Compilação condicional

Romero Malaquias
romero.malaquias@gmail.com

Vivendo no inferno do #ifdef

Compilação condicional é extremamente flexível e fácil de utilizar, mas gera um código difícil de manter

Vivendo no inferno do #ifdef

```
int
xmlNanoFTPGetConnection()
{
char buf[200];
int adp[4] = {1,4,2,0};
int portp[2] = {20,4};
#ifdef HAVE_FNPRINTF
int fnp[2] = {10,1};
#endif
int len;
#ifndef HAVE_SNPRINTF
       len = sprintf2(buf, "PORT %d,%d,%d,%d,%d,%d\r\n",
#else /* HAVE_SNPRINTF */
       len = snprintf2(buf, sizeof(buf), "PORT %d,%d,%d,%d,%d,%d\r\n",
#endif /* HAVE_SNPRINTF */
              adp[0] & 0xff, adp[1] & 0xff, adp[2] & 0xff, adp[3] & 0xff,
                     portp[0] & 0xff, portp[1] & 0xff);
return len;
}
```

$$2^n$$

$2^{12.000}$

Linux

Estruturado x Não Estruturado

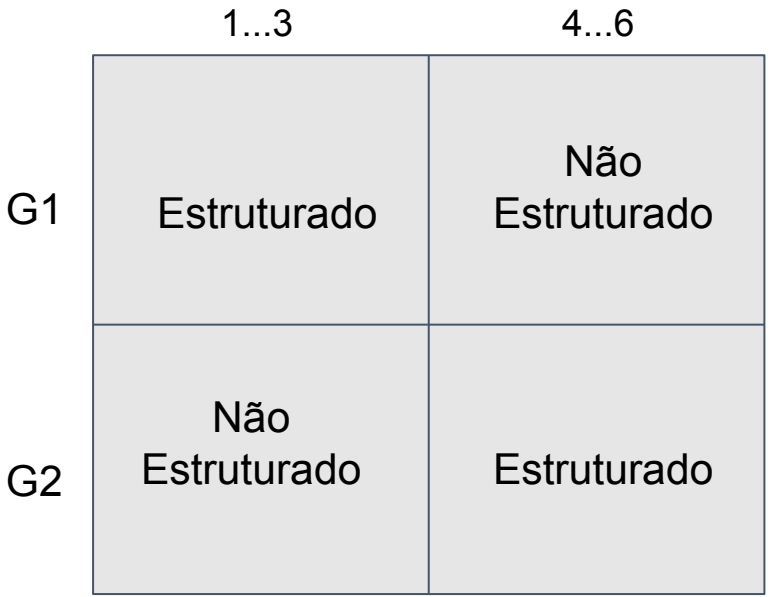
```
#define USE_START_TV
       int update_time, start_tv = 0;

#ifdef FEAT_XCLIPBOARD
       update_time = xterm_Shell != (Widget)0;
#ifdef USE_XSMP
       update_time = update_time || xsmp_icefd != -1;
#endif
#ifdef FEAT_MZSCHEME
              update_time = update_time || (mzthreads_allowed() && p_mzq > 0);
#endif
#else
#ifdef USE_XSMP
       update_time = xsmp_icefd != -1;
#ifdef FEAT_MZSCHEME
                     update_time = update_time || (mzthreads_allowed() && p_mzq > 0);
#endif
#endif
       if(msec > 0 &&update_time)
```

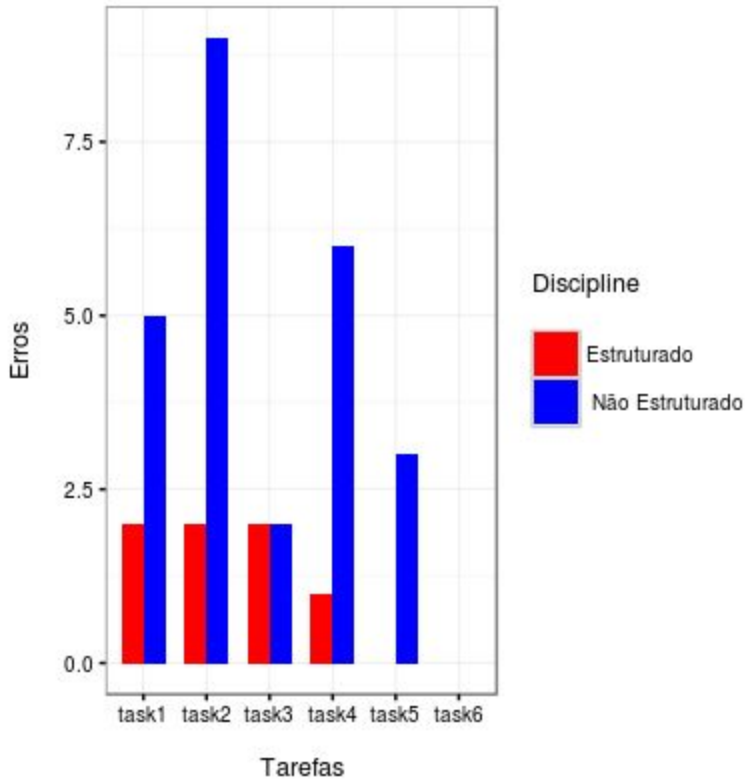
Estruturado x Não Estruturado

```
#define USE_START_TV
int start_tv = 0;
   if (msec > 0 && (
#ifdef FEAT_XCLIPBOARD
       xterm_Shell != 0
#if defined(USE_XSMP) || defined(FEAT_MZSCHEME)
       ||
#endif
#endif
#ifdef USE_XSMP
       xsmp_icefd != -1
#ifdef FEAT_MZSCHEME
       ||
#endif
#endif
#ifdef FEAT_MZSCHEME
   (mzthreads_allowed() && p_mzq > 0) //Retirando ( a mais
#endif
       ))
```

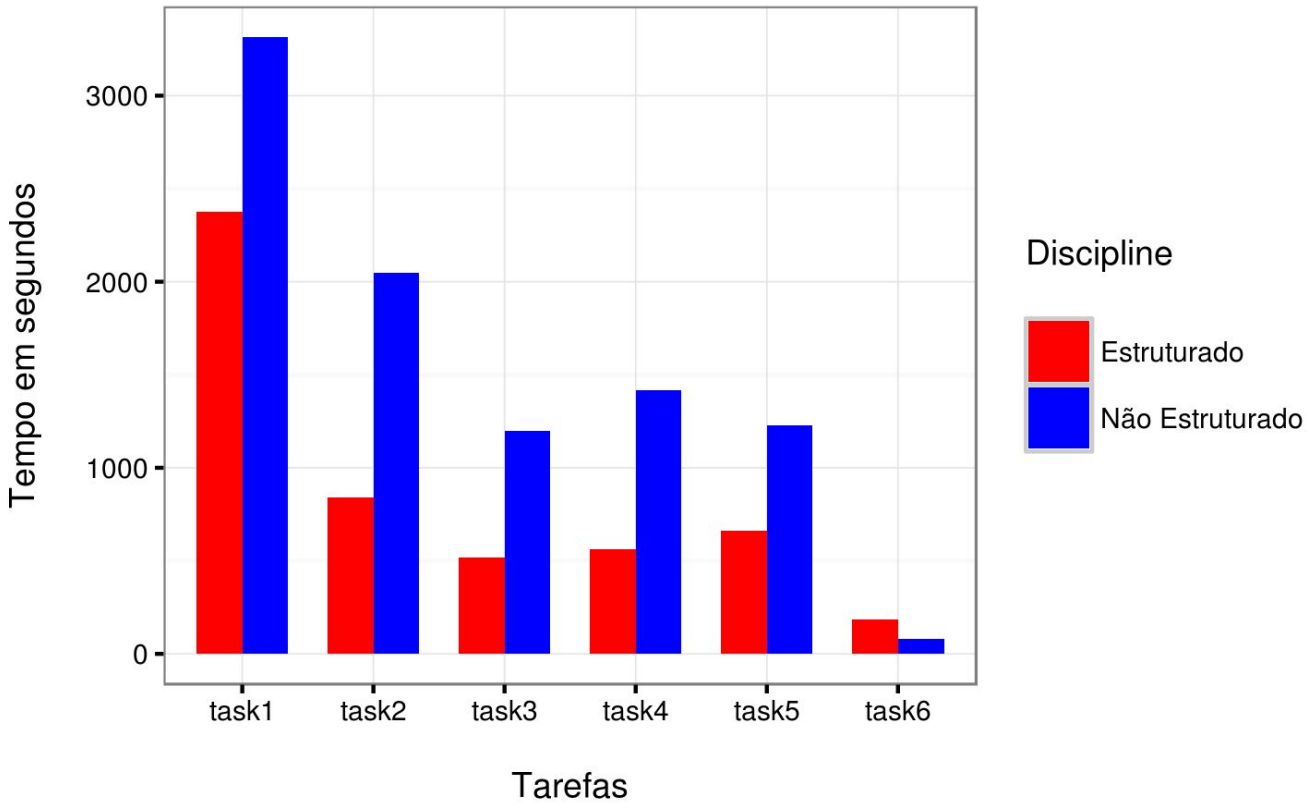
Exercício

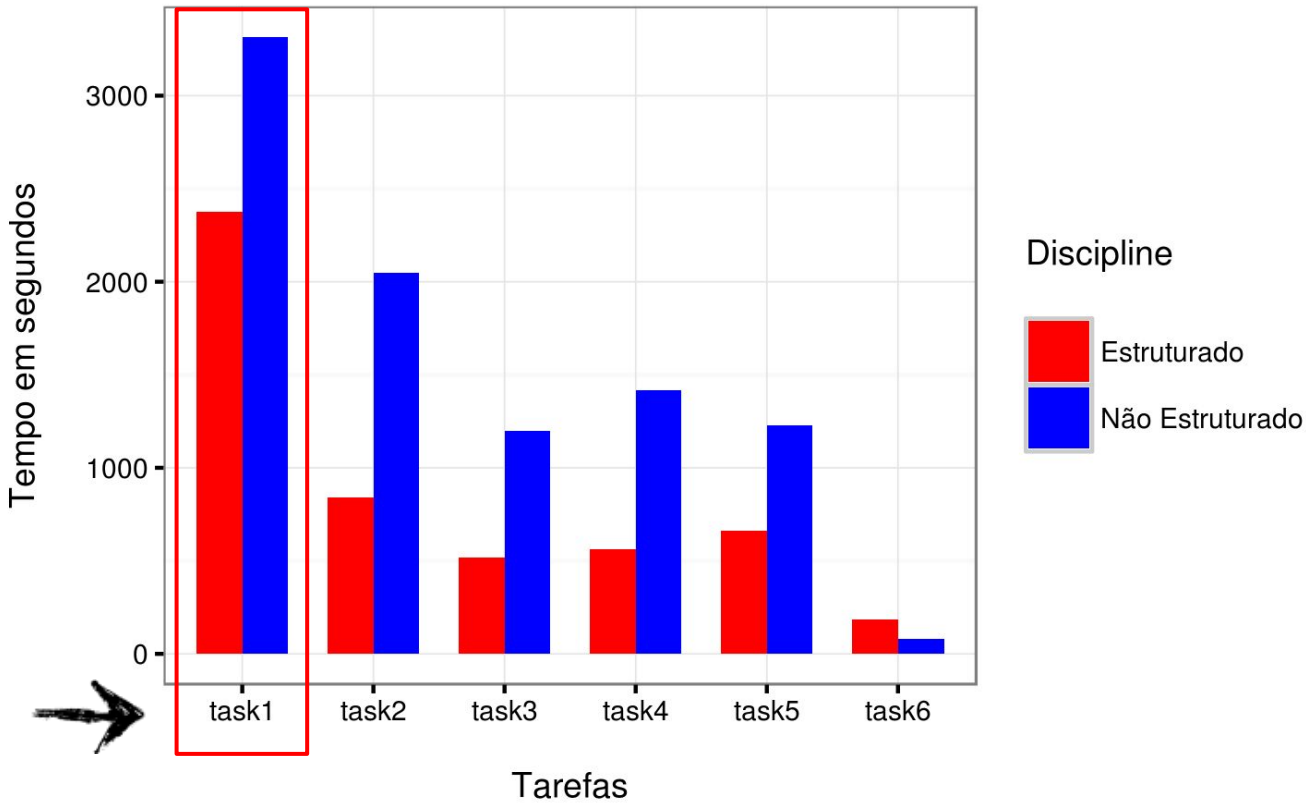

1...3
4...6
G1
Estruturado
Não Estruturado
G2
Não Estruturado
Estruturado

Estruturado x Não Estruturado



Estruturado x Não Estruturado




Tempo em segundos
3000
2000
1000
0
task1
task2
task3
task4
task5
task6
Tarefas
Discipline
Estruturado
Não Estruturado

Tarefa 1

Quais as saídas para cada conjunto de entradas?

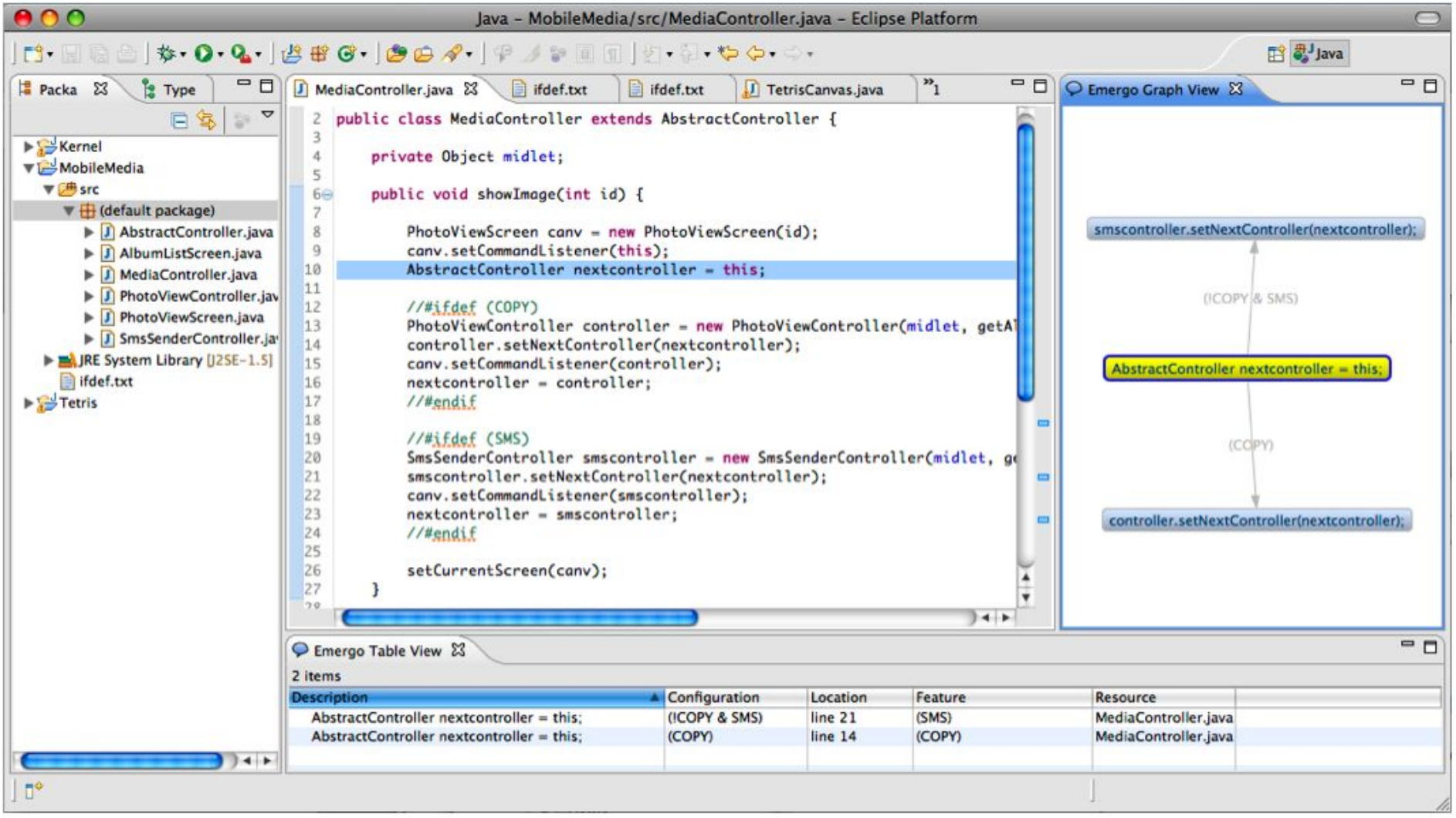
Tarefa 1

```
static bool key_method_2_read (struct tls_session *session, struct user up, struct auth_string ks)
{
 if ((session->opt.ssl_flags && SSLF_USERNAME_AS_COMMON_NAME))
           set_common_name (session, up.username);
#ifdef ENABLE_DEF_AUTH
         msg (D_HANDSHAKE, "TLS: Username/Password authentication %s for username '%s' %s",
              ks.auth_deferred ? "deferred" : "succeeded",
              up.username,
              (session->opt.ssl_flags && SSLF_USERNAME_AS_COMMON_NAME) ? "[CN SET]" : "");
#else
         msg (D_HANDSHAKE, "TLS: Username/Password authentication %s for username '%s' %s","succeeded",
              up.username,
              (session->opt.ssl_flags && SSLF_USERNAME_AS_COMMON_NAME) ? "[CN SET]" : "");
#endif
return true;
}
```

Tarefa 1

```
void msg (int handshake, char msg[], char return_msg[], char username[], char type_set[])
{
        bool is_authenticated = handshake;
#ifdef ENABLE_DEF_AUTH
        is_authenticated = is_authenticated && return_msg != "deferred";
#endif
#ifdef PLUGIN_DEF_AUTH
        is_authenticated = is_authenticated && type_set != "[CN SET]";
#endif
#ifdef ENABLE_OCC
   is_authenticated = is_authenticated || (return_msg == "succeeded" && strlen(username) > 0);
#endif
   if (is_authenticated)
        {
                printf("authentication succeeded");
        } else {
                printf("authentication failed");
        }
}
```

Soluções


Java - MobileMedia/src/MediaController.java - Eclipse Platform
Java
Packa
Type
Kernel
MobileMedia
src
(default package)
AbstractController.java
AlbumListScreen.java
MediaController.java
PhotoViewController.jav
PhotoViewScreen.java
SmsSenderController.ja
JRE System Library [J2SE-1.5]
ifdef.txt
Tetris
MediaController.java
ifdef.txt
ifdef.txt
TetrisCanvas.java
1
2 public class MediaController extends AbstractController {
3
4 private Object midlet;
5
6 public void showImage(int id) {
7
8 PhotoViewScreen canv = new PhotoViewScreen(id);
9 canv.setCommandListener(this);
10 AbstractController nextcontroller = this;
11
12 //#ifdef (COPY)
13 PhotoViewController controller = new PhotoViewController(midlet, getA
14 controller.setNextController(nextcontroller);
15 canv.setCommandListener(controller);
16 nextcontroller = controller;
17 //#endif
18
19 //#ifdef (SMS)
20 SmsSenderController smscontroller = new SmsSenderController(midlet, g
21 smscontroller.setNextController(nextcontroller);
22 canv.setCommandListener(smscontroller);
23 nextcontroller = smscontroller;
24 //#endif
25
26 setCurrentScreen(canv);
27 }
Emergo Graph View
smscontroller.setNextController(nextcontroller);
(!COPY & SMS)
AbstractController nextcontroller = this;
(COPY)
controller.setNextController(nextcontroller);
Emergo Table View
2 items
Description
Configuration
Location
Feature
Resource
AbstractController nextcontroller = this;
(!COPY & SMS)
line 21
(SMS)
MediaController.java
AbstractController nextcontroller = this;
(COPY)
line 14
(COPY)
MediaController.java