

# LINUX PROGRAMMING

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## ASSIGNMENT-9

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**Q1.Script to check if a number is even or odd.**

**Ans:**

```
"Enter a number: " n
if (( n % 2 == 0 )); then
    echo "Even"
else
    echo "Odd"
fi
```

**Q2.Difference between if and case statements.**

**Ans:**

Aspect	if	case
Usage	Multiple conditions	Pattern matching
Syntax	if [ condition ]; then ... fi	case variable in pattern) ... esac
Example	if [ \$x -eq 5 ]; then ... fi	case \$x in 5) echo "Five" ;; esac

**Q3.Script to find the largest of three numbers.**

**Ans:**

```
read -p "Enter three numbers: " a b c
if [ $a -ge $b ] && [ $a -ge $c ]; then
    echo "$a is largest"
elif [ $b -ge $a ] && [ $b -ge $c ]; then
    echo "$b is largest"
else
    echo "$c is largest"
fi
```

**Q4.Using for loop to traverse an array.**

**Ans:**

```
arr=(123 "Abs" -2.3 'A' 23.56 0)
for i in "${arr[@]"; do
    echo $i
done
```

**Q5.Script to list all files in current directory.**

**Ans:**

```
for file in *; do
    echo "$file"
done
```

**Q6.Difference between while and until loops.**

**Ans:**

Loop	Condition Type	Executes While
while	True	Condition is true
until	False	Condition is false

**Q7.Countdown timer script using while loop.**

**Ans:**

```
count=10
while [ $count -gt 0 ]; do
    echo $count
    sleep 1
    ((count--))
done
echo "Time's up!"
```

**Q8.Using break and continue in loops.**

**Ans:**

```
for i in {1..5}
do
```

```
    if [ $i -eq 3 ]; then
        continue
    fi
    if [ $i -eq 5 ]; then
        break
    fi
    echo $i
done
```

**Q9.Script to check if a file exists or not.**

**Ans:**

```
read -p "Enter filename: " file
if [ -e "$file" ]; then
    echo "File exists"
else
    echo "File does not exist"
fi
```

**Q10.Script to calculate factorial using for loop.**

**Ans:**

```
read -p "Enter number: " n
fact=1
for ((i=1; i<=n; i++))
do
    fact=$((fact * i))
done
echo "Factorial: $fact"
```

