 KB/s) - 'gnubik-2.4.3.tar.gz' saved [438451/438451]

bk08432@DESKTOP-BRH2KGB:~/src$ tar -xzf gnubik-2.4.3.tar.gz
bk08432@DESKTOP-BRH2KGB:~/src$ sudo apt install tree
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  tree
0 upgraded, 1 newly installed, 0 to remove and 2 not upgraded.
Need to get 47.1 kB of archives.
After this operation, 111 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu noble/universe amd64 tree amd64 2.1.1-2ubuntu3 [47.1 kB]
Fetched 47.1 kB in 1s (44.7 kB/s)
Selecting previously unselected package tree.
(Reading database ... 74110 files and directories currently installed.)
Preparing to unpack .../tree_2.1.1-2ubuntu3_amd64.deb ...
Unpacking tree (2.1.1-2ubuntu3) ...
Setting up tree (2.1.1-2ubuntu3) ...
Processing triggers for man-db (2.12.0-4build2) ...

bk08432@DESKTOP-BRH2KGB:~/src/gnubik-2.4.3/src$ ls *.c
colour-dialog.c  cube.c  cursors.c  drwBlock.c  glarea-common.c  main.c  move.c  select.c  textures.c  version.c
control.c        cubeview.c  dialogs.c  game.c      guile-hooks.c  menus.c  quaternion.c  swatch.c  txfm.c
bk08432@DESKTOP-BRH2KGB:~/src/gnubik-2.4.3/src$ ls *.h
colour-dialog.h  cube.h  cubeview.h  dialogs.h  game.h  guile-hooks.h  move.h  select.h  textures.h  version.h
control.h        cube.i.h  cursors.h  drwBlock.h  glarea.h  menus.h  quaternion.h  swatch.h  txfm.h
bk08432@DESKTOP-BRH2KGB:~/src/gnubik-2.4.3/src$
```

```

bk08432@DESKTOP-BRH2KGB:~/src/gnubik-2.4.3$ ./configure
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /usr/bin/mkdir -p
checking for gawk... gawk
checking whether make sets $(NAME)... yes
checking whether make supports nested variables... yes
checking for style of include used by make... GNU
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files... o
checking whether we are using the GNU C compiler... yes
checking whether gcc accepts -g... yes
checking for gcc option to accept ISO C89... none needed
checking whether gcc understands -c and -o together... yes
checking dependency style of gcc... gcc3
checking how to run the C preprocessor... gcc -E
checking for grep that handles long lines and -e... /usr/bin/grep
checking for egrep... /usr/bin/grep -E
checking for ANSI C header files... yes
checking for sys/types.h... yes
checking for sys/stat.h... yes
checking for stdlib.h... yes
checking for string.h... yes
checking for memory.h... yes
checking for strings.h... yes
checking for inttypes.h... yes
checking for stdint.h... yes
checking forunistd.h... yes
checking minix/config.h usability... no
checking minix/config.h presence... no
checking for minix/config.h... no
checking whether it is safe to define __EXTENSIONS__... yes
checking for gcc... (cached) gcc
checking whether we are using the GNU C compiler... (cached) yes
checking whether gcc accepts -g... (cached) yes
checking for gcc option to accept ISO C89... (cached) none needed
checking whether gcc understands -c and -o together... (cached) yes
checking dependency style of gcc... (cached) gcc3
checking for an ANSI C-conforming const... yes
checking for pkg-config... /mnt/c/Strawberry/perl/bin/pkg-config
checking pkg-config is at least version 0.9.0... ./configure: line 5309: /mnt/c/Strawberry/perl/bin/pkg-config: cannot execute: required file not found
no
checking for a sed that does not truncate output... /usr/bin/sed
checking whether NLS is requested... yes
checking for msgfmt... no
checking for gmsgfmt... :
checking for xgettext... no
checking for msgmerge... no
checking build system type... x86_64-unknown-linux-gnu
checking host system type... x86_64-unknown-linux-gnu
checking for ld used by gcc... /usr/bin/ld
checking if the linker (/usr/bin/ld) is GNU ld... yes
checking for shared library run path origin... done
checking for CFPReferencesCopyAppValue... no
checking for CFPreferencesCopyCurrent... no
checking for GNU gettext in libc... yes
checking whether to use NLS... yes
checking where the gettext function comes from... Libc
checking for X... no
checking for GL... no
checking for library containing glEnable... no
configure: error: "No GL library seems to be installed"
bk08432@DESKTOP-BRH2KGB:~/src/gnubik-2.4.3$ |

```

Chapter 13:

```

bk08432@DESKTOP-BRH2KGB:~/src/gnubik-2.4.3/src$ which gnubik
bk08432@DESKTOP-BRH2KGB:~/src/gnubik-2.4.3/src$ gnubik--version
gnubik--version: command not found
bk08432@DESKTOP-BRH2KGB:~/src/gnubik-2.4.3/src$ |

```

```
# Ubuntu sources have moved to the /etc/apt/sources.list.d/ubuntu.sources
# file, which uses the deb822 format. Use deb822-formatted .sources files
# to manage package sources in the /etc/apt/sources.list.d/ directory.
# See the sources.list(5) manual page for details.
```

(END)

```
bk08432@DESKTOP-BRH2KGB:~$ sudo zypper remove fritzing
Reading installed packages...
'fritzing' not found in package names. Trying capabilities.
No provider of 'fritzing' found.
Resolving package dependencies...

Problem: This request will break your system!
nothing provides the requested 'glibc'
Have you enabled all the required repositories?
Solution 1: ignore the warning of a broken system (requires:glibc)

Choose the above solution using '1' or cancel using 'c' [1/c/d/?] (c): c
bk08432@DESKTOP-BRH2KGB:~$
```

```
bk08432@DESKTOP-BRH2KGB:~$ sudo dnf autoremove fritzing
Unable to detect release version (use '--releasever' to specify release version)
No match for argument: fritzing
No packages marked for removal.
Dependencies resolved.
Nothing to do.
Complete!
bk08432@DESKTOP-BRH2KGB:~$
```

```

bk08432@DESKTOP-BRH2KGB:~$ wget https://atom-installer.github.com/v1.42.0/atom-amd64.deb
--2024-09-03 17:57:55-- https://atom-installer.github.com/v1.42.0/atom-amd64.deb
Resolving atom-installer.github.com (atom-installer.github.com)... 185.199.111.133, 185.199.109.133, 185.199.108.133, ..
Connecting to atom-installer.github.com (atom-installer.github.com)[185.199.111.133]:443... connected.
HTTP request sent, awaiting response... 503 No healthy IP available for the backend
2024-09-03 17:57:55 ERROR 503: No healthy IP available for the backend.

bk08432@DESKTOP-BRH2KGB:~$ sudo apt install ./atom-amd64.deb
[sudo] password for bk08432:
Reading package lists... Done
E: Unsupported file ./atom-amd64.deb given on commandline
bk08432@DESKTOP-BRH2KGB:~$ wget https://kojipkgs.fedoraproject.org/packages/
nano/4.3/3.fc31/x86_64/nano-4.3-3.fc31.x86_64.rpm
--2024-09-03 18:00:03-- https://kojipkgs.fedoraproject.org/packages/
Resolving kojipkgs.fedoraproject.org (kojipkgs.fedoraproject.org)... 38.145.60.20, 38.145.60.21
Connecting to kojipkgs.fedoraproject.org (kojipkgs.fedoraproject.org)[38.145.60.20]:443... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://kojipkgs.fedoraproject.org/packages/index.html/ [following]
--2024-09-03 18:00:05-- https://kojipkgs.fedoraproject.org/packages/index.html/
Reusing existing connection to kojipkgs.fedoraproject.org:443.
HTTP request sent, awaiting response... 200 OK
Length: 523 [text/html]
Saving to: 'index.html'

index.html          100%[=====] 523 --.-KB/s in 0s

2024-09-03 18:00:06 (501 MB/s) - 'index.html' saved [523/523]

-bash: nano/4.3/3.fc31/x86_64/nano-4.3-3.fc31.x86_64.rpm: No such file or directory
bk08432@DESKTOP-BRH2KGB:~$ |

```

```

bk08432@DESKTOP-BRH2KGB:~$ sudo dnf install nano-4.3-3.fc31.x86_64.rpm
Unable to detect release version (use '--releasever' to specify release version)
Can not load RPM file: nano-4.3-3.fc31.x86_64.rpm.
Could not open: nano-4.3-3.fc31.x86_64.rpm
bk08432@DESKTOP-BRH2KGB:~$ wget https://download.opensuse.org/repositories/openSUSE:/
Leap:/15.1/standard/x86_64/nano-2.9.6-lp151.2.3.x86_64.rpm
--2024-09-03 18:00:53-- https://download.opensuse.org/repositories/openSUSE:/
Resolving download.opensuse.org (download.opensuse.org)... 195.135.223.226, 2a07:de40:b250:131:10:151:131:30
Connecting to download.opensuse.org (download.opensuse.org)[195.135.223.226]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 10240 (10K) [text/html]
Saving to: 'index.html.1'

index.html.1        100%[=====] 10.00K --.-KB/s in 0s

2024-09-03 18:00:54 (89.6 MB/s) - 'index.html.1' saved [10240/10240]

-bash: Leap:/15.1/standard/x86_64/nano-2.9.6-lp151.2.3.x86_64.rpm: No such file or directory
bk08432@DESKTOP-BRH2KGB:~$ sudo zypper install nano-2.9.6-lp151.2.3.x86_64.rpm
Specified local path does not exist or is not accessible.
Problem retrieving the specified RPM file:
Malformed URI:
Please check whether the file is accessible.
Problem with the RPM file specified as 'nano-2.9.6-lp151.2.3.x86_64.rpm', skipping.
No valid arguments specified.
bk08432@DESKTOP-BRH2KGB:~$ sudo add-apt-repository ppa:webupd8team/atom
Repository: 'Types: deb
URIs: https://ppa.launchpadcontent.net/webupd8team/atom/ubuntu/
Suites: noble
Components: main
'
Description:
Please use the official repository instead: https://flight-manual.atom.io/getting-started/sections/installing-atom/#platform-linux
PPA for Atom text editor: https://atom.io

Now available for both 32bit and 64bit!

More info, report packaging bugs, feedback, etc.: http://www.webupd8.org/2014/05/install-atom-text-editor-in-ubuntu-via-ppa.html

Report non-packaging Atom bugs here: https://github.com/atom/atom/issues
More info: https://launchpad.net/~webupd8team/+archive/ubuntu/atom
Adding repository.
Press [ENTER] to continue or Ctrl-c to cancel.
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:3 http://security.ubuntu.com/ubuntu noble-security InRelease
Ign:4 https://ppa.launchpadcontent.net/webupd8team/atom/ubuntu noble InRelease
Err:5 https://ppa.launchpadcontent.net/webupd8team/atom/ubuntu noble Release
404 Not Found [IP: 185.125.190.80 443]
Hit:6 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Reading package lists... Done
E: The repository 'https://ppa.launchpadcontent.net/webupd8team/atom/ubuntu noble Release' does not have a Release file.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
bk08432@DESKTOP-BRH2KGB:~$ |

```

```

bk08432@DESKTOP-BRH2KGB:~$ sudo apt install atom
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package atom
bk08432@DESKTOP-BRH2KGB:~$ zypper addrepo https://download.opensuse.org/repositories/
Education/opensUSE_Leap_15.2/Education.repo
Root privileges are required to run this command.
-bash: Education/opensUSE_Leap_15.2/Education.repo: No such file or directory
bk08432@DESKTOP-BRH2KGB:~$ sudo zypper in obs-studio
Loading repository data...
Warning: No repositories defined. Operating only with the installed resolvables. Nothing can be installed.
Reading installed packages...
'obs-studio' not found in package names. Trying capabilities.
No provider of 'obs-studio' found.
Resolving package dependencies...

Problem: This request will break your system!
 nothing provides the requested 'glibc'
Have you enabled all the required repositories?
Solution 1: ignore the warning of a broken system (requires:glibc)

Choose the above solution using '1' or cancel using 'c' [1/c/d/?] (c): 1
Resolving dependencies...
Resolving package dependencies...

Problem: This request will break your system!
 nothing provides the requested 'glibc'
Have you enabled all the required repositories?
Solution 1: ignore the warning of a broken system (requires:glibc)

Choose the above solution using '1' or cancel using 'c' [1/c/d/?] (c): |

```

Chapter 15:

```

bk08432@DESKTOP-BRH2KGB:~$ sudo dpkg -i atom-amd64.deb
dpkg: error: cannot access archive 'atom-amd64.deb': No such file or directory
bk08432@DESKTOP-BRH2KGB:~$ sudo dpkg -s atom
dpkg-query: package 'atom' is not installed and no information is available
Use dpkg --info (= dpkg-deb --info) to examine archive files.
bk08432@DESKTOP-BRH2KGB:~$ |

```

```

bk08432@DESKTOP-BRH2KGB:~$ nano sublime.sh
bk08432@DESKTOP-BRH2KGB:~$ bash sublime.sh
sudo: apt-: command not found
sublime.sh: line 4: key: command not found
deb https://download.sublimetext.com/ apt/stable/
sublime.sh: line 6: pt/sources.list.d/sublime-text.list: No such file or directory
Hit:1 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Ign:5 https://ppa.launchpadcontent.net/webupd8team/atom/ubuntu noble InRelease
Err:6 https://ppa.launchpadcontent.net/webupd8team/atom/ubuntu noble Release
 404 Not Found [IP: 185.125.190.80 443]
Reading package lists... Done
E: The repository 'https://ppa.launchpadcontent.net/webupd8team/atom/ubuntu noble Release' does not have a Release file.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done

No apt package "sublime-text", but there is a snap with that name.
Try "snap install sublime-text"

E: Unable to locate package sublime-text
E: Unable to locate package -y
rm: cannot remove 'sublimehq-pub.gpg': No such file or directory
bk08432@DESKTOP-BRH2KGB:~$ |

```

```
#Download and Install
python3 -m pip install eric-ide -user
```

```
bk08432@DESKTOP-BRH2KGB:~$ bash python.sh
error: externally-managed-environment

× This environment is externally managed
➤ To install Python packages system-wide, try apt install
  python3-xyz, where xyz is the package you are trying to
  install.

  If you wish to install a non-Debian-packaged Python package,
  create a virtual environment using python3 -m venv path/to/venv.
  Then use path/to/venv/bin/python and path/to/venv/bin/pip. Make
  sure you have python3-full installed.

  If you wish to install a non-Debian packaged Python application,
  it may be easiest to use pipx install xyz, which will manage a
  virtual environment for you. Make sure you have pipx installed.

  See /usr/share/doc/python3.12/README.venv for more information.

note: If you believe this is a mistake, please contact your Python installation or OS distribution provider. You can override this, at the risk of breaking
your Python installation or OS, by passing --break-system-packages.
hint: See PEP 668 for the detailed specification.
bk08432@DESKTOP-BRH2KGB:~$
```

```
#Download and Install
snap install pycharm-community --classic
```

```
bk08432@DESKTOP-BRH2KGB:~$ nano snap.sh
bk08432@DESKTOP-BRH2KGB:~$ bash snap.sh
error: access denied (try with sudo)
bk08432@DESKTOP-BRH2KGB:~$ sudo bash snap.sh
pycharm-community 2024.2.1 from jetbrains✓ installed
```

```
#Download
wget https://netix.dl.sourceforge.net/project/drjava/1.%20DrJava%20Stable%20Releases/drjava-beta-20190813-220051/drjava-beta-20190813-220051.jar

#Install
mkdir /opt/DrJava
mv drjava-beta-20190813-220051.jar /opt/DrJava

#Softlink
echo "java -jar drjava-beta-20190813-220051.jar" >> /opt/DrJava/DrJava
chmod +x /opt/DrJava/DrJava
sudo ln -s /opt/DrJava/DrJava /usr/local/bin/DrJava
```

```
bk08432@DESKTOP-BRH2KGB:~$ nano java.sh
bk08432@DESKTOP-BRH2KGB:~$ bash java.sh
--2024-09-03 18:29:22-- https://netix.dl.sourceforge.net/project/drjava/1.%20DrJava%20Stable
Resolving netix.dl.sourceforge.net (netix.dl.sourceforge.net)... 87.121.121.2
Connecting to netix.dl.sourceforge.net (netix.dl.sourceforge.net)|87.121.121.2|:443... |
```

```
#Download
wget http://ftp.jaist.ac.jp/pub/eclipse/technology/epp/downloads/release/2019-12/R/eclipse-java-2019-12-R-linux-gtk-x86_64.tar.gz

#Install
tar -xf eclipse-java-2019-12-R-linux-gtk-x86_64.tar.gz --directory /opt/

#Softlink
sudo ln -s /opt/eclipse/eclipse /usr/local/bin/eclipse-java
```

```
bk08432@DESKTOP-BRH2KGB:~$ bash compile.sh
--2024-09-03 18:31:07-- http://ftp.jaist.ac.jp/pub/eclipse/technology/epp/downloads/release/2
Resolving ftp.jaist.ac.jp (ftp.jaist.ac.jp)... 150.65.7.130, 2001:df0:2ed:feed::feed
Connecting to ftp.jaist.ac.jp (ftp.jaist.ac.jp)|150.65.7.130|:80... connected.
HTTP request sent, awaiting response... 404 Not Found
2024-09-03 18:31:08 ERROR 404: Not Found.

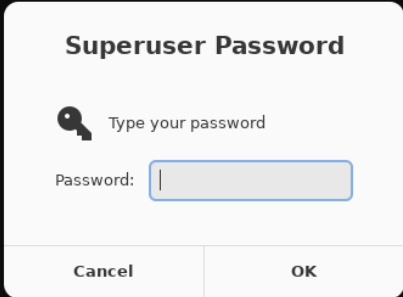
compile.sh: line 3: 019-12/R/eclipse-java-2019-12-R-linux-gtk-x86_64.tar.gz: No such file or directory
tar: eclipse-java-2019-12-R-linux-gtk-x86_64.tar.gz: Cannot open: No such file or directory
tar: Error is not recoverable: exiting now
bk08432@DESKTOP-BRH2KGB:~$
```

```
#Download
wget http://mirrors-wan.geekpie.club/qtproject/archive/qt/5.14/5.14.0/qt-opensource-linux-x64-5.14.0.run

#Install
./qt-opensource-linux-x64-5.14.0.run
```

15.3:

```
bk08432@DESKTOP-BRH2KGB:~$ nano super_user.sh
bk08432@DESKTOP-BRH2KGB:~$ bash super_user.sh
MESA: error: ZINK: failed to choose pdev
libEGL warning: egl: failed to create dri2 screen
MESA: error: ZINK: failed to choose pdev
glx: failed to create drisw screen
```



```
bk08432@DESKTOP-BRH2KGB:~$ nano internet.sh
bk08432@DESKTOP-BRH2KGB:~$ bash internet.sh
Internet Available

(zenity:819): Gtk-WARNING **: 00:44:41.815: Failed to open display
bk08432@DESKTOP-BRH2KGB:~$
```


I tried running rest of commands in chapter 15's end but those didn't ran and gave the same display error, tried everything out there on stackoverflow, none of them worked here on my WSL.

3) system calls:

1st code:

```
GNU nano 7.2 one.
#!/bin/bash

# Step 1: Reading details about the hard disk
total_size=$(df --output=size -h / | tail -1)
free_space=$(df --output=avail -k / | tail -1)

echo "Total disk size: $total_size"
echo "Available space: $free_space KB"

# Step 2: Taking a sample sentence from the user
echo "Please enter a sample sentence:"
read sentence

# Step 3: Taking a sample name of the file from the user
echo "Please enter the name of the file (e.g., myfile.txt):"
read file_name

# Step 4: Calculating the number of sentence instances to write
sentence_length=$(echo "$sentence" | wc -c)
instance_count=$((($free_space / 100000) / $sentence_length))

echo "Writing $instance_count instances of the sentence to $file_name..."

# Step 5: Creating the file and writing the sentence instances
for i in $(seq 1 $instance_count)
do
    echo "$sentence" >> "$file_name"
done

echo "File '$file_name' created with $instance_count instances of the sentence."
```

```
bk08432@DESKTOP-BRH2KGB:~$ nano one.sh
bk08432@DESKTOP-BRH2KGB:~$ bash one.sh
Total disk size: 1007G
Available space: 990278580 KB
Please enter a sample sentence:
my name is basil
Please enter the name of the file (e.g., myfile.txt):
basil.txt
Writing 582 instances of the sentence to basil.txt...
File 'basil.txt' created with 582 instances of the sentence.
bk08432@DESKTOP-BRH2KGB:~$ |
```


2nd code:

```
GNU nano 7.2
#include <stdio.h>
#include <stdlib.h>
#include <sys/statvfs.h>

int main() {
    struct statvfs disk_info;

    // Get file system statistics
    if (statvfs("/", &disk_info) != 0) {
        perror("statvfs");
        return EXIT_FAILURE;
    }

    // Total size of the disk
    unsigned long long total_size = disk_info.f_blocks * disk_info.f_frsize;

    // Free space available on the disk
    unsigned long long free_space = disk_info.f_bfree * disk_info.f_frsize;

    // Converting to more readable units (e.g., GB)
    double total_size_gb = total_size / (1024.0 * 1024.0 * 1024.0);
    double free_space_gb = free_space / (1024.0 * 1024.0 * 1024.0);

    printf("Total disk size: %.2f GB\n", total_size_gb);
    printf("Free space available: %.2f GB\n", free_space_gb);

    return EXIT_SUCCESS;
}
```

```
bk08432@DESKTOP-BRH2KGB:~$ gcc two.c -o two
bk08432@DESKTOP-BRH2KGB:~$ ./two
Total disk size: 1006.85 GB
Free space available: 995.62 GB
bk08432@DESKTOP-BRH2KGB:~$ |
```

3rd code:

```
GNU nano 7.2
#!/bin/bash

# Check if a file name was provided as an argument
if [ $# -eq 0 ]; then
    echo "Usage: bash read_file.sh <filename>"
    exit 1
fi

# Assign the first argument to a variable
file_name=$1

# Check if the file exists
if [ ! -f "$file_name" ]; then
    echo "File not found: $file_name"
    exit 1
fi

# Step 1: Find out the total size of the file in bytes
file_size=$(stat --format=%s "$file_name")
echo " "
echo "[1] Total size of '$file_name': $file_size bytes"

# Step 2: Print the number of lines present in the file
line_count=$(wc -l < "$file_name")
echo " "
echo "[2] Number of lines in '$file_name': $line_count"

# Step 3: Print the first line of the file
first_line=$(head -n 1 "$file_name")
echo " "
echo "[3] First line: $first_line"

# Step 4: Print the last line of the file
last_line=$(tail -n 1 "$file_name")
echo " "
echo "[4] Last line: $last_line"
|
```

```
bk08432@DESKTOP-BRH2KGB:~$ nano three.sh
bk08432@DESKTOP-BRH2KGB:~$ bash three.sh
Usage: bash read_file.sh <filename>
bk08432@DESKTOP-BRH2KGB:~$ bash three.sh one.sh

[1] Total size of 'one.sh': 936 bytes

[2] Number of lines in 'one.sh': 30

[3] First line: #!/bin/bash

[4] Last line: echo "File '$file_name' created with $instance_count instances of the sentence."
bk08432@DESKTOP-BRH2KGB:~$ |
```

4th code:

```
GNU nano 7.2
#include <stdio.h>
#include <stdlib.h>
#include <string.h>

// Function to write the sentence to the file
void create_file_with_sentence(unsigned long long free_space) {
    char sentence[256];
    char file_name[256];

    // Step 1: Ask the user for a string (sentence)
    printf("Enter a sentence: ");
    fgets(sentence, sizeof(sentence), stdin);

    // Step 2: Ask the user for the name of the file
    printf("Enter the name of the file (e.g., file.txt): ");
    fgets(file_name, sizeof(file_name), stdin);
    // Remove newline character from the file name
    file_name[strcspn(file_name, "\n")] = 0;

    // Step 3: Calculate the number of times the sentence should be written
    unsigned long long sentence_length = strlen(sentence);
    unsigned long long target_size = free_space / 100000;
    unsigned long long repeat_count = target_size / sentence_length;

    // Step 4: Open the file for writing
    FILE *file = fopen(file_name, "w");
    if (file == NULL) {
        perror("Error opening file");
        exit(EXIT_FAILURE);
    }

    // Step 5: Write the sentence to the file repeat_count times
    for (unsigned long long i = 0; i < repeat_count; i++) {
        fputs(sentence, file);
    }

    // Close the file
    fclose(file);

    printf("File '%s' created with %llu instances of the sentence.\n", file_name, repeat_count);
}

int main() {
    // Example free space for testing (e.g., 1 GB)
    unsigned long long free_space = 1024ULL * 1024ULL * 1024ULL; // 1 GB in bytes

    create_file_with_sentence(free_space);

    return 0;
}
```

```
bk08432@DESKTOP-BRH2KGB:~$ nano four.c
bk08432@DESKTOP-BRH2KGB:~$ gcc four.c -o four
bk08432@DESKTOP-BRH2KGB:~$ ./four
Enter a sentence: my name is basil khowaja, how you doing?
Enter the name of the file (e.g., file.txt): one.sh
File 'one.sh' created with 261 instances of the sentence.
bk08432@DESKTOP-BRH2KGB:~$ |
```