Q1.

cp /etc/passwd ~/copy\_of\_passwd  
sudo chown :<group\_name> ~/copy\_of\_passwd  
chmod g+rw ~/copy\_of\_passwd

Q2.

cut -d ':' -f <column\_number> /etc/group | wc -w

Q3.

sudo lastb | head -1 | cut -d ' ' -f 1

Q4.

awk -F: '$3 >= 1000 && $3 != 65534 {print $1}' /etc/passwd | head -n 3

Q5.

echo "uname -m > OS.txt" | at now + 2 minutes

Q6.

#!/bin/bash

echo -n "Enter a number: "

read number

# Validate input

if ! [[ $number =~ ^[0-9]+$ ]]; then

echo "Invalid input! Please enter a valid number."

exit 1

fi

# Print the pattern

for ((i = 1; i <= $number; i++)); do

spaces=$((number - i))

for ((j = 1; j <= spaces; j++)); do

echo -n " "

done

for ((k = 1; k <= i; k++)); do

echo -n ". "

done

echo ""

done

for ((i = $number; i >= 1; i--)); do

spaces=$((number - i))

for ((j = 1; j <= spaces; j++)); do

echo -n " "

done

for ((k = 1; k <= i; k++)); do

echo -n ". "

done

echo ""

done

Q7.

find /home/farzan\_rahmani -name "\*.txt" -size +0

Q8.

#!/bin/bash

echo -n "Enter an IP address: "

read ip\_address

ping -c 4 $ip\_address

Q9.

Q10.

#!/bin/bash

echo -n "Enter a three-digit number: "

read number

if [[ $number =~ ^[0-9]{3}$ ]]; then

digit1=$(( $number / 100 ))

digit2=$(( ($number / 10) % 10 ))

digit3=$(( $number % 10 ))

sum=$(( $digit1 + $digit2 + $digit3 ))

echo "Sum of digits: $sum"

else

echo "Invalid input! Please enter a three-digit number."

fi