Maxim Sysenko
S.A. Us, research supervisor
I.I. Zyenok, language adviser
SHEI "National Mining University", Dnipropetrovsk

System of Version Control

Team-working is the most popular method of creating projects. The main problem of this method is editing one project by many developers.

Problem of merging file is solved by using system of version control. I have researched two of the biggest revision control systems – GIT and SVN.

The main feature of any system of version control is saving all versions of the project, which has been committed (uploaded) to a server that one can revert or go back to chosen version.

SVN is a simple system, which has the main so called "master" branch. All teammates can download the latest version of the project, change it and upload again. There is no need to update your version, if someone uploaded his changes before you – server merges you files and create joint project. The all you have connection with the server to upload changes made by yourself.

GIT was initially designed and developed by Linus Torvalds for Linux kernel development. Since then it been adopted by many other projects. GIT is a multi-branch technology that gives you permission to create your own branch and local branch. So, we have a tree of a project with master branch and additional branches created by developers. You can start your branch from any of the commit and push it to master branch for merging. You have to update your version, before uploading, because GIT merge locally. And master branch must have only the latest stable working copy.

Below are some tips to be kept in mind, when choosing a system:

1. If you want easy setup, choose SVN;
2. If your team is quite big and a project is large you should use GIT, which saves time for developers;
3. Choose revision control in dependence of your platform or operation system.

From my own experience GIT, in spite of it complexity is better solution for developing, but it needs practice for setup and correct use.

To sum up, some reasons:

- it save your time;
- a version control system helps you share changes;
- a version control system remembers the history of your files;
- a version control system improves your efficiency;
- a data center also makes build automation possible;