Shell Scripting

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Shell Variables

- Variable Initialization/assignment

```
Variable=value
count=1
```

- No declaration needed
- Displaying variable value

```
echo $count
```

Single Quote Vs Double Quote

- Single quote
  - Text will be take as it ease
- Double quotes
  - Variable substitution will take place
- Example

```
var=abc
echo ‘$var’ (prints $var)
echo “$var” (prints abc)
```

Command Line arguments

- Number of command line arguments ($#)

  echo $# (prints number of command line arguments)

echo arg-1= $1, arg-2 = $2

- – Prints first two command line arguments

echo $*

- – Prints all command line arguments

Operators

- Comparing strings

```
test $1 = yes
[ $1 = yes ]
```

- Integer Operators

  -eq, -ge, -gt, -le, -lt, -ne

Selection - If

```
if condition
then
        command
        command
        …
fi
```

Selection – If-else

```
if condition
then
        command
        command
        …
else
        command
        command
        …
fi
```

Selection – else-if ladder

```
if condition$_1$
then
            command
            command
            …
elif  condition$_2$
then
            command
            command
            …
elif  condition$_n$
then
            command
            command
            …
Else
            command
            command
            …
fi
```

Selection - case

```
case value in
pat1) command
            command
            …..
            command;;
pat2)
….
*)          command
            command
            …
            command;;
esac
```

Repetition - for

```
for var in word1  word2 … wordn
do
        command
        command
done
```

Example

```
    for i in 1 2 3
    do
        echo $i
    done
```

Repetition - while

```
While condition
do
        command
        command
        …
done
```

Repetition - until

```
until condition
do
        command
        command
        …
done
```

Exercise - 1

- Write a program called **isyes** that returns an exit status of 9 if its argument is "yes" and 1 otherwise. For purposes of this exercise, consider **y, yes, Yes, YES and Y** all to be valid "yes" arguments. Write the program using an *if* command and then rewrite it using a *case* command.

Exercise - 2

- List all files whose size is larger than a given size in a given directory.

Exercise - 3

- Check the disk usage of a user and print a message "WARNING: Disk usage exceeding quota *value*" where *quota* is the value given as a parameter and the user name is also a parameter to the script.

Exercise - 4

- Write a script that replaces all spaces in the file name with _.

Exercise - 5

- A script to walk through the files in the directory and compute the average of the values in the files. The output consists of one line per file with each line having the name of the file and average of the 2nd column.