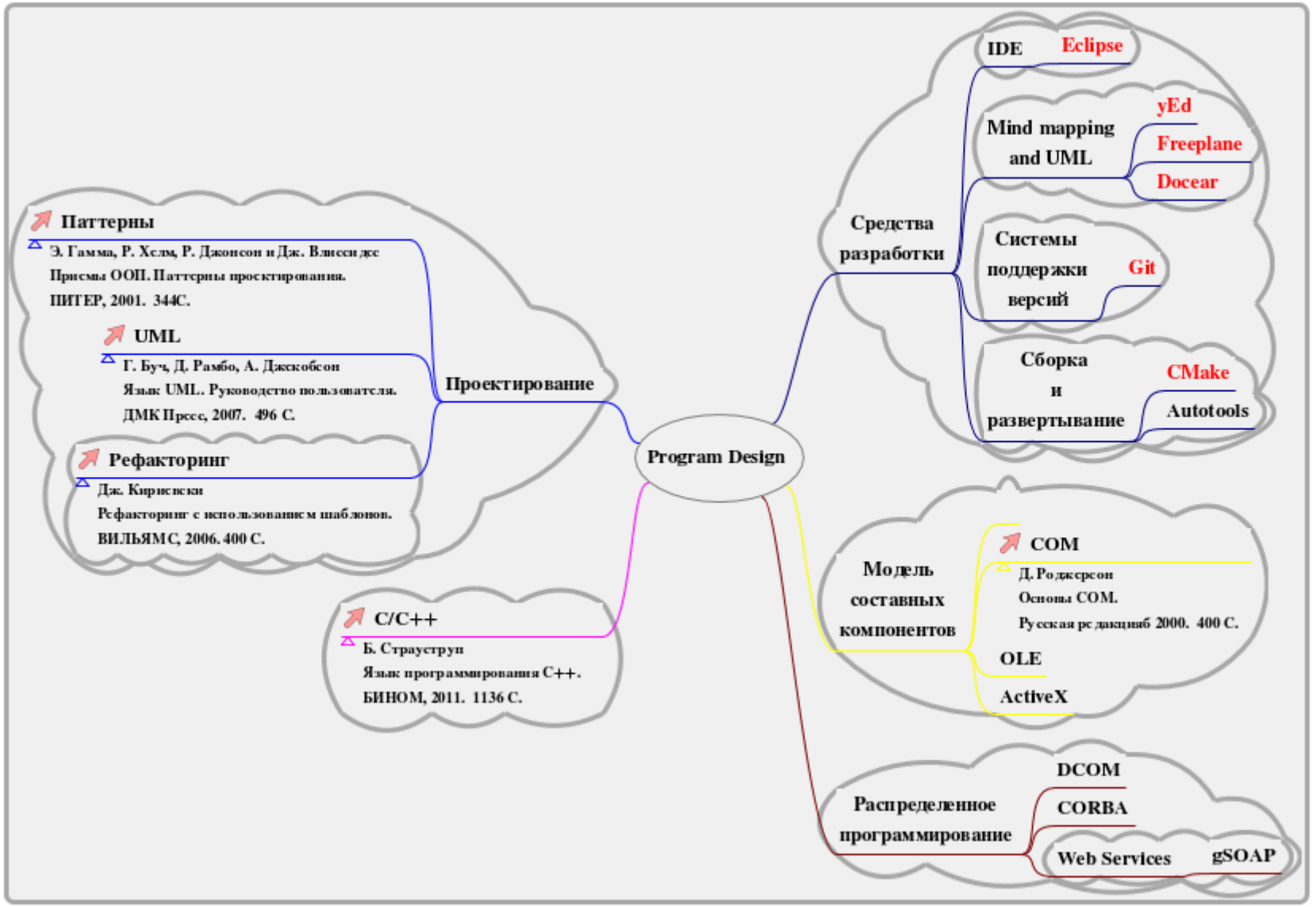
Лекция 1

Обзор курса и средств разработки



Система поддержки версий GIT

```
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> ls -la
total 8
drwxr-xr-x 2 ewgenij users 4096 Sep 12 12:24 .
drwxr-xr-x 7 ewgenij users 4096 Sep 11 20:12 ..
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 1.c
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 1.dat
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 README
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 s.cpp
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop>
```

```
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git init
Initialized empty Git repository in /home/ewgenij/Documents/СибГУТИ/ProgramDesignCourse/workshop/.git/
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> ls -la
total 12
drwxr-xr-x 3 ewgenij users 4096 Sep 12 12:44 .
drwxr-xr-x 7 ewgenij users 4096 Sep 11 20:12 ..
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 1.c
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 1.dat
drwxr-xr-x 7 ewgenij users 4096 Sep 12 12:44 .git
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 README
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 s.cpp
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop>
```

```
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git add 1.c README
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git commit  1.c README  -m 'First'
[master (root-commit) b47d575] First
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 1.c
 create mode 100644 README
```

```
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git branch
* master
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git branch a_test_branch
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git branch
  a_test_branch
* master
```

```
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> cat README
This is a test file (local branch master)
```

```
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git checkout a_test_branch
M       README
Switched to branch 'a_test_branch'
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git branch
* a_test_branch
  master
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> vim README
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git add README
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git commit README -m 'local
changes for a_...'
[a_test_branch dc4fcb3] local changes for a_...
 1 file changed, 1 insertion(+), 1 deletion(-)
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> cat README
Text has been changed in a_... branch
```

```
ewgenij@linux-715l:~> ssh -L 2222:dew.lab7.lan:22 malkov@...itam.nsc.ru
Enter passphrase for key '/home/ewgenij/.ssh/id_rsa':
malkov@...itam.nsc.ru's password:
Last login: Wed Sep 11 12:36:21 2013 from 178.49.13.74
[malkov@site ~]$
```

```
ewgenij@linux-715l:~> ssh -XY -p 2222 ewgenij@localhost
Enter passphrase for key '/home/ewgenij/.ssh/id_rsa':
Password:
Last login: Wed Sep 11 12:40:08 2013 from site.lan
Have a lot of fun...
ewgenij@dew:~$ mkdir tmp
ewgenij@dew:~$ cd tmp
```

```
ewgenij@dew:~/tmp$ git clone 178.49.13.74:/home/ewgenij/Documents/СибГУТИ/ProgramDesignCourse/workshop .
Cloning into '.'...
Enter passphrase for key '/home/ewgenij/.ssh/id_rsa':
Password:
Password:
remote: Counting objects: 3, done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 0), reused 0 (delta 0)
Receiving objects: 100% (3/3), done.
```

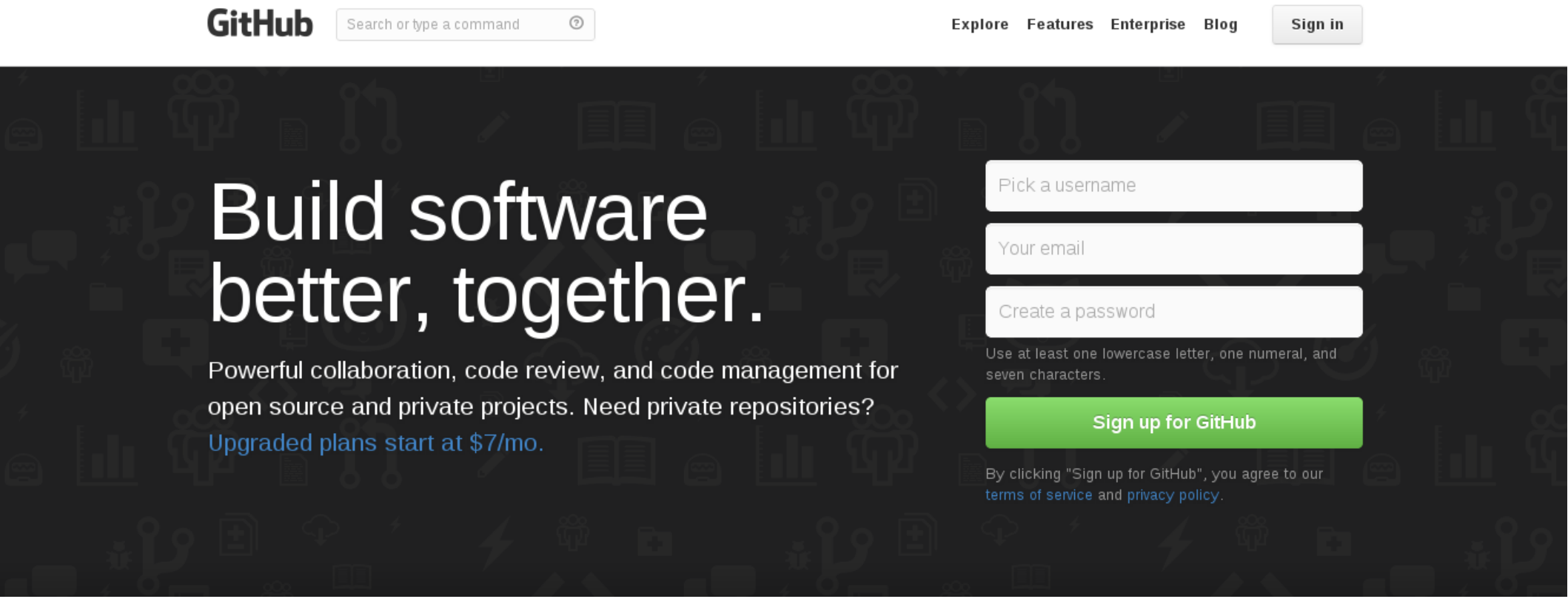
```
ewgenij@dew:~/tmp$ ls -la
total 20
drwxr-xr-x   3 ewgenij lab7  4096 Sep 12 13:49 .
drwxr-xr-x 100 ewgenij lab7 12288 Sep 12 13:44 ..
-rw-r--r--   1 ewgenij lab7     0 Sep 12 13:49 1.c
drwxr-xr-x   8 ewgenij lab7  4096 Sep 12 13:49 .git
-rw-r--r--   1 ewgenij lab7     0 Sep 12 13:49 README
ewgenij@dew:~/tmp$ git branch
* master
```

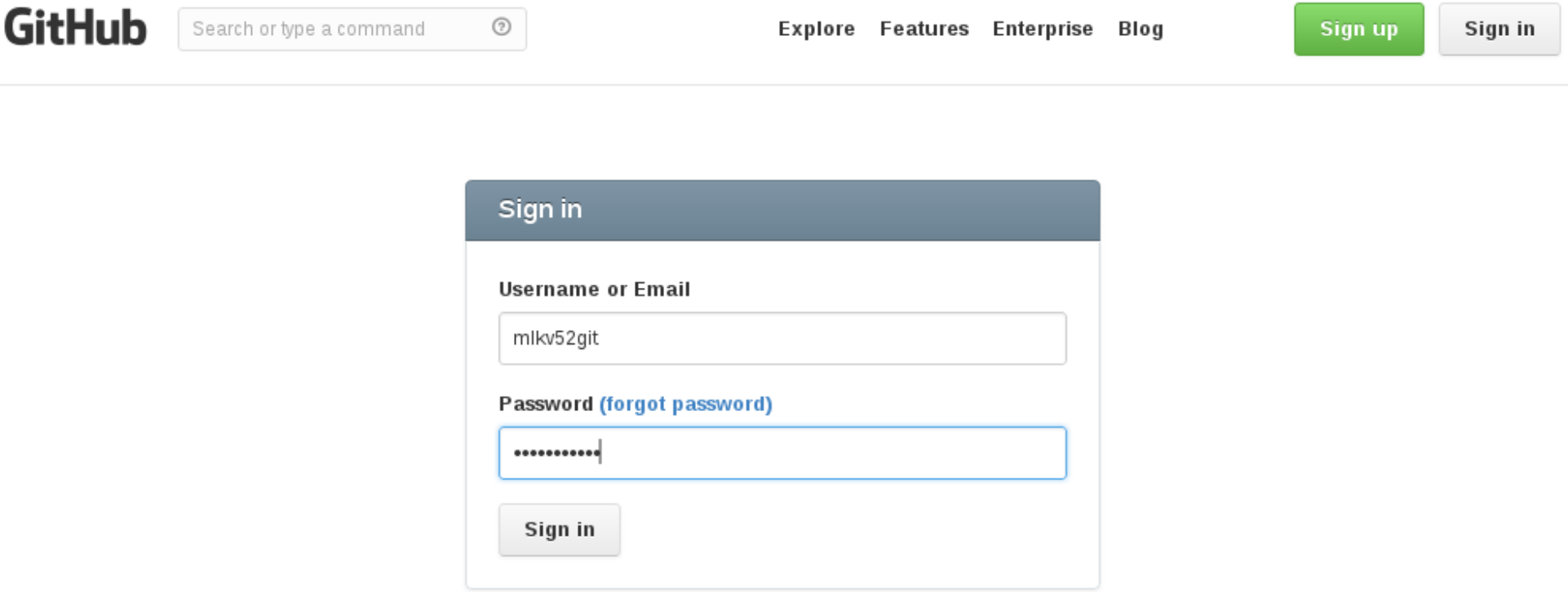
```
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> ls -la
total 16
drwxr-xr-x 3 ewgenij users 4096 Sep 12 13:26 .
drwxr-xr-x 7 ewgenij users 4096 Sep 11 20:12 ..
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 1.c
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 1.dat
drwxr-xr-x 8 ewgenij users 4096 Sep 12 13:16 .git
-rw-r--r-- 1 ewgenij users   58 Sep 12 13:26 README
-rw-r--r-- 1 ewgenij users    0 Sep 12 12:24 s.cpp
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git branch
* a_test_branch
  master
```

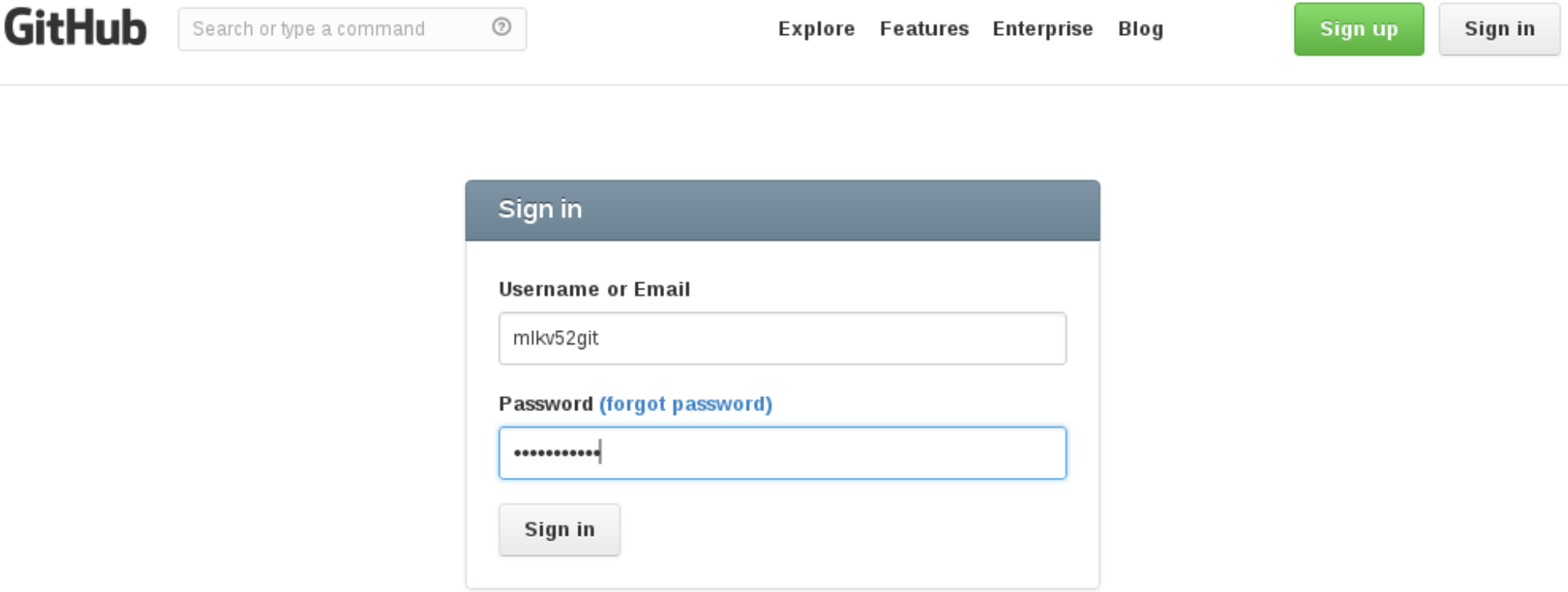
```
ewgenij@dew:~/tmp$ git branch I_Ivanov
ewgenij@dew:~/tmp$ git checkout I_Ivanov
ewgenij@dew:~/tmp$ git branch
* I_Ivanov
  a_test_branch
  master
ewgenij@dew:~/tmp$ vim test.txt
ewgenij@dew:~/tmp$ vim README
ewgenij@dew:~/tmp$ git add *
ewgenij@dew:~/tmp$ git commit *  -m 'for push'
ewgenij@dew:~/tmp$ git remote -v
origin  178.49.13.74:/home/ewgenij/Documents/СибГУТИ/ProgramDesignCourse/workshop (fetch)
origin  178.49.13.74:/home/ewgenij/Documents/СибГУТИ/ProgramDesignCourse/workshop (push)
ewgenij@dew:~/tmp$ git push origin I_Ivanov
Enter passphrase for key '/home/ewgenij/.ssh/id_rsa':
Password:
Counting objects: 6, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 401 bytes, done.
Total 4 (delta 0), reused 0 (delta 0)
To 178.49.13.74:/home/ewgenij/Documents/СибГУТИ/ProgramDesignCourse/workshop
   bd1a25e..cfec552  I_Ivanov -> I_Ivanov
```

```
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> ll
total 8
-rw-r--r-- 1 ewgenij users  0 Sep 12 12:24 1.c
-rw-r--r-- 1 ewgenij users  0 Sep 12 12:24 1.dat
-rw-r--r-- 1 ewgenij users 72 Sep 12 16:01 README
-rw-r--r-- 1 ewgenij users  0 Sep 12 12:24 s.cpp
-rw-r--r-- 1 ewgenij users 28 Sep 12 16:01 test.txt
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git branch
  I_Ivanov
* a_test_branch
  master
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> git checkout I_Ivanov
Switched to branch 'I_Ivanov'
ewgenij@linux-715l:~/Documents/СибГУТИ/ProgramDesignCourse/workshop> cat README
This is a test file (local branch master)
It was changed by Ivan Ivanov
```

GitHub (https://github.com/)




GitHub
Search or type a command
Explore
Features
Enterprise
Blog
Sign up
Sign in
Sign in
Username or Email
mlkv52git
Password (forgot password)
Sign in


GitHub
Search or type a command
Explore
Features
Enterprise
Blog
Sign up
Sign in
Sign in
Username or Email
mlkv52git
Password (forgot password)
Sign in

git clone https://github.com/mlkv52git/design_course.git

Git version > 1.7.9!

```
master@linux-715l:~/design_course> git branch
* master
master@linux-715l:~/design_course> vim IFunction.h
master@linux-715l:~/design_course> git add IFunction.h
master@linux-715l:~/design_course> git commit IFunction.h  -m 'first local commit'
[master b8daeab] first local commit
 Committer: SibSUTI masters <master@linux-715l.site>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

    git config --global user.name "Your Name"
    git config --global user.email you@example.com

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

 1 files changed, 2 insertions(+), 0 deletions(-)
```

```
master@linux-715l:~/design_course> git remote -v
origin  https://github.com/mlkv52git/design_course.git (fetch)
origin  https://github.com/mlkv52git/design_course.git (push)
master@linux-715l:~/design_course> git push origin master
Username for 'https://github.com': sibmaster
Password for 'https://sibmaster@github.com':
Counting objects: 5, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 319 bytes | 0 bytes/s, done.
Total 3 (delta 2), reused 0 (delta 0)
To https://github.com/mlkv52git/design_course.git
   a99ea57..6b1cd71  master -> master
```

Поддержка GIT в IDE Eclipse

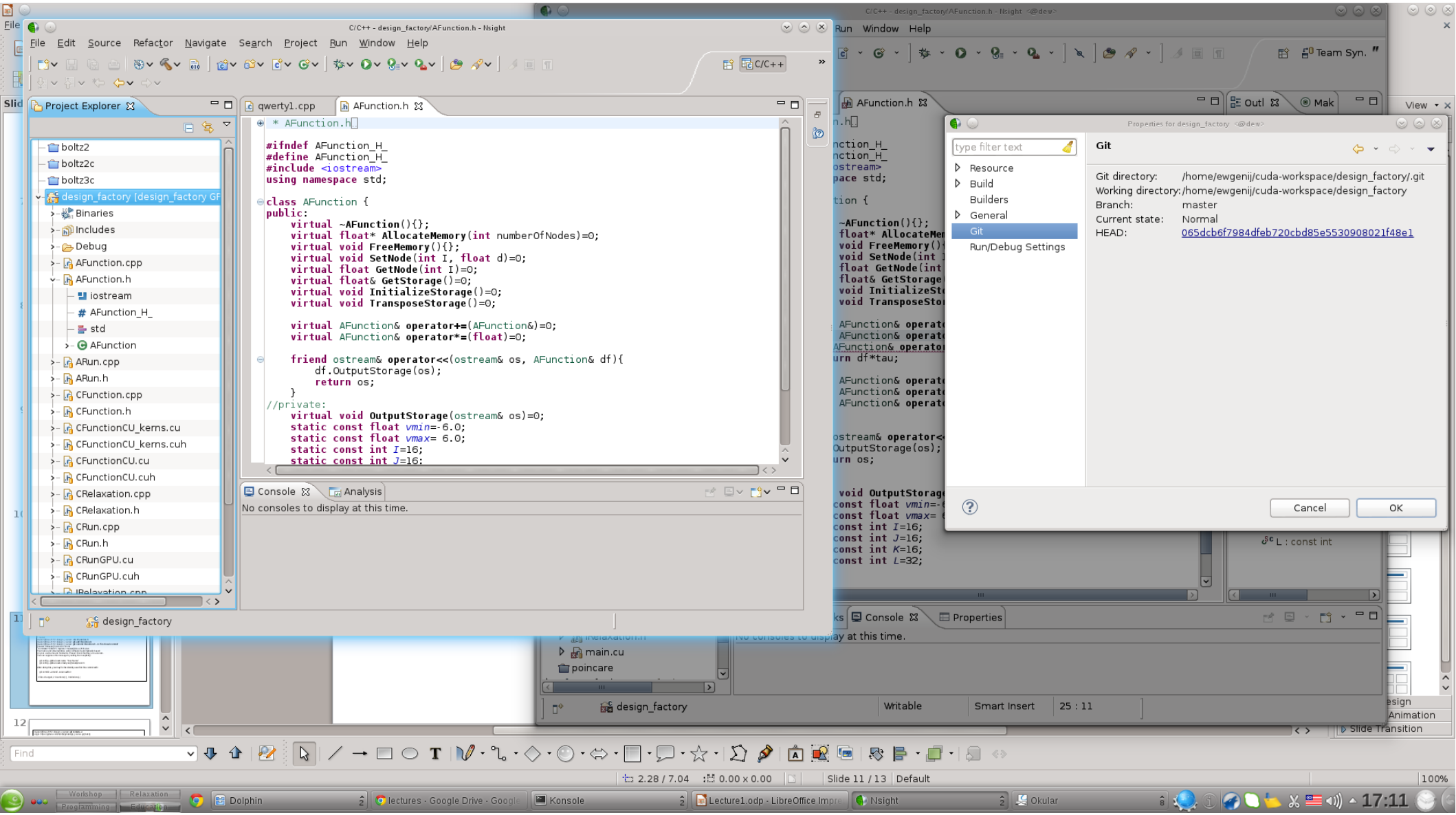
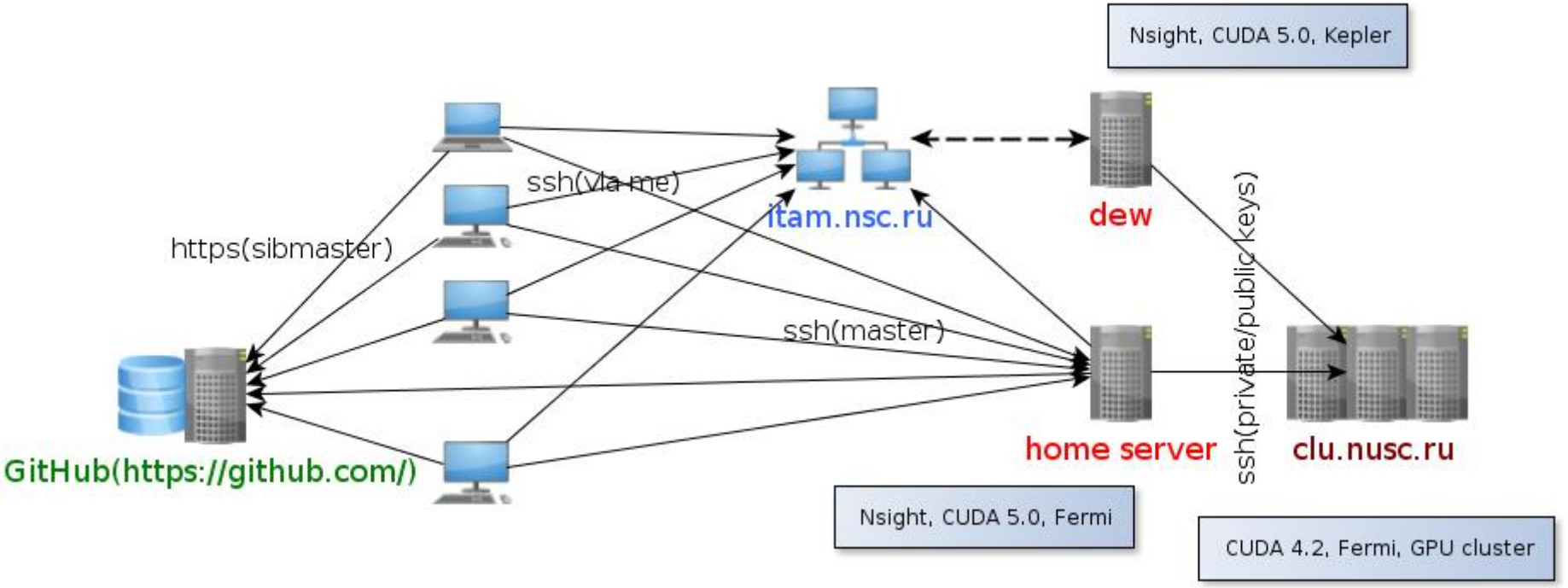


Схема вычислительных ресурсов проекта



Для MS Windows

- putti (***free***)
- Winscp (***free***)
- Xmanager (***30 days evoluation***)
- Knoppix (***free***)

Кросс-платформенные приложения

- Eclipse (***free***)
- Git (версия > 1.7.9) (***free***)

Для станций с картами NVIDIA

- CUDA SDK 5.0 (***free***)