

# 209 - Tutorial week 3

Some shell scripts

# 1st program

```
#!/bin/sh
```

```
track=1
```

```
for file in *.mp3
```

```
do
```

```
    mv "$file" "${track}.mp3"
```

```
    track=`expr $track + 1`
```

```
done
```

# A little more elaborate

```
#!/bin/sh
track=1
for file in *.mp3
do
    if test $track -lt 10
    then
        mv "$file" "0${track}.mp3"
    else
        mv "$file" "${track}.mp3"
    fi
    track=`expr $track + 1`
done
```

# Some interaction

```
#!/bin/sh
track=1
for file in *.mp3
do
    echo New name for track $file:
    read tname

    if [ $track -lt 10 ]
    then
        mv "$file" "0${track} - ${tname}.mp3"
    else
        mv "$file" "${track} - ${tname}.mp3"
    fi
    track=`expr $track + 1`
done
```

# Recursion!!

```
#!/bin/sh
factorial()
{
    if [ "$1" -gt "1" ]; then
        i=`expr $1 - 1`
        j=`factorial $i`
        k=`expr $1 \* $j`
        echo $k
    else
        echo 1
    fi
}

echo Please enter a number
read num
factorial $num
```

# Meaningful variable naming: \$?

```
#!/bin/sh
factorial()
{
    if [ "$1" -gt "1" ]; then
        i=`expr $1 - 1`
        factorial $i
        return `expr $1 \* $?`
    else
        return 1
    fi
}
```

```
echo Please enter a number
read num
factorial $num
echo Factorial of $num is $?
```

# More on functions

```
#!/bin/sh
add_a_user()
{
    USER=$1
    PASSWORD=$2
    shift; shift;
    COMMENTS=$@
    echo "Adding user $USER ..."
    echo useradd -c "$COMMENTS" $USER
    echo passwd $USER $PASSWORD
    echo "Added user $USER ($COMMENTS) with password $PASSWORD"
}
```

```
echo "Start of script..."
add_a_user lionel secret TA for 209
add_a_user krueger krueger Instructor of 209
```