



Introdução à Ciência da Computação – Lista 4 Shell script – parte 1

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RA:2024.1.08.014

- 1) O que é Shell? O que é Shell Scripting? Dê exemplos de shell existentes no padrão Unix.
- 2) O que são variáveis de ambiente? Qual a diferença de variáveis globais e locais?
- 3) Para que servem os comandos env/printenv? Execute-os e mostre o resultado.
- 4) Dê um exemplo de uma variável de ambiente (shell) e seu significado.
- 5) Crie uma variável nova no shell atual chamada teste, com o conteúdo “teste”. Mostre em tela o valor da variável criada. Verifique se ela está disponível fora do escopo do shell. Agora faça com que ela seja uma variável global e mostre ela fora do escopo do shell.
- 6) Abra uma nova sessão de shell a partir do mesmo terminal e verifique através do comando ps a existência das duas instâncias de shell rodando ao mesmo tempo. Mostre o valor da variável criada no exercício 5. Em seguida, saia desse shell criado e volte para o anterior. Exclua a variável e mostre que ela foi excluída.
- 7) Arrays de ambiente armazenam múltiplos valores dentro de si. Declare um array de ambiente de nome vegetais e preencha com 4 valores (batata, cenoura, beterraba, inhame). Em seguida, mostre em tela o conteúdo total do array. Depois mostre o conteúdo “cenoura” em tela.
- 8) No array de ambiente do exercício anterior, altere o valor de cenoura para chuchu. Em seguida, remova batata. Em seguida, adicione abobrinha ao array. Em seguida, exclua todo o array. Em todas as operações, mostre em tela o array para ver se as operações foram efetivadas.
- 9) Crie aliases para: comando que lista o que contém no diretório do seu home, comando que permite mostrar o conteúdo de um arquivo aos poucos e comando de criação de diretório. Faça testes mostrando que os aliases funcionaram.

- 10) Crie uma função chamada `primeirafuncao`, que cria um arquivo dentro do seu home, e escreve no arquivo "Olá, Mundo!". Faça isso de modo que toda vez que for executado o conteúdo seja anexado e não substituído.
- 11) Verifique se a função anterior foi de fato criada e execute-as 5 vezes. Mostre o conteúdo do arquivo após essas execuções, comprovando o funcionamento da função.

1)

O shell é um programa de usuário, que oferece uma interface personalizável para seus sistemas. Shell Scripting é a programação no Shell, Script é um arquivo com várias instruções para serem executadas pelo shell que é o interpretador de comandos. Com ele podemos automatizar muitas tarefas no Linux criando grandes facilidades. São exemplos de shell existentes no padrão Unix: sh, bash, ksh, zsh, csh, tcsh.

2)

Vários programas precisam de informações sobre o usuário e suas preferências para poderem rodar. Para evitar que você tenha de passar esses dados a cada comando que executa (ex.: caminhos de diretórios de bibliotecas), o shell cria um ambiente operacional composto de inúmeras variáveis. Essas variáveis contêm valores que são usados pelos programas e por outros shells. Variáveis Globais **são aquelas declaradas no início de um algoritmo**. São visíveis, ou seja, podem ser utilizadas no algoritmo principal e por todos os outros subalgoritmos. Variáveis Locais são aquelas declaradas no início de um subalgoritmo.

3)

Os comandos `env` e `printenv` mostram as variáveis de ambiente no terminal.

Activities Terminal | abr 22 10:33

2024.1.08.014@suporte-OptiPlex-3050: -

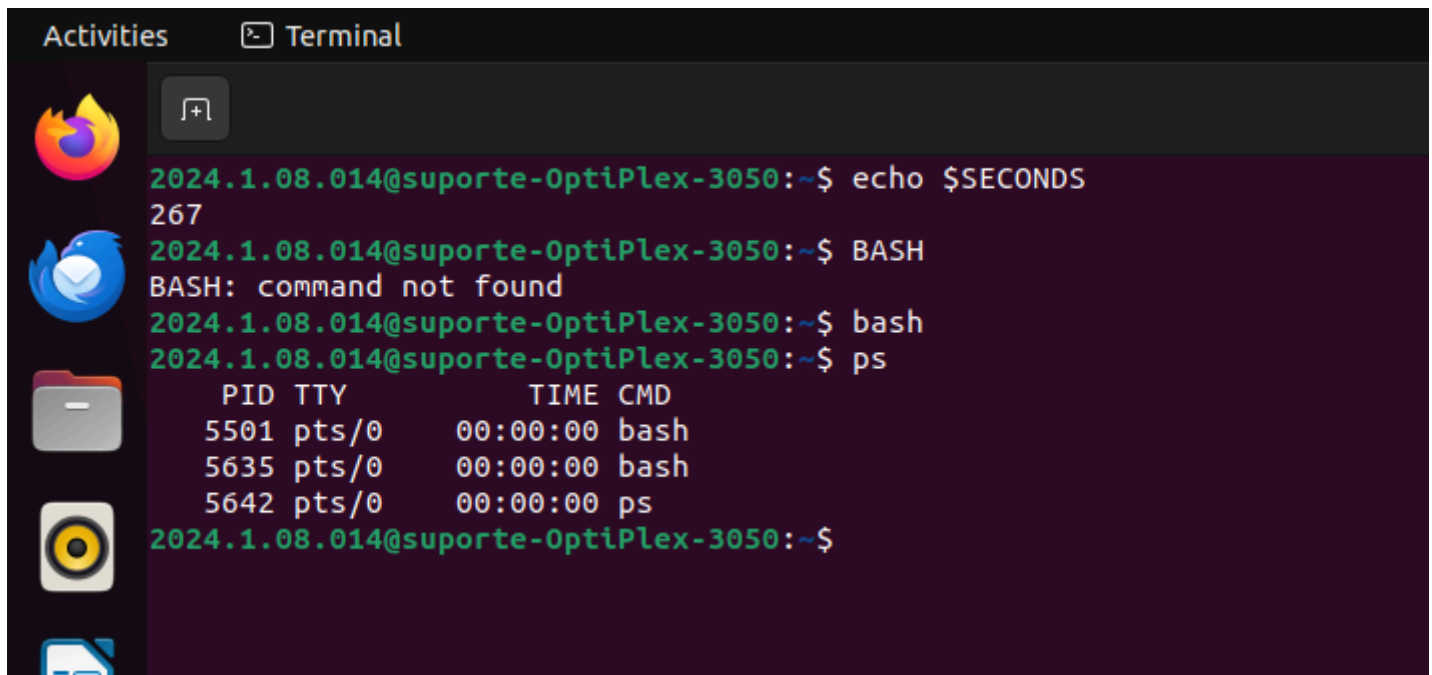
```
2024.1.08.014@suporte-OptiPlex-3050:~$ printenv
SHELL=/bin/bash
SESSION_MANAGER=local/suporte-OptiPlex-3050:/tmp/.ICE-unix/2483,unix/suporte-OptiPlex-3050:/tmp/.ICE-unix/2483
QT_ACCESSIBILITY=1
COLORTERM=truecolor
XDG_CONFIG_DIRS=/etc/xdg/xdg-ubuntu:/etc/xdg
SSH_AGENT_LAUNCHER=gnome-keyring
XDG_MENU_PREFIX=gnome-
GNOME_DESKTOP_SESSION_ID=this-is-deprecated
MATEMATICA_HOME=/usr/share/Wolfram/Documentation/13.3/en-us
LC_ADDRESS=pt_BR.UTF-8
JAVA_HOME=/usr/lib/jvm/java-17-openjdk-amd64
PAYARA_HOME=/opt/payara/glassfish
GNOME_SHELL_SESSION_MODE=ubuntu
LC_NAME=pt_BR.UTF-8
SSH_AUTH_SOCK=/run/user/54310/keyring/ssh
IDEA_HOME=/opt/idea-IU-232.8660.185
XMODIFIERS=@im=ibus
DESKTOP_SESSION=ubuntu
LC_MONETARY=pt_BR.UTF-8
GTK_MODULES=glib:atk-bridge
PWD=/home/2024.1.08.014
LOGNAME=2024.1.08.014
XDG_SESSION_DESKTOP=ubuntu
XDG_SESSION_TYPE=wayland
SYSTEMD_EXEC_PID=2535
XAUTHORITY=/run/user/54310/.mutter-Xwaylandauth.XMFOZ
HOME=/home/2024.1.08.014
USERNAME=2024.1.08.014
TM_CONFIG_PHASE=1
LC_PAPER=pt_BR.UTF-8
LANG=en_US.UTF-8
LS_COLORS=rs=0:di=01:34:ln=01:36:mh=00:pi=04:33:so=01:35:do=01:35:bd=00:33:01:cd=00:33:01:or=00:40:31;01:nl=00:su=37:41:sg=30:43:ca=30:41:tw=30:42:ow=34:42:st=37:44:ex=01:32:*.tar=01:31:*.tgz=01:31:*.arc=01:31:*.arj=01:31:*.taz=01:31:*.lha=01:31:*.lzh=01:31:*.lzma=01:31:*.tlz=01:31:*.txz=01:31:*.tzo=01:31:*.t7z=01:31:*.zip=01:31:*.z=01:31:*.gz=01:31:*.lrz=01:31:*.lz=01:31:*.lzo=01:31:*.xz=01:31:*.zst=01:31:*.tztst=01:31:*.bz2=01:31:*.bzip=01:31:*.bz=01:31:*.tbz=01:31:*.tbz2=01:31:*.t1p=01:31:*.deb=01:31:*.rpm=01:31:*.jar=01:31:*.war=01:31:*.ear=01:31:*.sar=01:31:*.rar=01:31:*.alz=01:31:*.ace=01:31:*.zoo=01:31:*.cpio=01:31:*.7z=01:31:*.rz=01:31:*.cab=01:31:*.wlm=01:31:*.swm=01:31:*.dwm=01:31:*.esd=01:31:*.jpg=01:35:*.jpeg=01:35:*.mjpg=01:35:*.mjpeg=01:35:*.gif=01:35:*.bmp=01:35:*.pbm=01:35:*.pgm=01:35:*.ppm=01:35:*.tga=01:35:*.xbm=01:35:*.xpm=01:35:*.tif=01:35:*.tiff=01:35:*.png=01:35:*.svg=01:35:*.svgz=01:35:*.mng=01:35:*.pcx=01:35:*.mov=01:35:*.mpg=01:35:*.mpeg=01:35:*.m2v=01:35:*.mkv=01:35:*.webm=01:35:*.webp=01:35:*.ogm=01:35:*.nsp=01:35:*.mp4=01:35:*.mpv=01:35:*.vob=01:35:*.qt=01:35:*.nuv=01:35:*.wmv=01:35:*.asf=01:35:*.rmvb=01:35:*.flc=01:35:*.avi=01:35:*.flv=01:35:*.gl=01:35:*.dl=01:35:*.xcf=01:35:*.xwd=01:35:*.yuv=01:35:*.cgm=01:35:*.enf=01:35:*.ogv=01:35:*.ogx=01:35:*.aac=00:36:*.au=00:36:*.flac=00:36:*.m4a=00:36:*.nld=00:36:*.nlt=00:36:*.nka=00:36:*.mp3=00:36:*.mpc=00:36:*.ogg=00:36:*.ra=00:36:*.wav=00:36:*.oga=00:36:*.opus=00:36:*.spx=00:36:*.xspf=00:36:
XDG_CURRENT_DESKTOP=ubuntu:GNOME
VTE_VERSION=6800
WAYLAND_DISPLAY=wayland-0
GNOME_TERMINAL_SCREEN=/org/gnome/Terminal/screen/b86db416_730d_471f_8ccf_f93a9ae48b0f
GNOME_SETUP_DISPLAY=:1
LESSCLOSE=/usr/bin/lesspipe %s %s
XDG_SESSION_CLASS=user
TERM=xterm-256color
LC_IDENTIFICATION=pt_BR.UTF-8
LESSOPEN=| /usr/bin/lesspipe %s
USER=2024.1.08.014
GNOME_TERMINAL_SERVICE=:1.139
DISPLAY=:0
SHLV=1
LC_TELEPHONE=pt_BR.UTF-8
GTK_MODULES=glib:atk-bridge
```

The screenshot shows a terminal window titled "Activities | Terminal | abr 22 10:33". The prompt indicates the user is logged in as root at the machine 2024.1.08.014, with the current directory being /suporte-OptiPlex-3050-. The user has entered the command `$ env`, which displays the output of the `env` command, listing various environment variables.

The output includes:

- SHELL=/bin/bash
- SESSION_MANAGER=local/suporte-OptiPlex-3050:/tmp/.ICE-unix/2483,unix/suporte-OptiPlex-3050:/tmp/.ICE-unix/2483
- QT_ACCESSIBILITY=1
- COLORTERM=truecolor
- XDG_CONFIG_DIRS=/etc/xdg/xdg-ubuntu:/etc/xdg
- SSH_AGENT_LAUNCHER=gnome-keyring
- XDG_MENU_PREFIX=gnome-
- GNOME_DESKTOP_SESSION_ID=this-is-deprecated
- MATHEMATICA_HOME=/usr/share/Wolfram/Documentation/13.3/en-us
- LC_ADDRESS=pt_BR.UTF-8
- JAVA_HOME=/usr/lib/jvm/java-17-openjdk-amd64
- PAYARA_HOME=/opt/payara/glassfish
- GNOME_SHELL_SESSION_MODE=ubuntu
- LC_NAME=pt_BR.UTF-8
- SSH_AUTH_SOCK=/run/user/54310/keyring/ssh
- IDEA_HOME=/opt/idea-IU-232.8660.185
- XMODIFIERS=@im=ibus
- DESKTOP_SESSION=ubuntu
- LC_MONETARY=pt_BR.UTF-8
- GTK_MODULES=gail:atk-bridge
- PWD=/home/2024.1.08.014
- LOGNAME=2024.1.08.014
- XDG_SESSION_DESKTOP=ubuntu
- XDG_SESSION_TYPE=wayland
- SYSTEMD_EXEC_PID=2535
- XAUTHORITY=/run/user/54310/.mutter-Xwaylandauth.XMFM0Z
- HOME=/home/2024.1.08.014
- USER=2024.1.08.014
- TM_CONFIG_PHASE=1
- LC_PAPER=pt_BR.UTF-8
- LANG=en_US.UTF-8
- LS_COLORS=rs=0;di=01;34;ln=01;36;mh=00;pi=40;33;so=01;35;d=01;35;bd=40;33;01;cd=40;33;01;or=40;31;01;mi=00;su=37;41;sg=30;43;ca=30;41;tw=30;42;ow=34;42;st=37;44;ex=01;32;*tar=01;31*;tgz=01;31*;arc=01;31*;arj=01;31*;taz=01;31*;lha=01;31*;lh=01;31*;lzma=01;31*;tlz=01;31*;txz=01;31*;tzo=01;31*;t7z=01;31*;zip=01;31*;z=01;31*;dz=01;31*;gz=01;31*;lrz=01;31*;lzo=01;31*;xz=01;31*;zst=01;31*;tzst=01;31*;bz2=01;31*;bz=01;31*;tbz=01;31*;tbz2=01;31*;tzi=01;31*;deb=01;31*;rpm=01;31*;jar=01;31*;war=01;31*;ear=01;31*;sar=01;31*;rar=01;31*;alz=01;31*;ace=01;31*;zoo=01;31*;cpio=01;31*;7z=01;31*;rz=01;31*;cab=01;31*;wlm=01;31*;swm=01;31*;dwm=01;31*;esd=01;31*;jpg=01;35*;jpeg=01;35*;mjpeg=01;35*;png=01;35*;gif=01;35*;bmp=01;35*;pbm=01;35*;pgm=01;35*;ppm=01;35*;tga=01;35*;xbm=01;35*;xpm=01;35*;tif=01;35*;tiff=01;35*;svg=01;35*;svgz=01;35*;nmg=01;35*;pcx=01;35*;mov=01;35*;mpg=01;35*;mpeg=01;35*;m2v=01;35*;mkv=01;35*;webm=01;35*;dl=01;35*;xcf=01;35*;xwd=01;35*;yuv=01;35*;cgm=01;35*;enf=01;35*;ogv=01;35*;ogx=01;35*;aac=00;36*;au=00;36*;flac=00;36*;ada=00;36*;nd=00;36*;nidl=00;36*;nka=00;36*;np3=00;36*;npc=00;36*;ogg=00;36*;ra=00;36*;wav=00;36*;oga=00;36*;opus=00;36*;spx=00;36*;xspf=00;36;
- XDG_CURRENT_DESKTOP=ubuntu:GNOME
- VTE_VERSION=6800
- WAYLAND_DISPLAY=wayland-0
- GNOME_TERMINAL_SCREEN=/org/gnome/Terminal/screen/b86db416_730d_471f_8ccf_f93a9ae4bbbf
- GNOME_SETUP_DISPLAY=:1
- LESSCLOSE=/usr/bin/lesspipe %s %s
- LC_SESSION_CLASS=user
- TERM=xterm-256color
- XCIDENTIFICATION=pt_BR.UTF-8
- LESSOPEN=/usr/bin/lesspipe %s
- USER=2024.1.08.014
- GNOME_TERMINAL_SERVICE=:1.139
- DISPLAY=:0
- SHLVL=1
- LC_TELEPHONE=pt_BR.UTF-8
- QT_IM_MODULE=ibus

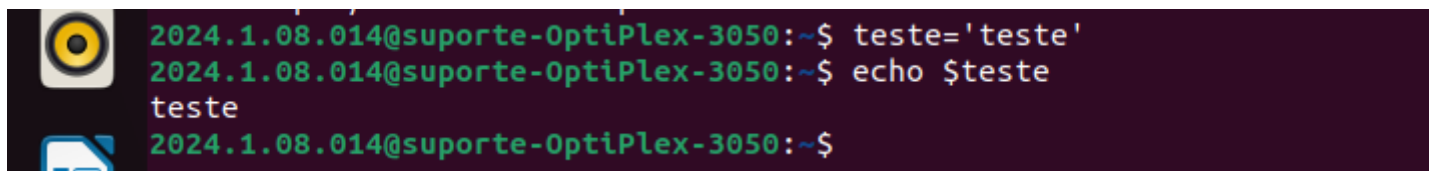
4) A variavel Seconds significa o número de segundos desde que o shell foi iniciado.



A terminal window titled 'Terminal' with a dark background. The prompt is '2024.1.08.014@suporte-OptiPlex-3050:~\$'. The user enters 'echo \$SECONDS' and the output is '267'. Then the user enters 'BASH' and the output is 'BASH: command not found'. Next, the user enters 'bash' and the prompt changes to '2024.1.08.014@suporte-OptiPlex-3050:~\$'. Finally, the user enters 'ps' and the output is a table of running processes.

```
2024.1.08.014@suporte-OptiPlex-3050:~$ echo $SECONDS
267
2024.1.08.014@suporte-OptiPlex-3050:~$ BASH
BASH: command not found
2024.1.08.014@suporte-OptiPlex-3050:~$ bash
2024.1.08.014@suporte-OptiPlex-3050:~$ ps
  PID TTY          TIME CMD
  5501 pts/0        00:00:00 bash
  5635 pts/0        00:00:00 bash
  5642 pts/0        00:00:00 ps
2024.1.08.014@suporte-OptiPlex-3050:~$
```

5)



A terminal window showing the user assigning the value 'teste' to the variable 'teste' and then echoing it. The prompt is '2024.1.08.014@suporte-OptiPlex-3050:~\$'.

```
2024.1.08.014@suporte-OptiPlex-3050:~$ teste='teste'
2024.1.08.014@suporte-OptiPlex-3050:~$ echo $teste
teste
2024.1.08.014@suporte-OptiPlex-3050:~$
```

```
Activities Terminal abr 22 10:55
2024.1.08.014@suporte-OptiPlex-3050: ~
2024.1.08.014@suporte-OptiPlex-3050: $ unset teste
2024.1.08.014@suporte-OptiPlex-3050: $ teste=teste
2024.1.08.014@suporte-OptiPlex-3050: $ echo $teste
teste
2024.1.08.014@suporte-OptiPlex-3050: ~$ env
SHELL=/bin/bash
SESSION_MANAGER=local/suporte-OptiPlex-3050:@tmp/.ICE-unix/2483,unix/suporte-OptiPlex-3050:/tmp/.ICE-unix/2483
QT_ACCESSIBILITY=1
COLORTERM=truecolor
XDG_CONFIG_DIRS=/etc/xdg/xdg-ubuntu:/etc/xdg
SSH_AGENT_LAUNCHER=gnome-keyring
XDG_MENU_PREFIX=gnome-
GNOME_DESKTOP_SESSION_ID=this-is-deprecated
MATEMATICA_HOME=/usr/share/Wolfram/Documentation/13.3/en-us
LC_ADDRESS=pt_BR.UTF-8
JAVA_HOME=/usr/lib/jvm/java-17-openjdk-amd64
PAYARA_HOME=/opt/payara6/glassfish
GNOME_SHELL_SESSION_MODE=ubuntu
LC_NAME=pt_BR.UTF-8
SSH_AUTH_SOCK=/run/user/54310/ssh
IDEA_HOME=/opt/idea-IU-232.8660.185
XMODIFIERS=@im=ibus
DESKTOP_SESSION=ubuntu
LC_MONETARY=pt_BR.UTF-8
GTK_MODULES=gail:atk-bridge
PWD=/home/2024.1.08.014
LOGNAME=2024.1.08.014
XDG_SESSION_DESKTOP=ubuntu
XDG_SESSION_TYPE=wayland
SYSTEMD_EXEC_PID=2535
XAUTORITY=/run/user/54310/.mutter-Xwaylandauth.XWFM02
HOME=/home/2024.1.08.014
USER=2024.1.08.014
IM_CONFIG_PHASE=1
LC_PAPER=pt_BR.UTF-8
LANG=en_US.UTF-8
LS_COLORS=rs=0:dl=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;33;01:or=40;31;01:ml=00:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=34;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lzh=01;31:*.lzma=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lzo=01;31:*.xz=01;31:*.zst=01;31:*.tst=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31:*.tbz2=01;31:*.taz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.wim=01;31:*.swm=01;31:*.dwm=01;31:*.esd=01;31:*.jpg=01;35:*.jpeg=01;35:*.mjpg=01;35:*.mjpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcc=01;35:*.nrv=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;35:*.webp=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35:*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.enf=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=00;36:*.au=00;36:*.flac=00;36:*.m4a=00;36:*.m4p=00;36:*.m4v=00;36:*.m4u=00;36:*.m4v=00;36:*.m4p=00;36:*.m4u=00;36:*.ogg=00;36:*.oga=00;36:*.opus=00;36:*.spx=00;36:*.xspf=00;36:
XDG_CURRENT_DESKTOP=ubuntu:GNOME
VTE_VERSION=6800
WAYLAND_DISPLAY=wayland-0
GNOME_TERMINAL_SCREEN=/org/gnome/Terminal/screen/b86db416_730d_471f_8ccf_f93a9ae48bbf
GNOME_SETUP_DISPLAY=:1
LESSCLOSE=/usr/bin/lesspipe %s %s
XDG_SESSION_CLASS=user
TERM=xterm-256color
LC_IDENTIFICATION=pt_BR.UTF-8
LESSOPEN=| /usr/bin/lesspipe %s
USER=2024.1.08.014
GNOME_TERMINAL_SERVICE=:1.139
GNOME_TERMINAL_SESSION=:1.139
```

```
Activities Terminal abr 22 10:56
2024.1.08.014@suporte-OptiPlex-3050: ~
SSH_AUTH_SOCK=/run/user/54310/ssh
IDEA_HOME=/opt/idea-IU-232.8660.185
XMODIFIERS=@im=ibus
DESKTOP_SESSION=ubuntu
LC_MONETARY=pt_BR.UTF-8
GTK_MODULES=gail:atk-bridge
PWD=/home/2024.1.08.014
LOGNAME=2024.1.08.014
XDG_SESSION_DESKTOP=ubuntu
XDG_SESSION_TYPE=wayland
SYSTEMD_EXEC_PID=2535
XAUTORITY=/run/user/54310/.mutter-Xwaylandauth.XWFM02
HOME=/home/2024.1.08.014
USER=2024.1.08.014
IM_CONFIG_PHASE=1
LC_PAPER=pt_BR.UTF-8
LANG=en_US.UTF-8
LS_COLORS=rs=0:dl=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;33;01:or=40;31;01:ml=00:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=34;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lzh=01;31:*.lzma=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lzo=01;31:*.xz=01;31:*.zst=01;31:*.tst=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31:*.tbz2=01;31:*.taz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.wim=01;31:*.swm=01;31:*.dwm=01;31:*.esd=01;31:*.jpg=01;35:*.jpeg=01;35:*.mjpg=01;35:*.mjpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcc=01;35:*.nrv=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;35:*.webp=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35:*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.enf=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=00;36:*.au=00;36:*.flac=00;36:*.m4a=00;36:*.m4p=00;36:*.m4v=00;36:*.m4u=00;36:*.ogg=00;36:*.oga=00;36:*.opus=00;36:*.spx=00;36:*.xspf=00;36:
XDG_CURRENT_DESKTOP=ubuntu:GNOME
VTE_VERSION=6800
WAYLAND_DISPLAY=wayland-0
GNOME_TERMINAL_SCREEN=/org/gnome/Terminal/screen/b86db416_730d_471f_8ccf_f93a9ae48bbf
GNOME_SETUP_DISPLAY=:1
LESSCLOSE=/usr/bin/lesspipe %s %s
XDG_SESSION_CLASS=user
TERM=xterm-256color
LC_IDENTIFICATION=pt_BR.UTF-8
LESSOPEN=| /usr/bin/lesspipe %s
USER=2024.1.08.014
GNOME_TERMINAL_SERVICE=:1.139
DISPLAY=:0
SHLV=3
LC_TELEPHONE=pt_BR.UTF-8
QT_IM_MODULE=ibus
LC_MEASUREMENT=pt_BR.UTF-8
MVN_HOME=/opt/apache-maven-3.9.3
LC_CTYPE=pt_BR.UTF-8
XDG_RUNTIME_DIR=/run/user/54310
LC_TIME=pt_BR.UTF-8
XDG_DATA_DIRS=/usr/share/ubuntu:/usr/local/share:/usr/share:/var/lib/snapd/desktop
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin:/usr/lib/jvm/java-17-openjdk-amd64/bin:/opt/apache-maven-3.9.3/bin:/opt/idea-IU-232.8660.185/bin:/opt/payara6/glassfish/bin
GNOME_SESSION=ubuntu
DBUS_SESSION_BUS_ADDRESS=unix:path=/run/user/54310/bus
teste=teste
LC_NUMERIC=pt_BR.UTF-8
_=usr/bin/env
2024.1.08.014@suporte-OptiPlex-3050: ~$
```

6)

```
2024.1.08.014@suporte-OptiPlex-3050:~$ bash
2024.1.08.014@suporte-OptiPlex-3050:~$ ps
  PID TTY          TIME CMD
  5501 pts/0    00:00:00 bash
  5635 pts/0    00:00:00 bash
  5793 pts/0    00:00:00 bash
  5847 pts/0    00:00:00 bash
  5856 pts/0    00:00:00 ps
2024.1.08.014@suporte-OptiPlex-3050:~$ echo $teste
teste
2024.1.08.014@suporte-OptiPlex-3050:~$ exit
exit
2024.1.08.014@suporte-OptiPlex-3050:~$ unset teste
2024.1.08.014@suporte-OptiPlex-3050:~$ echo $teste

2024.1.08.014@suporte-OptiPlex-3050:~$
```

7)

```
2024.1.08.014@suporte-OptiPlex-3050:~$ vegetaisarray=(batata,cenoura,beterraba,inham)
2024.1.08.014@suporte-OptiPlex-3050:~$ echo $vegetaisarray
batata,cenoura,beterraba,inham
2024.1.08.014@suporte-OptiPlex-3050:~$ echo ${vegetaisarray[1]}
cenoura
2024.1.08.014@suporte-OptiPlex-3050:~$ unset vegetaisarray
2024.1.08.014@suporte-OptiPlex-3050:~$ vegetaisarray=(batata cenoura beterraba inham)
2024.1.08.014@suporte-OptiPlex-3050:~$ echo $vegetaisarray
batata
2024.1.08.014@suporte-OptiPlex-3050:~$ echo ${vegetaisarray[*]}
batata cenoura beterraba inham
2024.1.08.014@suporte-OptiPlex-3050:~$ echo ${vegetaisarray[1]}
cenoura
2024.1.08.014@suporte-OptiPlex-3050:~$ echo ${vegetaisarray[1]}
cenoura
2024.1.08.014@suporte-OptiPlex-3050:~$
```

8)

```
2024.1.08.014@suporte-OptiPlex-3050:~$ vegetaisarray[1]=chuchu
2024.1.08.014@suporte-OptiPlex-3050:~$ unset vegetaisarray[0]
2024.1.08.014@suporte-OptiPlex-3050:~$ vegetaisarray[4]=abobrinha
2024.1.08.014@suporte-OptiPlex-3050:~$ echo ${vegetaisarray[*]}
chuchu beterraba inhame abobrinha
2024.1.08.014@suporte-OptiPlex-3050:~$ unset vegetaisarray[*]
2024.1.08.014@suporte-OptiPlex-3050:~$ echo ${vegetaisarray[*]}
>
```

9)

```
2024.1.08.014@suporte-OptiPlex-3050:~$ alias mostrarhome='ls -l ~/ '
2024.1.08.014@suporte-OptiPlex-3050:~$ alias
alias alert='notify-send --urgency=low -i "${[ $? = 0 ]} && echo terminal || echo error)" "$(history|tail -n1|sed -e '\''s/^\s*[0-9]\+\s*//;s/;;s/[]\s*alert$//'\''")'
alias egrep='egrep --color=auto'
alias fgrep='fgrep --color=auto'
alias grep='grep --color=auto'
alias l='ls -CF'
alias la='ls -A'
alias ll='ls -alF'
alias ls='ls --color=auto'
alias mostrarhome='ls -l ~/ '
2024.1.08.014@suporte-OptiPlex-3050:~$ mostrarhome
total 36
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Desktop
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Documents
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Downloads
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Music
drwxr-xr-x 3 2024.1.08.014 Domain Users 4096 abr 22 10:32 Pictures
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Public
drwx----- 3 2024.1.08.014 Domain Users 4096 abr 22 10:07 snap
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Templates
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Videos
2024.1.08.014@suporte-OptiPlex-3050:~$
```



```
2024.1.08.014@suporte-OptiPlex-3050: ~$ alias mostrarhome='ls -l ~/\'
2024.1.08.014@suporte-OptiPlex-3050: ~$ alias
alias alert='notify-send --urgency=low -i "${[ $? = 0 ]} && echo terminal || echo error" "$(history|tail -n1|sed -e '\''s/^\s*[0-9]\+\s*//;s/[;&]\s*alert$//'\''")"'
alias egrep='egrep --color=auto'
alias fgrep='fgrep --color=auto'
alias grep='grep --color=auto'
alias l='ls -CF'
alias la='ls -A'
alias ll='ls -alF'
alias ls='ls --color=auto'
alias mostrarhome='ls -l ~/\'
2024.1.08.014@suporte-OptiPlex-3050: ~$ mostrarhome
total 36
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Desktop
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Documents
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Downloads
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Music
drwxr-xr-x 3 2024.1.08.014 Domain Users 4096 abr 22 10:32 Pictures
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Public
drwx----- 3 2024.1.08.014 Domain Users 4096 abr 22 10:07 snap
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Templates
drwxr-xr-x 2 2024.1.08.014 Domain Users 4096 abr 22 10:07 Videos
2024.1.08.014@suporte-OptiPlex-3050: ~$ alias
alias alert='notify-send --urgency=low -i "${[ $? = 0 ]} && echo terminal || echo error" "$(history|tail -n1|sed -e '\''s/^\s*[0-9]\+\s*//;s/[;&]\s*alert$//'\''")"'
alias egrep='egrep --color=auto'
alias fgrep='fgrep --color=auto'
alias grep='grep --color=auto'
alias l='ls -CF'
alias la='ls -A'
alias ll='ls -alF'
alias ls='ls --color=auto'
alias mostrarAospoucos='more'
alias mostrarhome='ls -l ~/\'
2024.1.08.014@suporte-OptiPlex-3050: ~$ mostrarAospoucos
more: bad usage
Try 'more --help' for more information.
2024.1.08.014@suporte-OptiPlex-3050: ~$ cat>arquivoi.txt
pinto
23
cm
2024.1.08.014@suporte-OptiPlex-3050: ~$ mostrarAospoucos arquivoi.txt
pinto
23
cm
2024.1.08.014@suporte-OptiPlex-3050: ~$
```

```
2024.1.08.014@suporte-OptiPlex-3050: ~$ alias criardiretorio='mkdir'
bash: alias: criardiretorio: not found
bash: alias: =mkdir: not found
2024.1.08.014@suporte-OptiPlex-3050: ~$ alias criardiretorio='mkdir'
2024.1.08.014@suporte-OptiPlex-3050: ~$ criardiretorio goku2
2024.1.08.014@suporte-OptiPlex-3050: ~$ ls goku2
2024.1.08.014@suporte-OptiPlex-3050: ~$ ls
arquivoi.txt Desktop Documents Downloads goku2 Music Pictures Public snap Templates Videos
2024.1.08.014@suporte-OptiPlex-3050: ~$
```


Activities Terminal abr 22 11:49 2024.1.08.014@suporte-OptiPlex

```
2024.1.08.014@suporte-OptiPlex-3050:~$ unset -f primeirafuncao
2024.1.08.014@suporte-OptiPlex-3050:~$ primeirafuncao()
> {
> cd /home/2024.1.08.014;
> echo 'Olá,Mundo!' >> arquivo1.txt
> }
2024.1.08.014@suporte-OptiPlex-3050:~$ primeirafuncao
2024.1.08.014@suporte-OptiPlex-3050:~$ cat arquivo1.txt
pinto
23
cm
olá,mundo
Olá,Mundo!
2024.1.08.014@suporte-OptiPlex-3050:~$ primeirafuncao
2024.1.08.014@suporte-OptiPlex-3050:~$ cat arquivo1.txt
pinto
23
cm
olá,mundo
Olá,Mundo!
Olá,Mundo!
2024.1.08.014@suporte-OptiPlex-3050:~$
```

```
2024.1.08.014@suporte-OptiPlex-3050:~$ primeirafuncao
2024.1.08.014@suporte-OptiPlex-3050:~$ primeirafuncao
2024.1.08.014@suporte-OptiPlex-3050:~$ primeirafuncao
2024.1.08.014@suporte-OptiPlex-3050:~$ primeirafuncao
2024.1.08.014@suporte-OptiPlex-3050:~$ cat arquivo1.txt
pinto
23
cm
olá,mundo
Olá,Mundo!
Olá,Mundo!
Olá,Mundo!
Olá,Mundo!
Olá,Mundo!
Olá,Mundo!
Olá,Mundo!
```