SUBVERSION

Subversion

- What is source code version control?
  - http://svnbook.red-bean.com/
  - allow multiple people to modify the same source code
  - allow one person to manage multiple versions of their source code
    - move from computer to computer to develop
    - track all changes

Repository

zeus.cs.pacificu.edu
/home/punetid/SVNROOT/

Store your source code on zeus check it out and edit it on any other machine and upload your changes back to zeus.

Client

moe.cs.pacificu.edu
/home/punetid/workspace/HelloWorld

Client

lisa.cs.pacificu.edu
/home/punetid/workspace/HelloWorld

Client

punetid.home
/Users/punetid/workspace/HelloWorld

Topics

- Subversion
  - Source Control
  - Check in
  - Check out
  - Update
  - Commit

SVN

- Import the project **ArrayOfVoidStars** into Eclipse
  - Start Eclipse
  - Window->Preferences. Type SVN. Make sure that interface client is SVNKit (Pure Java)
  - File->Import->SVN->Projects from SVN
  - Select: Create a new repository location
  - Type in the following for the url: svn+ssh://zeus.cs.pacificu.edu/home/CS300Public/2016/SVNROOT_CS300_2016
  - Type in your zeus login and password
  - Click Browse then select **ArrayOfVoidStars**
  - Check out as a project with the name specified, then next, finish

SVN

- Project has been imported into your workspace
- Right-click on project
  - Team->Disconnect
  - Make sure and delete meta-information
- Run the program and verify that it works
- Go to the file system and note that the project is in your workspace

ArrayOfVoidStars

- Let’s examine the code arrayofvoidstars.c
- How to use the debugger for a void *
- Write the code asked for at the end of the program

Your Own Repository

- Create a repository on zeus
  - do this exactly once!!!
  - use this one repository for all your projects

- ssh into zeus

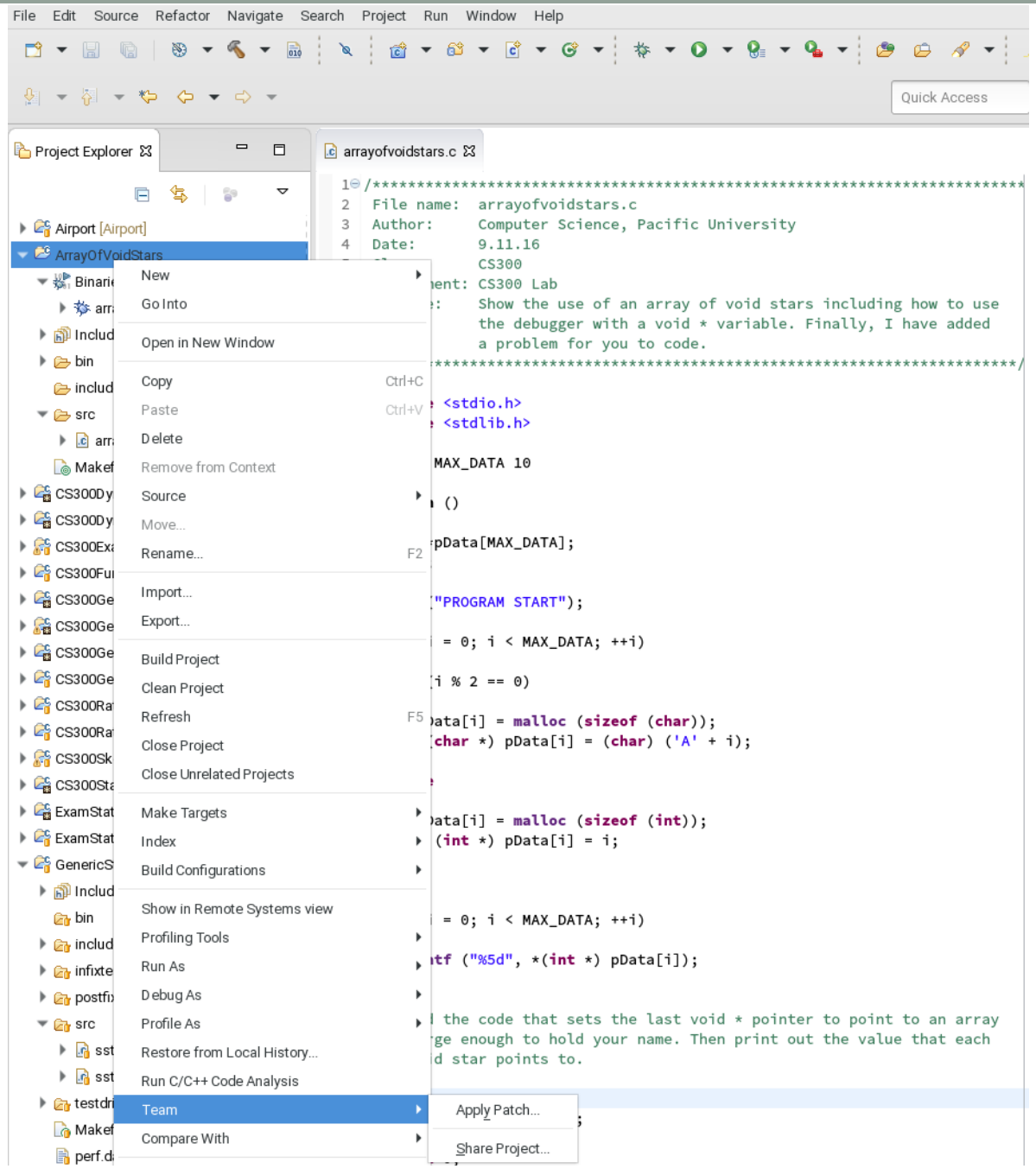
- Type:

```
zeus$ svnadmin create /home/punetid/SVNCS300REPOS
```

- Replace punetid with your punetid which for me is **`/home/ryand/SVNCS300REPOS`**

Check in ArrayOfVoidStars

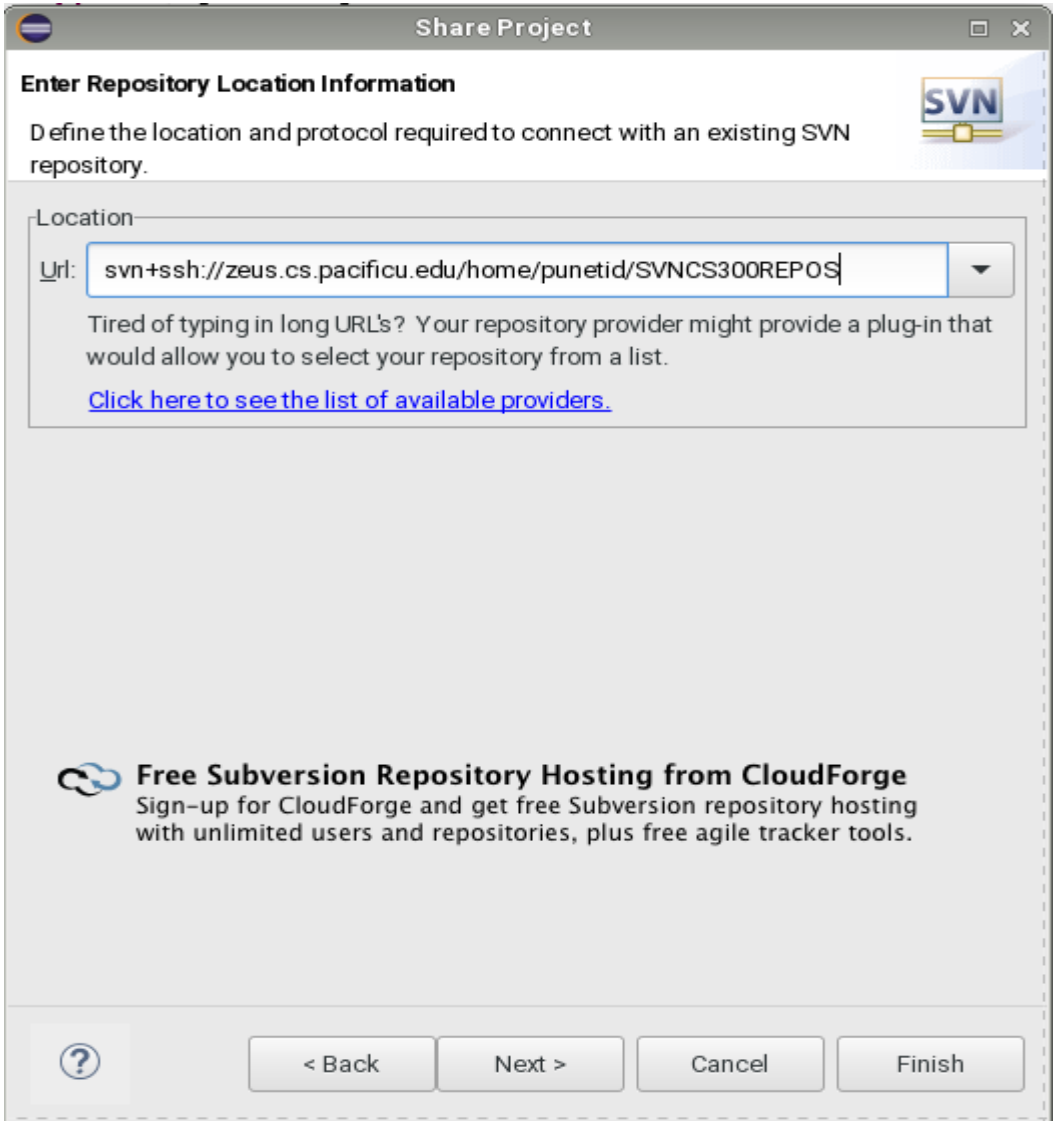
- Problem: Let's check ArrayOfVoidStars into the repository
- How?
- Right click on the ArrayOfVoidStars project, then Team, then Share Project, then SVN, then Next, then Create a new repository location
  - See next slide


File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Project Explorer
arrayofvoidstars.c
Airport [Airport]
ArrayOfVoidStars
New
Go Into
Open in New Window
Copy Ctrl+C
Paste Ctrl+V
Delete
Remove from Context
Source
Move...
Rename... F2
Import...
Export...
Build Project
Clean Project
Refresh F5
Close Project
Close Unrelated Projects
Make Targets
Index
Build Configurations
Show in Remote Systems view
Profiling Tools
Run As
Debug As
Profile As
Restore from Local History...
Run C/C++ Code Analysis
Team
Compare With
Apply Patch...
Share Project...
/*****
File name: arrayofvoidstars.c
Author: Computer Science, Pacific University
Date: 9.11.16
CS300
ent: CS300 Lab
e: Show the use of an array of void stars including how to use
the debugger with a void * variable. Finally, I have added
a problem for you to code.
*****/
<stdio.h>
<stdlib.h>
MAX_DATA 10
pData[MAX_DATA];
"PROGRAM START");
= 0; i < MAX_DATA; ++i)
i % 2 == 0)
ata[i] = malloc (sizeof (char));
char *) pData[i] = (char) ('A' + i);
ata[i] = malloc (sizeof (int));
(int *) pData[i] = i;
= 0; i < MAX_DATA; ++i)
tf ("%5d", *(int *) pData[i]);
the code that sets the last void * pointer to point to an array
ge enough to hold your name. Then print out the value that each
d star points to.


Share Project
Share Project
Select the repository plug-in that will be used to share the selected project.
Select a repository type:
Git
SVN

Select Create a new repository location

URL should use /home/punetid/SVNCS300REPOS on all subsequent slides



Click Finish and provide authentication information

How to do a code commit

To commit a project, right click on the project folder → Team → Commit

Do not commit (i.e. uncheck) any binary files!!!!! Always clean before committing.

Add very descriptive comments for EACH code commit. You will not be sorry.

Version Control

- Each change you make to the source code is a ***revision*** stored in the repository
  - can annotate your change with a note
    - why did I do that?
  - you can browse back through the repository to find old revisions of file
    - changed a data structure and it did not work
    - rewrote an algorithm and it got slower!
  - check out the old (working) revision from the repository

Hmmm….

- How often should I ***update*** and ***commit***?
  - every major change
  - once every 15 minutes
  - right before you do something you think may be a bad idea
  - be sure to update and commit before you log off of a lab machine!
    - Or before you leave the lab
    - Someone may reboot your machine!

Make a change in Eclipse

- Add printf(“I love CS 300!\n”); to main()
- Build and run (just to be sure)
- Commit to SVN:
  - Right Click SVNTest | Team | Commit
- Do NOT commit .o or executable files!

Show History

- In Eclipse
- Right Click a File
  - Team | Show History