

# **GIT**

## PPP / PAI / OirPOS

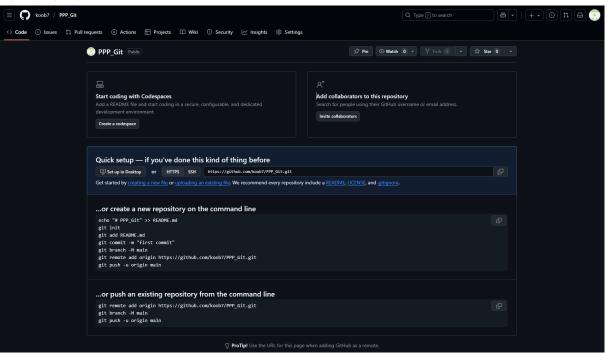
13.10.2025

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## Zadania

## Część 1

1. a, b, c, d, e



2. a, b, c

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git init
hint: Using 'master' as the name for the initial branch. This default branch name
e
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint: git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint: git branch -m <name>
Initialized empty Git repository in /home/admin/Desktop/PPP_Git/.git/
admin@PPPubuntu:~/Desktop/PPP_Git$
```

#### з. a, b, c, d, e,

```
admin@PPPubuntu:~/Desktop/PPP_Git$ touch plik.txt
admin@PPPubuntu:~/Desktop/PPP_Git$ nano plik.txt
admin@PPPubuntu:~/Desktop/PPP_Git$ git add.
git: 'add.' is not a git command. See 'git --help'.
The most similar command is
        add
admin@PPPubuntu:~/Desktop/PPP_Git$ git add .
admin@PPPubuntu:~/Desktop/PPP_Git$ git status
On branch master
No commits yet
Changes to be committed:
 (use "git rm --cached <file>..." to unstage)
admin@PPPubuntu:~/Desktop/PPP_Git$ git commit -m "wiadomosc"
Author identity unknown
*** Please tell me who you are.
Run
 git config --global user.email "you@example.com"
 git config --global user.name "Your Name"
to set your account's default identity.
Omit --global to set the identity only in this repository.
fatal: unable to auto-detect email address (got 'admin@PPPubuntu.(none)')
admin@PPPubuntu:~/Desktop/PPP Git$
```

#### f,g,

Zgłoszony błąd związany jest z brakiem konfiguracji konta użytkownika w Git.

```
Konfiguracja konta
```

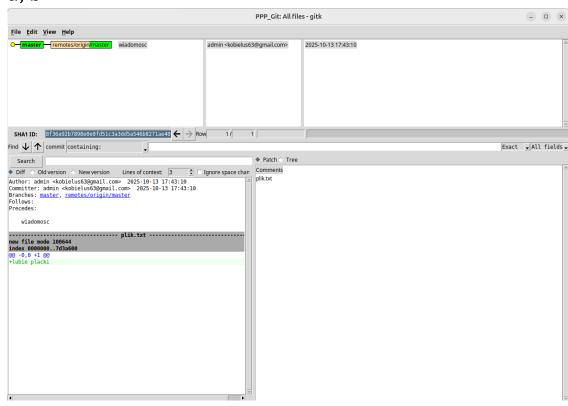
```
admin@PPPubuntu:~/Desktop/PPP_Git$ git config --global user.email "kobielus63@gm
ail.com"
admin@PPPubuntu:~/Desktop/PPP_Git$ git commit -m "wiadomosc"
[master (root-commit) 8f36a92] wiadomosc
1 file changed, 1 insertion(+)
create mode 100644 plik.txt
admin@PPPubuntu:~/Desktop/PPP_Git$ git status
On branch master
nothing to commit, working tree clean
admin@PPPubuntu:~/Desktop/PPP_Git$
```

Po konfiguracji konta commit został poprawnie wykonany

#### 4. a, b,

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git remote add origin https://github.com/koob
7/PPP Git.git
admin@PPPubuntu:~/Desktop/PPP_Git$ git push
fatal: The current branch master has no upstream branch.
To push the current branch and set the remote as upstream, use
   git push --set-upstream origin master
To have this happen automatically for branches without a tracking
upstream, see 'push.autoSetupRemote' in 'git help config'.
admin@PPPubuntu:~/Desktop/PPP_Git$ git push -u origin master
Username for 'https://github.com': kobielus63@gmail.com
Password for 'https://kobielus63%40gmail.com@github.com':
remote: Invalid username or token. Password authentication is not supported for
Git operations.
fatal: Authentication failed for 'https://github.com/koob7/PPP_Git.git/'
admin@PPPubuntu:~/Desktop/PPP_Git$ git push -u origin master
Username for 'https://github.com': koob7
Password for 'https://koob7@github.com':
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 220 bytes | 220.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/koob7/PPP Git.git
* [new branch]
                        master -> master
branch 'master' set up to track 'origin/master'.
admin@PPPubuntu:~/Desktop/PPP GitS
```

#### 5. a, b



### Część 2

#### 1. a, b, c, d, e

#### f, g

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git push -u origin develop

Username for 'https://github.com': koob7

Password for 'https://koob7@github.com':

Total 0 (delta 0), reused 0 (delta 0), pack-reused 0

remote:
remote: Create a pull request for 'develop' on GitHub by visiting:
remote: https://github.com/koob7/PPP_Git/pull/new/develop

remote:
To https://github.com/koob7/PPP_Git.git

* [new branch] develop -> develop

branch 'develop' set up to track 'origin/develop'.

Odevelop master remotes/origin/develop remotes/origin/master wiadomosc
```

#### 2. a) a, b, c, d, e, f

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout develop
Already on 'develop'
Your branch is up to date with 'origin/develop'.
admin@PPPubuntu:~/Desktop/PPP_Git$ touch main.txt
admin@PPPubuntu:~/Desktop/PPP_Git$ nano main.txt
admin@PPPubuntu:~/Desktop/PPP_Git$ git add .
admin@PPPubuntu:~/Desktop/PPP_Git$ git commit -m "wiadomosc"
[develop 0c294c8] wiadomosc
1 file changed, 1 insertion(+)
create mode 100644 main.txt
admin@PPPubuntu:~/Desktop/PPP_Git$ git push
Username for 'https://github.com': koob7
Password for 'https://koob7@github.com':
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 280 bytes | 280.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/koob7/PPP_Git.git
   8f36a92..0c294c8 develop -> develop
```

#### b) a, b, c, d, e, f, g

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git config --global credential.helper store
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout develop
Already on 'develop'
Your branch is up to date with 'origin/develop'.
admin@PPPubuntu:~/Desktop/PPP_Git$ git branch feature_1
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout geature_1
error: pathspec 'geature_1' did not match any file(s) known to git
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout feature_1
Switched to branch 'feature_1'
admin@PPPubuntu:~/Desktop/PPP_Git$ nano main.txt
admin@PPPubuntu:~/Desktop/PPP_Git$ git status
On branch feature_1
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
admin@PPPubuntu:~/Desktop/PPP_Git$ git add .
admin@PPPubuntu:~/Desktop/PPP_Git$ git commit -m "wiadomosc"
[feature 1 91900bf] wiadomosc
1 file changed, 1 insertion(+)
admin@PPPubuntu:~/Desktop/PPP_Git$ git push
fatal: The current branch feature 1 has no upstream branch.
To push the current branch and set the remote as upstream, use
    git push --set-upstream origin feature 1
To have this happen automatically for branches without a tracking
upstream, see 'push.autoSetupRemote' in 'git help config'.
admin@PPPubuntu:~/Desktop/PPP_Git$ git push -u origin feature_1
Username for 'https://github.com': koob7
Password for 'https://koob7@github.com':
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 289 bytes | 289.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
```

#### c) a, b, c, d, e, f, g

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout develop
Switched to branch 'develop'
Your branch is up to date with 'origin/develop'.
admin@PPPubuntu:~/Desktop/PPP_Git$ git branch feature_2
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout feature_2
Switched to branch 'feature 2'
admin@PPPubuntu:~/Desktop/PPP_Git$ nano main.txt
admin@PPPubuntu:~/Desktop/PPP_Git$ git status
On branch feature 2
Changes not staged for commit:
 (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
admin@PPPubuntu:~/Desktop/PPP_Git$ git add .
admin@PPPubuntu:~/Desktop/PPP_Git$ git commit -m "wiadomosc"
[feature_2 61795f5] wiadomosc
1 file changed, 1 insertion(+)
admin@PPPubuntu:~/Desktop/PPP_Git$ git push
fatal: The current branch feature_2 has no upstream branch.
To push the current branch and set the remote as upstream, use
   git push --set-upstream origin feature_2
To have this happen automatically for branches without a tracking
upstream, see 'push.autoSetupRemote' in 'git help config'.
admin@PPPubuntu:~/Desktop/PPP_Git$ git push -u origin feature_2
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 290 bytes | 290.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'feature_2' on GitHub by visiting:
remote:
            https://github.com/koob7/PPP_Git/pull/new/feature_2
remote:
To https://github.com/koob7/PPP_Git.git
* [new branch]
                 feature_2 -> feature_2
```

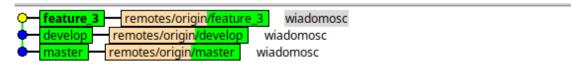
#### d) a, b, c, d, e, f, g

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout develop
Switched to branch 'develop'
Your branch is up to date with 'origin/develop'.
admin@PPPubuntu:~/Desktop/PPP_Git$ git branch feature_3
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout feature_3
Switched to branch 'feature_3'
admin@PPPubuntu:~/Desktop/PPP Git$ nano main.txt
admin@PPPubuntu:~/Desktop/PPP_Git$ git status
On branch feature 3
Changes not staged for commit:
 (use "git add <file>..." to update what will be committed)
 (use "git restore <file>..." to discard changes in working directory)
no changes added to commit (use "git add" and/or "git commit -a")
admin@PPPubuntu:~/Desktop/PPP_Git$ git add .
admin@PPPubuntu:~/Desktop/PPP_Git$ git commit -m "wiadomosc"
[feature 3 d14139c] wiadomosc
1 file changed, 1 insertion(+)
admin@PPPubuntu:~/Desktop/PPP_Git$ git push -u origin feature_3
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 289 bytes | 289.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
emote: Create a pull request for 'feature 3' on GitHub by visiting:
            https://github.com/koob7/PPP Git/pull/new/feature 3
emote:
remote:
To https://github.com/koob7/PPP_Git.git
* [new branch]
                   feature 3 -> feature 3
branch 'feature_3' set up to track 'origin/feature_3'.
admin@PPPubuntu:~/Desktop/PPP_Git$
```

e)

Każda gałąź przechowuje inną wersję pliku main.txt

f)



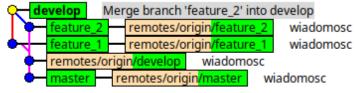
```
feature_3 remotes/origin/feature_3 wiadomosc
feature_2 remotes/origin/feature_2 wiadomosc
feature_1 remotes/origin/feature_1 wiadomosc
develop remotes/origin/develop wiadomosc
master remotes/origin/master wiadomosc
```

#### 3. a, b, c, d, e

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout develop
Switched to branch 'develop'
Your branch is up to date with 'origin/develop'.
admin@PPPubuntu:~/Desktop/PPP_Git$ git merge feature_1
Updating 0c294c8..91900bf
Fast-forward
main.txt | 1 +
1 file changed, 1 insertion(+)
admin@PPPubuntu:~/Desktop/PPP_Git$ git merge feature_2
Auto-merging main.txt
CONFLICT (content): Merge conflict in main.txt
Automatic merge failed; fix conflicts and then commit the result.
```

#### f, g, h, i, j, k, l, m

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git mergetool
fatal: bad config line 14 in file /home/admin/.gitconfig
admin@PPPubuntu:~/Desktop/PPP_Git$ git config --global -e
fatal: bad config line 14 in file /home/admin/.gitconfig
admin@PPPubuntu:~/Desktop/PPP_Git$
admin@PPPubuntu:~/Desktop/PPP_Git$ git config --global -e
fatal: bad config line 14 in file /home/admin/.gitconfig
admin@PPPubuntu:~/Desktop/PPP_Git$ nano ~/.gitconfig
admin@PPPubuntu:~/Desktop/PPP_Git$ git mergetool
fatal: bad config line 14 in file /home/admin/.gitconfig
admin@PPPubuntu:~/Desktop/PPP_Git$ nano ~/.gitconfig
admin@PPPubuntu:~/Desktop/PPP_Git$ git mergetool
Merging:
main.txt
Normal merge conflict for 'main.txt':
 {local}: modified file
  {remote}: modified file
main.txt seems unchanged.
Was the merge successful [y/n]? y
admin@PPPubuntu:~/Desktop/PPP_Git$ git merge -continue
error: did you mean `--continue` (with two dashes)?
admin@PPPubuntu:~/Desktop/PPP_Git$ git merge --continue
[develop 7f7eb8a] Merge branch 'feature_2' into develop
admin@PPPubuntu:~/Desktop/PPP_Git$ gitk
```



#### n, o, p

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git fetch
admin@PPPubuntu:~/Desktop/PPP_Git$ git pull
Already up to date.
admin@PPPubuntu:~/Desktop/PPP_Git$ git push
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 344 bytes | 344.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/koob7/PPP_Git.git
   0c294c8..7f7eb8a develop -> develop
admin@PPPubuntu:~/Desktop/PPP_Git$ git status
On branch develop
Your branch is up to date with 'origin/develop'.
Untracked files:
 (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
admin@PPPubuntu:~/Desktop/PPP_Git$ gitk
    develop remotes/origin/develop Merge branch 'feature_2' into develop
      feature_2 remotes/origin/feature_2
                                       wiadomosc
      feature_1 remotes/origin/feature_1
                                       wiadomosc
    wiadomosc
```

master remotes/origin/master wiadomosc

#### q, r

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git merge feature_3
Auto-merging main.txt
CONFLICT (content): Merge conflict in main.txt
Automatic merge failed; fix conflicts and then commit the result.
admin@PPPubuntu:~/Desktop/PPP_Git$ git mergetool
Merging:
main.txt
Normal merge conflict for 'main.txt':
  {local}: modified file
  {remote}: modified file
main.txt seems unchanged.
Was the merge successful [y/n]? y
admin@PPPubuntu:~/Desktop/PPP_Git$ git merge --continue
[develop d0e362b] Merge branch 'feature_3' into develop
admin@PPPubuntu:~/Desktop/PPP_Git$ gitk
   develop Merge branch 'feature_3' into develop
     feature_3 remotes/origin/feature_3 wiadomosc
        remotes/origin/develop Merge branch 'feature_2' into develop
                   remotes/origin/feature_2
                                          wiadomosc
         feature_2
        feature_1
                   remotes/origin/feature_1
                                          wiadomosc
      wiadomosc
      master remotes/origin/master
                                   wiadomosc
```

#### 4. a, b, c, d, e

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout develop
Already on 'develop'
Your branch is ahead of 'origin/develop' by 2 commits.
(use "git push" to publish your local commits)
admin@PPPubuntu:~/Desktop/PPP_Git$ git branch release
admin@PPPubuntu:~/Desktop/PPP_Git$ git push -u origin release
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 345 bytes | 345.00 KiB/s, done.
「otal 3 (delta 0), reused 0 (delta 0), pack-reused 0
emote:
emote: Create a pull request for 'release' on GitHub by visiting:
            https://github.com/koob7/PPP_Git/pull/new/release
emote:
emote:
Fo https://github.com/koob7/PPP_Git.git
* [new branch]
                 release -> release
pranch 'release' set up to track 'origin/release'.
admin@PPPubuntu:~/Desktop/PPP_Git$ touch test.cpp
admin@PPPubuntu:~/Desktop/PPP_Git$ git status
On branch develop
Your branch is ahead of 'origin/develop' by 2 commits.
 (use "git push" to publish your local commits)
Jntracked files:
 (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
admin@PPPubuntu:~/Desktop/PPP_Git$ git add test.cpp
admin@PPPubuntu:~/Desktop/PPP_Git$ git commit -m "plik cpp"
develop ad9b3f9] plik cpp
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 test.cpp
admin@PPPubuntu:~/Desktop/PPP Git$ git push
```

#### f, g, h, i

```
admin@PPPubuntu:~/Desktop/PPP_Git$ touch .gitignore
admin@PPPubuntu:~/Desktop/PPP_Git$ nano .gitignore
admin@PPPubuntu:~/Desktop/PPP_Git$ git status
On branch develop
Your branch is up to date with 'origin/develop'.
Untracked files:
 (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
admin@PPPubuntu:~/Desktop/PPP_Git$ touch test_2.cpp
admin@PPPubuntu:~/Desktop/PPP_Git$ git status
On branch develop
Your branch is up to date with 'origin/develop'.
Untracked files:
 (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
admin@PPPubuntu:~/Desktop/PPP_Git$
```

#### j, k

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git add *
The following paths are ignored by one of your .gitignore files:
test_2.cpp
hint: Use -f if you really want to add them.
hint: Turn this message off by running
admin@PPPubuntu:~/Desktop/PPP_Git$ git add .gitignore
admin@PPPubuntu:~/Desktop/PPP_Git$ git commit -m "gitignore"
[develop cca7d44] gitignore
6 files changed, 20 insertions(+)
create mode 100644 .gitignore
create mode 100644 main.txt.orig
create mode 100644 main_BACKUP_11918.txt
create mode 100644 main_BASE_11918.txt
create mode 100644 main_LOCAL_11918.txt
create mode 100644 main_REMOTE_11918.txt
admin@PPPubuntu:~/Desktop/PPP_Git$ git push
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 4 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (8/8), 703 bytes | 703.00 KiB/s, done.
Total 8 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/koob7/PPP_Git.git
  ad9b3f9..cca7d44 develop -> develop
admin@PPPubuntu:~/Desktop/PPP_Git$
```

#### 5. a, b, c, d

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git checkout release
Switched to branch 'release'
Your branch is up to date with 'origin/release'.
admin@PPPubuntu:~/Desktop/PPP_Git$ git tag -a v1.0.0.0 -m 'release v1.0.0.0'
fatal: Failed to resolve 'v1.0.0.0' as a valid ref.
admin@PPPubuntu:~/Desktop/PPP_Git$ git tag -a v1.0.0.0 -m 'release v1.0.0.0'
admin@PPPubuntu:~/Desktop/PPP_Git$ gitk
admin@PPPubuntu:~/Desktop/PPP_Git$ ^C
admin@PPPubuntu:~/Desktop/PPP_Git$ git push --tags
Enumerating objects: 1, done.
Counting objects: 100\% (1/1), done.
Writing objects: 100% (1/1), 160 bytes | 160.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/koob7/PPP_Git.git
* [new tag]
                      v1.0.0.0 -> v1.0.0.0
admin@PPPubuntu:~/Desktop/PPP_Git$
    v1.0.0.0 release remotes/origin/release Merge branch 'feature_3' into develop
      feature_3 remotes/origin/feature_3
                                       wiadomosc
        Merge branch 'feature_2' into develop
                    remotes/origin/feature
                                          wiadomosc
         feature 2
                   remotes/origin/feature 1
         feature 1
                                          wiadomosc
      wiadomosc
      master remotes/origin/master
                                    wiadomosc
           d0e362b1fbd33c577df8f7c3a957e1d8cc45cbf2
 SHA1 ID:
                                                       → Row
commit containing:
                                                                             Patch
  Search

    Diff 	Old version 	New version

                                   Lines of context: 3
                                                        🖶 🗌 Ignore space chan
Tag: v1.0.0.0
object d0e362b1fbd33c577df8f7c3a957e1d8cc45cbf2
type commit
tag v1.0.0.0
tagger admin <kobielus63@gmail.com> 1760384150 +0000
release v1.0.0.0
```

#### 6. a, b,

```
admin@PPPubuntu:~/Desktop/PPP_Git$ git config --global -e
admin@PPPubuntu:~/Desktop/PPP_Git$ git st
On branch release
Your branch is up to date with 'origin/release'.
Untracked files:
 (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
admin@PPPubuntu:~/Desktop/PPP_Git$ git co
Your branch is up to date with 'origin/release'.
admin@PPPubuntu:~/Desktop/PPP_Git$ git sync
Already up to date.
Everything up-to-date
admin@PPPubuntu:~/Desktop/PPP_Git$ git cos
Your branch is up to date with 'origin/release'.
Already up to date.
Everything up-to-date
admin@PPPubuntu:~/Desktop/PPP_GitS
```

#### 7. a, b,

```
GNU nano 7.2
                               /home/admin/.gitconfig
user]
       email = kobielus63@gmail.com
[credential]
       helper = store
[alias]
       st = status
       co = checkout
       sync = "!f() { git pull --all; git push; }; f"
       cos = "!f() { git co $1; git sync; }; f"
# Add this to you gitconfig
# Comment: Start of "Extra Block"
# Comment: This is to unlock VSCode as your
[merge]
        tool = vscode
[mergetool "vscode"]
       cmd = code --wait $MERGED
[diff]
        tool = vscode
[difftool "vscode"]
        cmd = code --wait --diff $LOCAL $REMOTE
## End of extra block
```

### Część 3

#### a, b, c, d

```
admin@PPPubuntu:~/Desktop$ rm -rf PPP_Git
admin@PPPubuntu:~/Desktop$ mk dkr PPP_Git
mk: command not found
admin@PPPubuntu:~/Desktop$ mkdir PPP_Git
admin@PPPubuntu:~/Desktop$ git clone https://github.com/koob7/PPP_Git
Cloning into 'PPP_Git'...
remote: Enumerating objects: 30, done.
remote: Counting objects: 100% (30/30), done.
remote: Compressing objects: 100% (21/21), done.
remote: Total 30 (delta 4), reused 26 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (30/30), done.
Resolving deltas: 100% (4/4), done.
admin@PPPubuntu:~/Desktop$ gitk
admin@PPPubuntu:~/Desktop$ cd PPP_Git
admin@PPPubuntu:~/Desktop/PPP_Git$ gitk
```

