

[1]-shell script  
procedure:

```
step 1:create .sh file
>>touch hello.sh
```

step 2:go into the .sh file:  
>>**gedit** hello.sh

step 3:shell type declare into .sh file(good practice):

```
#!/bin/bash
```

step 4:write shell commands require:  
example:

echo hello world

$x=2$

echo this is variable x : \$x  
comment in shell script:

 $\#(\text{-----})$ 

```
| file permission:
|   read(r)
|   write(w)
|   execute(x)
|
|   |---| |---| |---|
| d/-[file/folder] | owner | group | other |
```

step 5:give permission if needed:  
 >>`chmod +x hello.sh`

step 6:run script file(.sh):

```
>>./hello.sh
```

[1]-shell script format

[1]-execute a .sh file

[2]-variable:

- system variable  
all-capital letter
- user variable  
all-small letter

system variable print:

```
echo $USER #user name
echo $PWD #current working dir
echo $HOME #home directory
echo $BASH #shell name
```

```
name=mark
echo $name
```

-in variable declare space forbidden

```
x="hello"  
y=hello
```

```
echo $x $y[variable declare works either way]
```

types of echo in shell script:

```
myvar=hello  
echo $myvar # print variable  
echo "$myvar" # print variable  
echo '$myvar' # print variable name only  
echo \ $myvar # print variable name only
```

[3]-user input(read) in shell script:

```
read name  
echo "my name is : " $name
```

message print before input:

```
read -p 'enter your name : ' name  
echo "my name is : " $name
```

keep input hidden:

```
read -p 'enter your name : ' name  
read -p 'enter your id : ' std_id  
read -p 'enter password : ' -s pass #-s for keep input hidden  
echo "my name is : " $name  
echo "student id : " $std_id  
echo "password : " $pass
```

if no variable declare data can be store in system variable \$REPLY:

```
read -p "enter names : "  
echo "the value is : " $REPLY
```

[4]-array in shell script:

```
#names: max , john , mark
```

```
read -p "enter names : " -a names #-a for array  
echo "names[0] : " ${names[0]} #${variable[position]}  
echo "names[1] : " ${names[1]} #${variable[position]}  
echo "names[2] : " ${names[2]} #${variable[position]}
```

[ ]-command line argument in shell script[direct in command input]:

```
>>./hello.sh max john mark  
echo "first cla variable : $1"  
echo "second cla variable : $2"  
echo "third cla variable : $3"  
#echo "0 cla variable : $0" #shell script name stored
```

[5]-array in command input(command line argument):

```
#!/hello.sh max john mark  
#args={"max","john","mark"}  
#shell script array index starts from 0
```

```
args=("$@")
```

```
echo "first cla variable : ${args[0]}"  
echo "second cla variable : ${args[1]}"  
echo "third cla variable : ${args[2]}"
```

```
echo "number of arguments : " $#
```

[6]-expression:

```
#x=1+1 #x=2  
#y=21-2 #y19
```

```
#expr :
```

```
x=$(expr 1 + 1) #space between values & expression  
echo $x
```

```
num1=20  
num2=5
```

```
result=$(expr $num1 + $num2)  
echo $result
```

[7]-if else....

[8]-case