

**Московский государственный технический университет им.Н.Э.Баумана
кафедра "Системы обработки информации и управления"**



МЕТОДИЧЕСКИЕ УКАЗАНИЯ

к лабораторной работе №2

Работа с GIT

по курсу лекций

«Технологии разработки программного обеспечения»

Инструктор : Мария Валерьевна, Elizaveta Eliseeva

Email:2623859464@qq.com

Студент: Ван Чаочао

группа ИУ5-12М

2021/10/14

Цель работы:

Изучить базовые возможности систем управления версиями с применением CASE средств.

В материалах рассмотрены принципы управления версиями. Приведены инструкции по работе с версиями программ в среде управления версиями Git. Рассмотрены примеры использования указанных средств. В заключительной части методических указаний приведены контрольные вопросы, список рекомендуемой литературы и пример задания.

Шаг1: необходимо установить GIT:

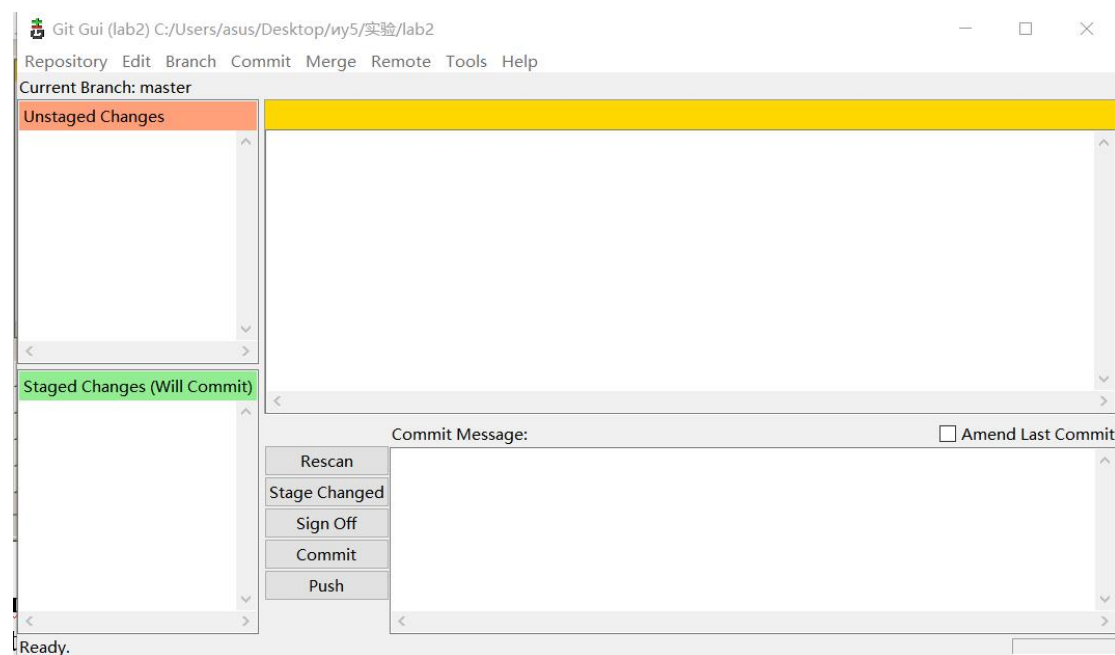
Поскольку скриншоты были переданы мне, я понял, что мне нужно сделать отчет только после того, как я закончил второй эксперимент, по этому мне не нужно было показывать процесс.

Шаг2: Создание хранилища (GIT GUI)



名称	修改日期	类型	大小
.git	2021/10/25 16:27	文件夹	
askname.c	2021/10/12 19:38	C Source	1 KB
main.c	2021/10/12 19:36	C Source	1 KB
askname.h	2021/10/12 19:38	C/C++ Header	1 KB

1: главный интерфейс git gui



2: выберите *Edit* → *Options* (Редактировать → Настройки).

The screenshot shows the 'Git GUI (lab2): Options' dialog box. It is divided into two main sections: 'lab2 Repository' and 'Global (All Repositories)'. Both sections have identical settings. In the 'lab2 Repository' section, the 'User Name' is 'Chaochao690480' and the 'Email Address' is '2623859464@qq.com'. The 'Merge Verbosity' is set to 2. The 'Show Diffstat After Merge' checkbox is checked. The 'Use Merge Tool' field is empty. The 'Trust File Modification Timestamps', 'Prune Tracking Branches During Fetch', and 'Match Tracking Branches' checkboxes are unchecked. The 'Use Textconv For Diffs and Blames' checkbox is checked. The 'Blame Copy Only On Changed Files' checkbox is unchecked. The 'Maximum Length of Recent Repositories List' is 10, 'Minimum Letters To Blame Copy On' is 40, 'Blame History Context Radius (days)' is 7, and 'Number of Diff Context Lines' is 5. The 'Additional Diff Parameters' field is empty. The 'Commit Message Text Width' is 75. The 'New Branch Name Template' field is empty. The 'Default File Contents Encoding' is 'cp936'. The 'Warn before committing to a detached head' checkbox is unchecked. The 'Staging of untracked files' is set to 'ask'. The 'Show untracked files' checkbox is checked. The 'Tab spacing' is 8. The 'Spelling Dictionary' is empty. In the 'Global (All Repositories)' section, the 'User Name' is 'Chaochao690480' and the 'Email Address' is '2623859464@qq.com'. The 'Merge Verbosity' is set to 2. The 'Show Diffstat After Merge' checkbox is checked. The 'Use Merge Tool' field is empty. The 'Trust File Modification Timestamps', 'Prune Tracking Branches During Fetch', and 'Match Tracking Branches' checkboxes are unchecked. The 'Use Textconv For Diffs and Blames' checkbox is checked. The 'Blame Copy Only On Changed Files' checkbox is unchecked. The 'Maximum Length of Recent Repositories List' is 10, 'Minimum Letters To Blame Copy On' is 40, 'Blame History Context Radius (days)' is 7, and 'Number of Diff Context Lines' is 5. The 'Additional Diff Parameters' field is empty. The 'Commit Message Text Width' is 75. The 'New Branch Name Template' field is empty. The 'Default File Contents Encoding' is 'cp936'. The 'Warn before committing to a detached head' checkbox is unchecked. The 'Staging of untracked files' is set to 'ask'. The 'Show untracked files' checkbox is checked. The 'Tab spacing' is 8. The 'Spelling Dictionary' is empty. The 'Main Font' is 'Microsoft YaHei UI 9 pt.' and the 'Diff/Console Font' is '新宋体 10 pt.'. There are 'Change Font' buttons next to both font settings. At the bottom of the dialog, there are 'Restore Defaults', 'Cancel', and 'Save' buttons.

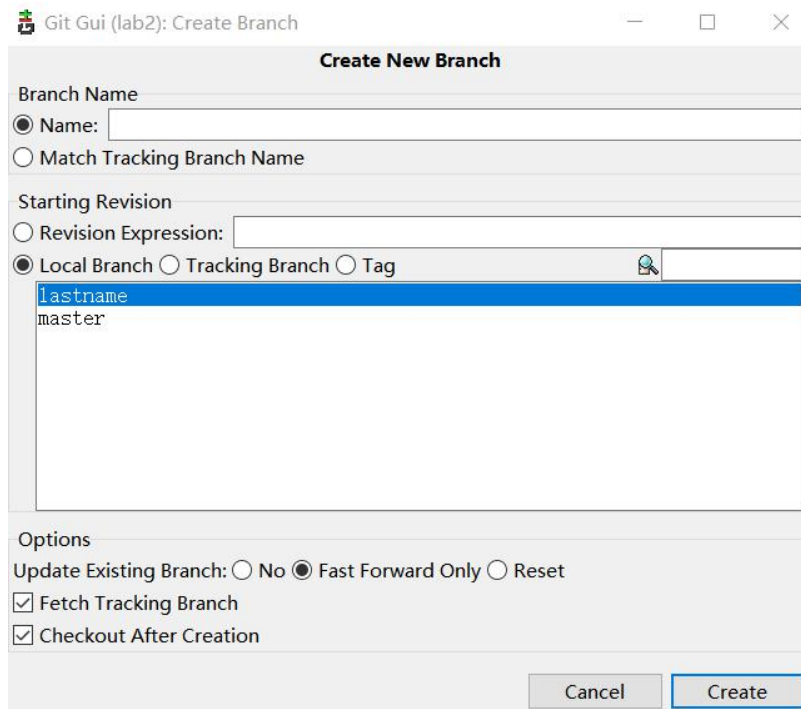
Шаг3: Фиксация изменений (commiting)

Поскольку этот процесс был выполнен две недели назад, мы больше не будем его показывать.

The screenshot shows the 'Git GUI (lab2)' interface. The title bar indicates the path 'C:/Users/asus/Desktop/ny5/实验/lab2'. The menu bar includes 'Repository', 'Edit Branch', 'Commit', 'Merge', 'Remote', 'Tools', and 'Help'. The 'Current Branch: master' is displayed. The 'Unstaged Changes' section is highlighted in orange. The 'Staged for commit' section is highlighted in yellow and shows the file 'askname.c'. The code for 'askname.c' is displayed in the main area, showing a new file mode 100644 with C code for asking for a first and last name. The 'Staged Changes (Will Commit)' section is highlighted in green and shows the file 'askname.c'. The 'Amended Commit Message' section is highlighted in purple and shows the message 'askname. c'. The 'Amend Last Commit' checkbox is checked. Below the commit message, there are buttons for 'Rescan', 'Stage Changed', 'Sign Off', 'Commit', and 'Push'. The status bar at the bottom says 'Ready'.

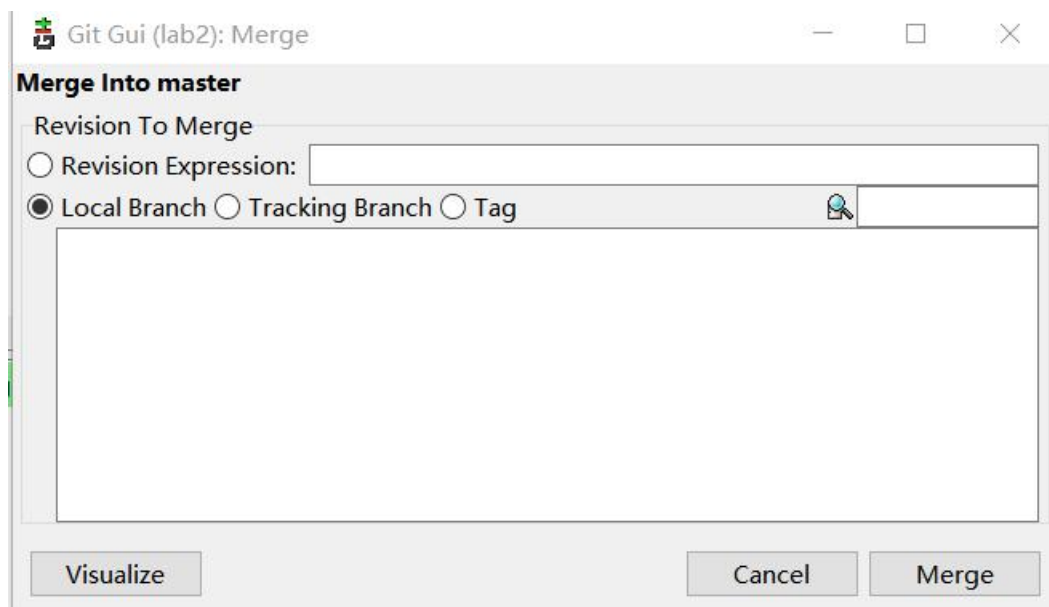
Шаг4: Ветвление (branching)

Я не создаю новую ветку



The dialog box is titled "Create New Branch". It has a "Branch Name" section with a radio button selected for "Name:" and a text input field. Below it is a radio button for "Match Tracking Branch Name". The "Starting Revision" section has a radio button selected for "Local Branch", a "Revision Expression" text field, and a list box showing "lastname" (selected) and "master". At the bottom, the "Options" section has "Update Existing Branch:" with radio buttons for "No", "Fast Forward Only" (selected), and "Reset". There are also checkboxes for "Fetch Tracking Branch" and "Checkout After Creation". "Cancel" and "Create" buttons are at the bottom right.

Шаг5: Слияние (merging)



The dialog box is titled "Merge Into master". It has a "Revision To Merge" section with a radio button selected for "Local Branch", a "Revision Expression" text field, and a list box. At the bottom, there are buttons for "Visualize", "Cancel", and "Merge".

Шаг6: Просмотр истории

The screenshot shows the Git GUI interface for a repository named 'lab2'. The top menu bar includes 'File', 'Edit', 'View', and 'Help'. Below the menu is a commit history graph showing a sequence of commits. The current commit is 'askname.c' by 'Chaochao690480' on the 'master' branch. The commit message is 'Move the ask name code into its own function and f'. The commit hash is 'bae657ec40e3f74a609ab1525314608d2459fbbb'. The commit date is '2021-10-12 19:40:52'. The commit is part of a pull request #1 from 'remotes/test1/master' to 'remotes/test1/main'. The commit is the final commit in the branch.

The commit details section shows the following information:

- Author: Chaochao690480 <2623859464@qq.com> 2021-10-12 19:40:36
- Committer: Chaochao690480 <2623859464@qq.com> 2021-10-12 19:39:42
- Parent: 8944334751c02831306ff762176e8dbff032b07
- Branches: master, remotes/test1/master
- Follows:
- Precedes:

The file content section shows the code for 'askname.c'.

```
new file mode 100644
index 0000000..6604394
@@ -0,0 +1,13 @@
+/* askname.c */
+#include <stdio.h>
+#include <string.h>
+
+void askname(char *first, char *last)
+{
+    printf("Enter your first name: ");
+    fgets(first, 255, stdin);
+    first[strlen(first)-1] = '\0'; /* remove trailing newline */
+    printf("Now enter your last name: ");
+    gets(last); /* buffer overflow? what's that? */
+}
\ No newline at end of file
```

запустить blame

The screenshot shows the Git GUI interface for a repository named 'lab2'. The top menu bar includes 'File', 'Edit', 'View', and 'Help'. Below the menu is a commit history graph showing a sequence of commits. The current commit is 'askname.c' by 'Chaochao690480' on the 'master' branch. The commit message is 'Move the ask name code into its own function and f'. The commit hash is 'bae657ec40e3f74a609ab1525314608d2459fbbb'. The commit date is '2021-10-12 19:40:52'. The commit is part of a pull request #1 from 'remotes/test1/master' to 'remotes/test1/main'. The commit is the final commit in the branch.

The file content section shows the code for 'askname.c'.

```
new file mode 100644
index 0000000..6604394
@@ -0,0 +1,13 @@
+/* askname.c */
+#include <stdio.h>
+#include <string.h>
+
+void askname(char *first, char *last)
+{
+    printf("Enter your first name: ");
+    fgets(first, 255, stdin);
+    first[strlen(first)-1] = '\0'; /* remove trailing newline */
+    printf("Now enter your last name: ");
+    gets(last); /* buffer overflow? what's that? */
+}
\ No newline at end of file
```

Публикация изменений (pushing) на удалённом сервере

1: Зарегистрируйтесь на сайте <https://github.com/>

The screenshot shows the GitHub interface for a repository named 'hello-world' by user 'Chaochao690480'. The repository is public and has 1 commit. The main branch is 'main'. The README.md file is visible, containing the text 'hello-world' and 'just for learning'. The right sidebar shows sections for 'About', 'Releases', and 'Packages'.

2:

The screenshot shows the 'Insights' tab for the same repository. On the left, there is a sidebar with navigation links: Pulse, Contributors, Community, Traffic, Commits, Code frequency, Dependency graph, and Network. The main content area is titled 'Network graph' and shows a timeline of the most recent commits to this repository and its network ordered by most recently pushed to. The graph shows a commit history with labels for 'main' and 'master' branches.