

Операционные системы

Редактор Emacs

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Цели и задачи работы

Познакомиться с операционной системой Linux. Получить практические навыки работы с редактором Emacs.

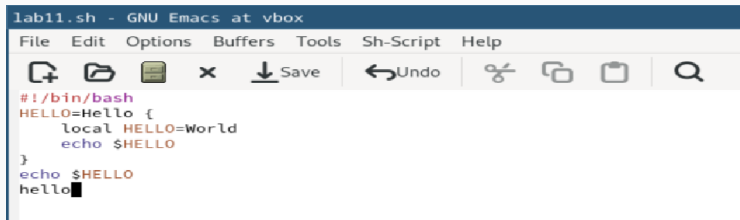
1 Изучить возможности редактора Emacs

Процесс выполнения лабораторной работы

1. Откроем Emacs.

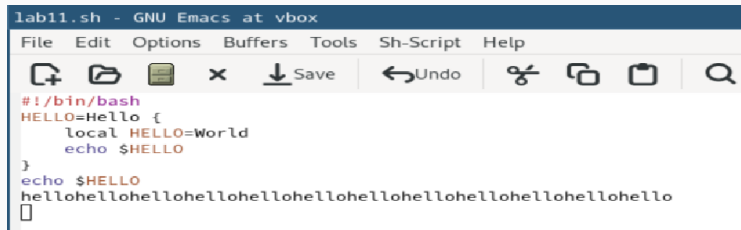


Рис. 1: Запуск Emacs



```
lab11.sh - GNU Emacs at vbox
File Edit Options Buffers Tools Sh-Script Help
[Icons: New, Open, Save, Close, Save, Undo, Cut, Copy, Paste, Find]
#!/bin/bash
HELLO=Hello {
    local HELLO=World
    echo $HELLO
}
echo $HELLO
hello
```

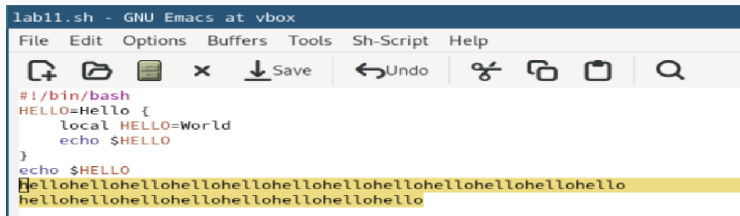
Рис. 2: Новый файл



The image shows a screenshot of the GNU Emacs editor interface. The title bar at the top reads "lab11.sh - GNU Emacs at vbox". Below the title bar is a menu bar with the following items: "File", "Edit", "Options", "Buffers", "Tools", "Sh-Script", and "Help". Under the menu bar is a toolbar with icons for opening a file, saving a file, closing a file, saving the current file, undo, redo, copy, paste, and search. The main editing area contains the following text:

```
#!/bin/bash
HELLO=Hello {
  local HELLO=World
  echo $HELLO
}
echo $HELLO
hellohellohellohellohellohellohellohellohellohellohellohello
```

Рис. 3: Операция вставка

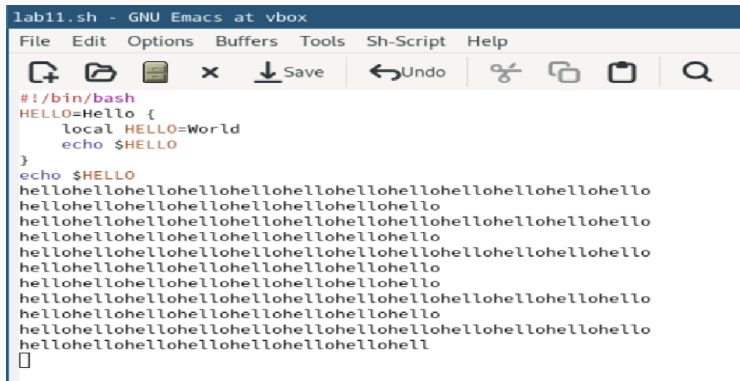


The image shows a screenshot of the GNU Emacs editor window titled "lab11.sh - GNU Emacs at vbox". The menu bar includes "File", "Edit", "Options", "Buffers", "Tools", "Sh-Script", and "Help". The toolbar contains icons for opening, saving, undo, redo, and search. The editor content is a shell script:

```
#!/bin/bash
HELLO=Hello {
    local HELLO=World
    echo $HELLO
}
echo $HELLO
HelloHelloHelloHelloHelloHelloHelloHelloHelloHelloHello
HelloHelloHelloHelloHelloHelloHelloHelloHelloHelloHello
```

The last two lines of the script are highlighted in yellow, indicating a selected block of text.

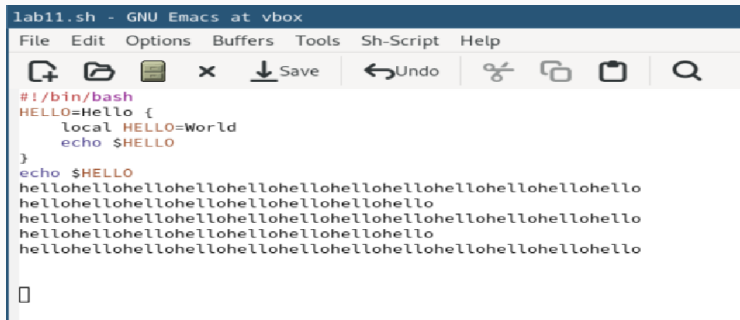
Рис. 4: Выделение блока



```
lab11.sh - GNU Emacs at vbox
File Edit Options Buffers Tools Sh-Script Help
[Icons: New, Open, Save, Close, Save As, Undo, Cut, Copy, Paste, Find]

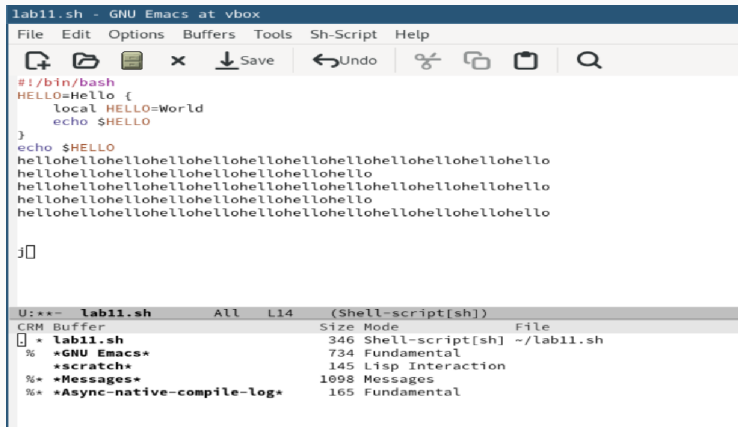
#!/bin/bash
HELLO=Hello {
    local HELLO=World
    echo $HELLO
}
echo $HELLO
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohell
█
```

Рис. 5: Копирование блока



```
lab11.sh - GNU Emacs at vbox
File Edit Options Buffers Tools Sh-Script Help
[Icons: Open, Save, Close, Undo, Redo, Copy, Paste, Find]
#!/bin/bash
HELLO=Hello {
    local HELLO=World
    echo $HELLO
}
echo $HELLO
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
```

Рис. 6: Удаление блока



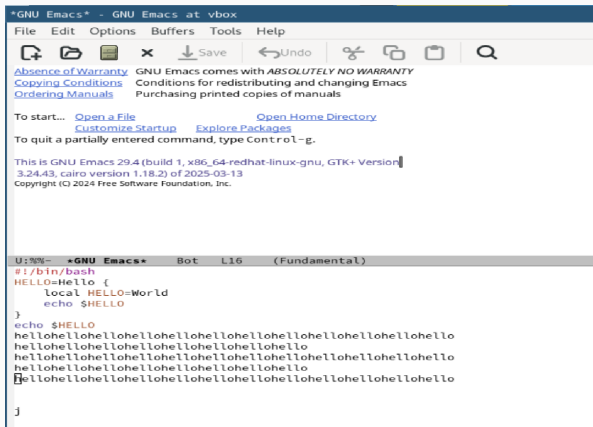
The screenshot shows the GNU Emacs editor interface. The top menu bar includes 'File', 'Edit', 'Options', 'Buffers', 'Tools', 'Sh-Script', and 'Help'. Below the menu is a toolbar with icons for opening, saving, undo, redo, and search. The main text area contains a shell script named 'lab11.sh' with the following content:

```
#!/bin/bash
HELLO=Hello {
    local HELLO=World
    echo $HELLO
}
echo $HELLO
hellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohello
```

Below the text area, a buffer list is displayed, showing the current buffer and other buffers in the workspace.

U:*	lab11.sh	All	L14	(Shell-script[sh])
CRM	Buffer			Size Mode File
	* lab11.sh			346 Shell-script[sh] ~/lab11.sh
%	*GNU Emacs*			734 Fundamental
%	*scratch*			145 Lisp Interaction
%	*Messages*			1098 Messages
%	*Async-native-compile-log*			165 Fundamental

Рис. 7: Горизонтальное разделение



The screenshot shows the GNU Emacs 29.4 interface running inside a virtual box. The title bar reads '*GNU Emacs* - GNU Emacs at vbox'. The menu bar includes File, Edit, Options, Buffers, Tools, and Help. The toolbar contains icons for opening files, saving, undo, and search. The main text area displays the Emacs startup screen, including links to the 'Absence of Warranty', 'Copying Conditions', and 'Ordering Manuals', and instructions on how to start or quit the editor. Below this, a status bar shows 'U:%%- *GNU Emacs* Bot L16 (Fundamental)'. The main buffer is a shell, indicated by the prompt '#!/bin/bash'. It contains a function definition for 'HELLO' and a series of 'echo' commands that output 'HELLO' repeatedly, demonstrating a buffer overflow or a loop.

```
*GNU Emacs* - GNU Emacs at vbox
File Edit Options Buffers Tools Help
[Icons: Open, Save, Undo, Search]
Absence of Warranty GNU Emacs comes with ABSOLUTELY NO WARRANTY
Copying Conditions Conditions for redistributing and changing Emacs
Ordering Manuals Purchasing printed copies of manuals

To start... Open a File Open Home Directory
Customize Startup Explore Packages
To quit a partially entered command, type Control-g.

This is GNU Emacs 29.4 (build 1, x86_64-redhat-linux-gnu, GTK+ Version
3.24.43, cairo version 1.18.2) of 2025-03-13
Copyright (C) 2024 Free Software Foundation, Inc.

U:%%- *GNU Emacs* Bot L16 (Fundamental)
#!/bin/bash
HELLO=Hello {
  local HELLO=World
  echo $HELLO
}
echo $HELLO
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
j
```

Рис. 8: Переключение буфера

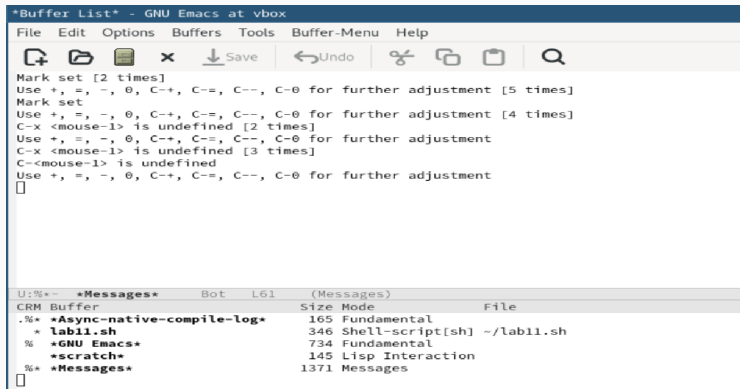
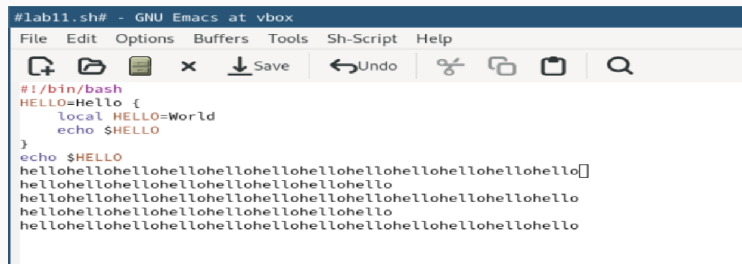


Рис. 9: Закроем буфер



The screenshot shows a GNU Emacs editor window titled "#lab11.sh# - GNU Emacs at vbox". The menu bar includes File, Edit, Options, Buffers, Tools, Sh-Script, and Help. The toolbar contains icons for opening, saving, undo, redo, and search. The editor buffer contains a shell script that defines a function 'Hello' which prints 'World' and then prints the value of 'HELLO' (which is 'Hello'). The script is executed, and the output is displayed in the buffer, showing the word 'Hello' repeated multiple times.

```
#lab11.sh# - GNU Emacs at vbox
File Edit Options Buffers Tools Sh-Script Help
[Icons: Open, Save, Undo, Redo, Search]

#!/bin/bash
HELLO=Hello {
  local HELLO=World
  echo $HELLO
}
echo $HELLO
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohello
```

Рис. 10: Переключение буфера

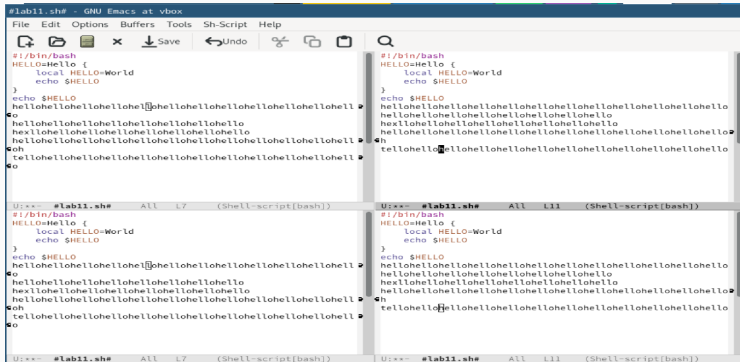


Рис. 11: Четыре буфера

Minibuf-1 - GNU Emacs at vbox

File Edit Options Buffers Tools Minibuf Help

Icons: Open, Save, Undo, Redo, Copy, Paste, Search

```
#!/bin/bash
HELLO=Hello {
    local HELLO=World
    echo $HELLO
}
echo $HELLO
hellohellohellohellohellohellohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohello
hexllohellohellohellohellohellohellohellohello
hellohellohellohellohellohellohellohellohellohellohellohellohellohello
tellohellohellohellohellohellohellohellohellohellohellohellohellohello
```

Рис. 12: Режим поиска

Выводы по проделанной работе

В данной работе мы познакомились с еще одним редактором операционной системой Linux. Получили практические навыки работы с редактором Emacs.