# Linux Classroom Series – 08/Sept/2020

## Returning Text from functions

- Look at the following script

```bash
#!/bin/bash
return_using_globalvar() {
    return_value="How are you"
}

print_message() {
    input="$1"
    echo "Message is ${input}"

}

return_text_by_echo() {
    input="$1"
    echo "Message is ${input}"
}

# solution 1: Using global variables
return_using_globalvar
echo "${return_value}"
```

```
# solution 2: Read the output
read -p "Enter your message "
return_test=$(return_text_by_echo "$REPLY")
echo "$return_test"
```

# Recursive Functions

- Function that calls itself is recursive functions

```
#!/bin/bash

calculate_factorial() {
    if [ $1 -eq 1 ]
    then
        echo 1
    else
        local var=$(( $1 - 1 ))
        local res=$(calculate_factorial $var)
        echo $(( $res * $1 ))
    fi

}

read -p "Enter a number: " val
factorial=$(calculate_factorial $val)
echo "Factorial of $val is: $factorial"
```

- Exercise:
1. Write a function to download a file from internet to desired location
   ```
   download_item "<url>" "<location>"
   ```
2. Write a function to extract a tar to a specific location
   ```
   untar_file <tar_location> <extract_location>
   ```