

CPP Assignment #5

Practice abstract class and virtual function in OO design. Learn how to use CVS(version control) in project development.

1. Review Lists have already implemented in Assignment #4. Find some common interfaces in them, abstract these interfaces into a List abstract class. Provide three concrete subclass to implement single-linked list, double-linked list, sorted double-linked list.

2. Apply CVS in project development.

1) Create a CVS repository in CVS server.

I. Install cvs and ssh program in you computer (Normally your linux already have them) .

Fedora: yum install cvs openssh

Ubuntu: apt-get install cvs openssh

II. create a dir in your home dir as CVS repository

example: mkdir /home/bbt/cvsroot

III. export CVSROOT environment variable

example: export CVSROOT=/home/bbt/cvsroot

IV. create CVS repository

example: cd /home/bbt/cvsroot

cvs init

2) Add an empty project to the repository (you can do it at any computer, for other computers refer to step 5)

mkdir /home/bbt/list

cd list

cvs import -m "ceate a new list project" list list start

3) Check out this project in other directory.

mkdir -p /home/bbt/project

cd /home/bbt/project

cvs checkout list

4) Add a file to the project

```
cd /home/bbt/project/list
touch list.c
cvs add list.c
cvs commit
```

- 5) Check out project in other computer with ssh connection, and start to work on that computer.

```
export CVSROOT=:extssh:bbt@bbtcollege.com:/home/bbt/cvsroot
cvs checkout list
vi list.c    <----- do some modification
cvs commit
```

- 6) check other people's update in different computer

```
export CVSROOT=:extssh:bbt@bbtcollege.com:/home/bbt/cvsroot
cvs update    <--- you did the checkout already, then use update.
vi list.c
cvs commit
```

- 7) Apply CVS in eclipse

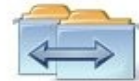
- I. select **team/share object** in the project menu






- II. Select CVS in Share Project.

Share Project

Select the repository plug-in that will be used to share the selected project.



Select a repository type:

-  **CVS**
-  File System Example (Non-Versioning)
-  Pessimistic Simple Provider (Non-Versioning)

? < Back Next > Finish Cancel

III. Input host/path, connection type: extssh and user and password

Enter Repository Location Information

Define the location and protocol required to connect with an existing CVS repository.



Location

Host: ▼

Repository path: ▼

Authentication

User: ▼

Password:

Connection

Connection type: ▼

☒ Use default port

☐ Use port:

☐ Save password (could trigger secure storage login)

[Configure connection preferences...](#)

? < Back Next > Finish Cancel

IV. Select project in the repository

Enter Module Name

Select the name of the module in the CVS repository.




☒ Use project name as module name

☐ Use specified module name:

☐ Use an existing module (this will allow you to browse the modules in the repository)

☐ Use project name as module name and place it under the selected module



V. **Team** submenu should look like this now. They are CVS command

