

## Automatic file version control

As a system administrator, you may come across people who want to figure out a way to keep older versions of the files. The job can be performed by using RCS but it will be nice if we can have a system that will combine `vi` with RCS and automatically provide version control. Such a system will be able to manage versions using RCS administrative commands.

All the options used by `vi` should be retained as such. If the user specifies multiple files to be edited, the options will apply to all the files. Make sure that the user does not have to type in the changes made, unless specified with an option.

For convenience sake (and to distinguish our script from `vi`), we'll call our script `vir`. You are free to use a shell of your choice (from `ksh`, `sh`, and `perl`) to do this assignment.

You should handle all the options (command line switches) available with `vi` on Solaris.

**Algorithm.** The user will invoke the command just as he were to issue `vi` command, replacing the command name with `vir`. You should run through each file one at a time. If the user transfers to a file from within `vi`, you cannot do much. However, assuming the user does not do that, you will have the following cases:

- The specified file does not exist in current directory. Check if the file exists in the RCS directory. If it exists in RCS directory, check it out from RCS. Remember that `filename` in RCS will be represented as `filename,v`. Edit the file and after you are done, check if the user made any changes with respect to checked in version. If the user did not make changes, simply remove the file and unlock the RCS version. If the user did make changes, check in the file into RCS.
- The specified file exists in current directory. Check if it also exists in RCS directory. If it does and it is different, warn the user and ask for confirmation. If the file is not present in RCS, check it in and keep a current copy. Leave the edited version in current directory.

We'll like the following additional options with `vir`.

- `-i rev` It specifies the revision number from RCS. If this happens, you may end up starting a branch in the revision tree. This is allowed. The revision number should be valid and you can check that using one of the RCS commands.

### What to handin

Create your programs in a directory called `username.5` where `username` is your user name on hoare. Once you are done with everything, issue the following commands:

```
% cd
% ~sanjiv/bin/handin cs5780 5
```