



IFSul Campus Pelotas

Curso de Engenharia Elétrica – Sistemas Embarcados

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Relatório do Trabalho de COMPILANDO PROGRAMAS

Os arquivos de script desse trabalho é deixei disponível no endereço do repositório:
<https://github.com/dankas/SistemasEmbarcados/tree/master/Trabalhos/>

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1 COMPILANDO PROGRAMAS: Baixar o código fonte do coreutils.

Na configuração inicial da distribuição eu já havia configurado as fontes para incluir os repositórios de source, por esse motivo ignorei a configuração do source list. Baixei e descompactei a source e na sequência alterei as permissões.

1.1 Imagem da execução:

```
root@Zireael: /home/dankas/aula/Trabalho04# apt-get source coreutils
Reading package lists... Done
Need to get 5294 kB of source archives.
Get:1 http://br.archive.ubuntu.com/ubuntu bionic/main coreutils 8.28-1ubuntu1 (dsc) [2302 B]
Get:2 http://br.archive.ubuntu.com/ubuntu bionic/main coreutils 8.28-1ubuntu1 (tar) [5252 kB]
Get:3 http://br.archive.ubuntu.com/ubuntu bionic/main coreutils 8.28-1ubuntu1 (asc) [1196 B]
Get:4 http://br.archive.ubuntu.com/ubuntu bionic/main coreutils 8.28-1ubuntu1 (diff) [37.9 kB]
Fetched 5294 kB in 3s (1860 kB/s)
sh: 1: dpkg-source: not found
W: Download is performed unsandboxed as root as file 'coreutils_8.28-1ubuntu1.dsc' couldn't be accessed by user '_apt'.
- pkgAcquire::Run (13: Permission denied)
E: Unpack command 'dpkg-source --no-check -x coreutils_8.28-1ubuntu1.dsc' failed.
N: Check if the 'dpkg-dev' package is installed.
root@Zireael: /home/dankas/aula/Trabalho04#
```

2 COMPILANDO PROGRAMAS: talando ctags e texinfo.

Executei os apt install do ctags e texinfo, criei o arquivo de tags e alterei as permissões.

2.1 Imagem da execução:

```
dankas@Zireael: ~/aula/Trabalho04/coreutils-8.28
yytype_uint8 lib/parse-datetime.c /^typedef YYTYPE_UINT8 yytype_uint8;$/; t file:
yytype_uint8 lib/parse-datetime.c /^typedef unsigned char yytype_uint8;$/; t file:
yyvs_alloc lib/parse-datetime.c /^ YYTYPE yyvs_alloc;$/; m union:yyalloc file:
zaptemp src/sort.c /^zaptemp (char const *name)$/; f file:
zcat_setup tests/misc/help-version.sh /^zcat_setup O { args=$zin; }$/; f
zcmp_setup tests/misc/help-version.sh /^zcmp_setup O { args="$zin $zin2"; }$/; f
zdiff_setup tests/misc/help-version.sh /^zdiff_setup O { args="$zin $zin2"; }$/; f
zegrep_setup tests/misc/help-version.sh /^zegrep_setup O { args="z $zin"; }$/; f
zero gnu/lib-tests/test-cloexec.c /^static int zero (void) { return 0; }$/; f file:
zero gnu/lib-tests/test-dup-safer.c /^static int zero (void) { return 0; }$/; f file:
zero gnu/lib-tests/test-dup2.c /^static int zero (void) { return 0; }$/; f file:
zero gnu/lib-tests/test-fcntl.c /^static int zero (void) { return 0; }$/; f file:
zero_fill src/shred.c /^ bool zero_fill; \/* -z flag: Add a final zero pass *\$/; m struct:0
ptions file:
zero_padding_width src/numfmt.c /^static long int zero_padding_width = 0;$/; v file:
zerod gnu/lib-tests/test-signbit.c /^double zerod = 0.0;$/; v
zerof gnu/lib-tests/test-signbit.c /^float zerof = 0.0f;$/; v
zerol gnu/lib-tests/test-signbit.c /^long double zerol = 0.0L;$/; v
zeros src/tsort.c /^static struct item *zeros = NULL;$/; v typedef:struct:item file:
zerosize_ptr gnu/lib-tests/zerosize-ptr.h /^zerosize_ptr (void)$/; f
zfgrep_setup tests/misc/help-version.sh /^zfgrep_setup O { args="z $zin"; }$/; f
zforce_setup tests/misc/help-version.sh /^zforce_setup O { args=$zin; }$/; f
zgrep_setup tests/misc/help-version.sh /^zgrep_setup O { args="z $zin"; }$/; f
zless_setup tests/misc/help-version.sh /^zless_setup O { args=$zin; }$/; f
zmore_setup tests/misc/help-version.sh /^zmore_setup O { args=$zin; }$/; f
znew_setup tests/misc/help-version.sh /^znew_setup O { args=$bigz_in; }$/; f
zone lib/parse-datetime.y /^zone:$/; 1
zone_offset lib/parse-datetime.y /^zone_offset:$/; 1
zones_seen lib/parse-datetime.c /^ptrdiff_t zones_seen;$/; m struct: anon77 file:
```

3 COMPILANDO PROGRAMAS: Configuração da instalação.

Rodei o configure. Na primeira execução estava como root o que gerou erro, voltei para usuário normal e o makefile foi gerado corretamente.

3.1 Imagens da execução:

```
root@Zireael: /home/dankas/aula/Trabalho04/coreutils-8.28
checking for stdlib.h... (cached) yes
checking for GNU libc compatible malloc... (cached) yes
checking whether NAN macro works... yes
checking whether HUGE_VAL works... yes
checking whether mbrtowc handles incomplete characters... (cached) guessing yes
checking whether mbrtowc works as well as mbtowc... (cached) guessing yes
checking whether mbrtowc handles a NULL pwc argument... (cached) guessing yes
checking whether mbrtowc handles a NULL string argument... (cached) guessing yes
checking whether mbrtowc has a correct return value... (cached) guessing yes
checking whether mbrtowc returns 0 when parsing a NUL character... (cached) guessing yes
checking whether mbrtowc works on empty input... (cached) yes
checking whether the C locale is free of encoding errors... (cached) no
checking whether mbrtowc handles incomplete characters... (cached) guessing yes
checking whether mbrtowc works as well as mbtowc... (cached) guessing yes
checking whether mbrtowc handles incomplete characters... (cached) guessing yes
checking whether mbrtowc works as well as mbtowc... (cached) guessing yes
checking whether mbsrtowcs works... guessing yes
checking whether mbswidth is declared in <wchar.h>... no
checking for mbstate_t... (cached) yes
checking for mempcpy... (cached) yes
checking for memchr... yes
checking whether mkdir handles trailing slash... yes
checking whether mkdir handles trailing dot... yes
checking whether mkfifo rejects trailing slashes... yes
checking whether mknod can create fifo without root privileges... configure: error: in `/home/dankas/aula/Trabalho04/coreutils-8.28':
configure: error: you should not run configure as root (set FORCE_UNSAFE_CONFIGURE=1 in environment to bypass this check)
```

```
root@Zireael: /home/dankas/aula/Trabalho04/coreutils-8.28
GEN      man/touch.1
GEN      man/tr.1
GEN      man/true.1
GEN      man/truncate.1
GEN      man/tsort.1
GEN      man/tty.1
GEN      man/uname.1
GEN      man/unexpand.1
GEN      man/unig.1
GEN      man/unlink.1
GEN      man/vdir.1
GEN      man/wc.1
GEN      man/whoami.1
GEN      man/yes.1
GEN      lib/charset.alias
GEN      lib/ref-add.sed
GEN      lib/ref-del.sed
make[2]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28'
Making all in gnulib-tests
make[2]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
make all-recursive
make[3]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
Making all in :
make[4]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
make[4]: Nothing to be done for 'all-am'.
make[4]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
make[3]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
make[2]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
```

4 COMPILANDO PROGRAMAS: Compilando com make.

Instalei o make e rodei gerando os binários.

4.1 Imagens da execução:

```
root@Zireael: /home/dankas/aula/Trabalho04/coreutils-8.28
root@Zireael:/home/dankas/aula/Trabalho04/coreutils-8.28# apt install make
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
  make-doc
The following NEW packages will be installed:
  make
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 0 B/154 kB of archives.
After this operation, 381 kB of additional disk space will be used.
Selecting previously unselected package make.
(Reading database ... 50097 files and directories currently installed.)
Preparing to unpack .../make_4.1-9.1ubuntu1_amd64.deb ...
Unpacking make (4.1-9.1ubuntu1) ...
Setting up make (4.1-9.1ubuntu1) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
root@Zireael:/home/dankas/aula/Trabalho04/coreutils-8.28#
```

```
root@Zireael: /home/dankas/aula/Trabalho04/coreutils-8.28
csplit.c      head.c      od.o          split        uniq
csplit.o      head.o      operand2sig.c split.c       uniq.c
cu-progs.mk   hostid     operand2sig.h split.o       uniq.o
cut           hostid.c   paste         src_b2sum-md5sum.o  unlink
cut.c         hostid.o   paste.o       src_base32-base64.o  unlink.c
cut.o         hostname.c paste.o       src_base64-base64.o  unlink.o
date          id         pathchk      src_ginstall-copy.o  uptime
date.c        id.c      pathchk.c    src_ginstall-cp-hash.o  uptime.c
date.o        id.o      pathchk.o    src_ginstall-extent-scan.o  uptime.o
dcgen         install.c pinky         src_ginstall-force-link.o  users
dd            ioblksize.h pinky.o       src_ginstall-install.o   users.c
dd.c          join      pinky.c      src_ginstall-prog-fprintf.o  users.o
dd.o          join.c    pinky.o       src_ginstall-selinux.o     vdir
df            join.o    pr           src_libstdbuf.so-libstdbuf.o  version.c
df.c          kill      pr.c         src_md5sum-md5sum.o       version.h
df.o          kill.c   primes.h     src_sha1sum-md5sum.o      version.o
die.h         kill.o   printenv     src_sha224sum-md5sum.o    wc
dir           lbracket.c printenv.c   src_sha256sum-md5sum.o    wc.c
dircolors    lbracket.o printenv.o   src_sha384sum-md5sum.o    wc.o
dircolors.c  libstdbuf.c printf       src_sha512sum-md5sum.o    who
dircolors.h  libstdbuf.so printf.c     stat                who.c
dircolors.hin libver.a  printf.o     stat.c             who.o
dircolors.o  link     printf.o     stat.o             whoami
dirname      link.c   prog-fprintf.c stdbuf            whoami.c
dirname.c    link.o   prog-fprintf.h stdbuf.c          whoami.o
dirname.o    ln       prog-fprintf.o stdbuf.o          yes
du           ln.c     ptx          stty              yes.c
du.c         ln.o     ptx.c        stty.c            yes.o
```

5 COMPILANDO PROGRAMAS: Editando whoami.

Editei o arquivo src/whoami.c, criei uma string com o texto “you are running as:” e usei “puts” para escrever a mensagem antes da exibição do usuário. Executei o make para recriar o binário.

5.1 Imagem da execução:

```
root@Zireael: /home/dankas/aula/Trabalho04/coreutils-8.28
root@Zireael: /home/dankas/aula/Trabalho04/coreutils-8.28# vim src/whoami.c
root@Zireael: /home/dankas/aula/Trabalho04/coreutils-8.28# make
make all-recursive
make[1]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28'
Making all in po
make[2]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28/po'
make[2]: Nothing to be done for 'all'.
make[2]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28/po'
Making all in .
make[2]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28'
  CC      src/whoami.o
  CCLD    src/whoami
  GEN     man/whoami.1
make[2]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28'
Making all in gnulib-tests
make[2]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
make all-recursive
make[3]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
Making all in .
make[4]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
make[4]: Nothing to be done for 'all-am'.
make[4]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
make[3]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
make[2]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28/gnulib-tests'
make[1]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28'
root@Zireael: /home/dankas/aula/Trabalho04/coreutils-8.28# ./src/whoami
you are running as:
root
```

6 COMPILANDO PROGRAMAS: Rodando patch.

Baixei o rm.patch e rodei o comando. Compilei com o make, entretanto ocorreu um erro de compilação. Rodando o comando retorna erro. Não consegui identificar se o erro é no patch ou foi na instalação do ctags.

6.1 Imagem da execução:

```
dankas@Zireael: ~/aula/Trabalho04/coreutils-8.28
dankas@Zireael:~/aula/Trabalho04/coreutils-8.28$ make
make all-recursive
make[1]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28'
Making all in po
make[2]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28/po'
make[2]: Nothing to be done for 'all'.
make[2]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28/po'
Making all in .
make[2]: Entering directory '/home/dankas/aula/Trabalho04/coreutils-8.28'
  CC      src/rm.o
src/rm.c: In function 'main':
src/rm.c:231:9: error: duplicate case value
    case 'g':
    ~~~~~
src/rm.c:228:9: note: previously used here
    case 'g':
    ~~~~~
Makefile:9122: recipe for target 'src/rm.o' failed
make[2]: *** [src/rm.o] Error 1
make[2]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28'
Makefile:11717: recipe for target 'all-recursive' failed
make[1]: *** [all-recursive] Error 1
make[1]: Leaving directory '/home/dankas/aula/Trabalho04/coreutils-8.28'
Makefile:5978: recipe for target 'all' failed
make: *** [all] Error 2
dankas@Zireael:~/aula/Trabalho04/coreutils-8.28$ ./src/rm --gently tags
./src/rm: unrecognized option '--gently'
Try './src/rm --help' for more information.
dankas@Zireael:~/aula/Trabalho04/coreutils-8.28$
```