Literate programming and output

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1 Literate Programming Document Example in emacs org mode

1.1 Shell Script

Shell script example. This is an example of a shell script that heavily utilizes variables, and is nicely formatted with shebang, module block, variable block, and commands seperated by "#"s.

```sh
########################
#!/usr/bin/env sh
########################

#####################
##Modules
##module load something
#####################

########################
##Variables
input_dir=input
out_dir=output
##input/output files arrays
files=(`ls ${input_dir} | grep sh$`)
out_files=(`echo ${files[@]} | sed s/sh/pl/g`)

##parameter expansion
##parameter/patten/string
input_with_path=( "${files[@]/#/${input_dir}/}" )
output_with_path=( "${out_files[@]/#/${out_dir}/}" )
########################

########################
##commands
##make the output dir
mkdir -p ${out_dir}

##for loop
##use length to iterate in order to index input output arrays
for ((i=0; i<${#input_with_path[@]}; i++)); do

    echo ${i}

    echo cp ${input_with_path[${i}]} ${output_with_path[${i}]}

done
#####################
```