LINUX ASSIGNMENT - 9

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1. echo “Enter a number:”

```
read num
If (( num % 2 == 0))
Then
    Echo “$num is even.”
else
    echo “$num is odd.”
 Fi
```

Output Enter a number: 5 5 is odd

2.

Feature	if statement	case statement
● Usage	used for logical conditions	used for pattern matching
● Syntax	if {[condition]; then...fi	case variable in Pattern Commands;;esac
● Best for	numerical or string comparisons	multiple possible Values of variable

Example:

```
# Using if
if [ "$day" == "Mon" ]; then
 echo "Start of the week"
 fi
# Using case
case $day in
 Mon) echo "Start of the week" ;;
Fri) echo "Weekend coming!" ;;
esac
```

3. echo "Enter three numbers:"

```
read a b c
if (( a >= b && a >= c ))
 then
```

```
echo "$a is the largest"
elif (( b >= a && b >= c ))
 then
 echo "$b is the largest"
else echo "$c is the largest"
 fi
```

4.
```
arr=(123 "Abs" -2.3 'A' 23.56 0)
 #!/bin/bash
arr=(123 "Abs" -2.3 'A' 23.56 0)
 for element in "${arr[@]}"
do
 echo "$element"
 done
```

5.
```
echo "Files in current directory:"
 for file in *
do
 if [ -f "$file”]; then
 echo "$file"
 fi
 done
```

Output:
```
script.sh
 notes.txt
data.csv
```

6.

Feature	while loop	until loop
Condition	executes while condition is true	executes until Condition becomes true
Syntax	while[condition]; do....done	until [condition]; do... Done

Example:	# while loop
	count =1
	while[$count -le 3]
	do
	echo "Count = $count"
	((count++))
	done
		# until loop
		count=1
		until [$count -gt 3]
		do
		echo "Count = $count"
		((count++))
		done

7.

```
echo "Enter countdown time (in seconds):"
 read n
while [ $n -gt 0 ]
 do
 echo "Time left: $n"
do
 echo "Count = $count"
sleep 1 ((n--)) done echo "Time’s up!"
```

8.

```
examples with break
 for i in {1..5}
do
 if [ $i -eq 3 ];
 then
break
fi
```

```
echo $i
 done
# Output: 1 2
Examples with continue statement
 for i in {1..5}
do
 if [ $i -eq 3 ];then
continue
 fi
 echo $i
 done
 # Output: 1 2 4 5
```

9.

```
echo "Enter filename:"
 read filename
 if [ -f "$filename" ]
 then
echo "File '$filename' exists."
 else
echo "File '$filename' does not exist."
 fi
```

10.

```
#!/bin/bash
echo "Enter a number:"
read num
fact=1
for (( i=1; i<=num; i++ ))
do
fact=$((fact * i))
```

```
done
echo "Factorial of $num is $fact"
```

Output:

```
Enter a number: 8
Factorial of 8 is 40320
```