Laboratory 3. Bourne Shell Scripting

For this laboratory, you will use the Bourne Again shell (bash) to make a script file *do.sh*, which opens a specified file with the proper application in the system. For example, type

```
% do.sh hello.c
```

The script will open a file named *hello.c* with your preferred text editor, possibly vi. For example, type

```
% do.sh picture.jpg
```

It will open a graphic file named *picture.jpg* with your preferred graphic application. Basically, the script *do.sh* performs a similar work of double-clicking in a file manager of a graphical window systems, where double-clicking a file will open the file with a proper application. Follow closely the instructions below:

1. The match of a file extension and an application is specified in a hidden configuration file (*.dorc*) under your home directory.
2. The configuration file is a simple text file following the syntax as given below. There is an example of the file at the bottom of this assignment.
a. An empty line is ignored.
b. A comment line starts with a pond character (#).
c. Each match is described as a single line, consisting of three fields. Fields are separated by a tab or space character.
d. The first field is a MIME (Multipurpose Internet Mail Extensions) description.
e. The second field contains extensions separated by commas.
f. The third field is an application name, possibly followed by optional argument.

3. The configuration file contains, but is not limited to
a. Microsoft Office applications (doc, xls, ppt)
b. StartOffice applications
c. WWW file types
d. source file types
e. graphic file types
f. multimedia file types

4. The script must contain understandable error messages for exceptional situations.
5. The script must be invoked no matter what the current directory which means you have to set the environment upon login. Consider the command export, the PATH variable, and what the file .bashrc does to the environment and discover where it needs to be placed to be useful.
6. Recall what all scripts must have at the header of the script file.
7. Submit all applicable files including environmental files.

Note: You may need the following tools for this lab.
- Unix commands: basename, cut, grep (egrep), awk, export
- substitution mark (i.e. `foo`) recall what the hash/substitution marks do when applied to a variable. E.g. export TEST=`who am i` The hash/substitution mark is not a single quote.

```
# This is a sample .dorc
# As you can see, this line is a comment
Application/PostScript ps /usr/bin/ggv
Application/PDF pdf /usr/local/bin/acroread
Image/Jpeg jpeg,jpg /usr/local/bin/gimp
Image/Gif gif /usr/local/bin/gimp
text/plain txt /usr/local/bin/vim
text/plain c /usr/local/bin/vim
text/plain h /usr/local/bin/vim
Image/fig gif /usr/local/bin/xfig
```