



## **Operating System**

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### Task 1:

```
student@student-virtual-machine:~$ pico task1.txt
```

```
student@student-virtual-machine: ~
GNU nano 6.2 task1.txt
if [ -e "data.txt" ]; then
    echo "data.txt exists."
else
    echo "data.txt does not exist."
fi

student@student-virtual-machine:~$ ./task1.txt
bash: ./task1.txt: Permission denied
student@student-virtual-machine:~$ chmod +x task1.txt
student@student-virtual-machine:~$ ./task1.txt
data.txt exists.
```

### Task 2:

```
student@student-virtual-machine:~$ pico task2.txt
student@student-virtual-machine:~$
```

```
GNU nano 6.2 task2.txt
read -p "Enter a number: " num

if [  $$(num \% 2)$  -eq 0 ]; then
    echo "Even number."
else
    echo "Odd number."
fi

student@student-virtual-machine:~$ ./task2.txt
Enter a number: 8
Even number.
student@student-virtual-machine:~$
```

### Task 3:

```
student@student-virtual-machine:~$ pico task3.sh
```

```
GNU nano 6.2 task3.sh
#!/bin/bash

read -p "Enter your score (0-100): " score

if [ $score -ge 90 ]; then
    echo "Grade: A"
elif [ $score -ge 80 ]; then
    echo "Grade: B"
elif [ $score -ge 70 ]; then
    echo "Grade: C"
elif [ $score -ge 60 ]; then
    echo "Grade: D"
else
    echo "Grade: F"
fi
```

```
student@student-virtual-machine:~$ chmod +x task3.sh
```

```
student@student-virtual-machine:~$ ./task3.sh
```

```
Enter your score (0-100): 80
```

```
Grade: B
```

### Task 4:

```
student@student-virtual-machine:~$ pico task4.sh
```

```
GNU nano 6.2 task4.sh *
#!/bin/bash
read -p "Enter first number: " n1
read -p "Enter second number: " n2
read -p "Enter operator (+, -, *, /): " op
case $op in
    +)
        echo "Result: $((n1 + n2))"
        ;;
    -)
        echo "Result: $((n1 - n2))"
        ;;
    \*)
        echo "Result: $((n1 * n2))"
        ;;
    /)
        if [ $n2 -ne 0 ]; then
            echo "Result: $((n1 / n2))"
        else
            echo "Error: Division by zero."
        fi
fi
```

```
        echo "Error: Division by zero."
    fi
    ;;
*)
    echo "Invalid operator."
    ;;
esac
```

```
student@student-virtual-machine:~$ chmod +x task4.sh
student@student-virtual-machine:~$ ./task4.sh
Enter first number: 6
Enter second number: 4
Enter operator (+, -, *, /): /
Result: 1
student@student-virtual-machine:~$ ./task4.sh
Enter first number: 8
Enter second number: 3
Enter operator (+, -, *, /): *
Result: 24
student@student-virtual-machine:~$
```