In shell scripting, variables are used to store data or values that can be manipulated or referenced throughout the script. Variables can hold various types of data, such as numbers, strings, or even arrays. Here are a few examples of how variables are used in shell scripting:

1.Numeric Variable:

#!/bin/bash

# Assigning a numeric value to a variable

count=10

# Performing arithmetic operations using variables

result=$((count + 5))

# Printing the result

echo "The result is: $result"

Output:

The result is: 15

2.String Variable:

#!/bin/bash

# Assigning a string value to a variable

name="John"

# Printing a message using the variable

echo "Hello, $name! How are you?"

Output:

Hello, John! How are you?

3.Array Variable:

#!/bin/bash

# Assigning an array of names to a variable

names=("Alice" "Bob" "Charlie" "Dave")

# Accessing individual elements of the array

echo "The first name is: ${names[0]}"

echo "The third name is: ${names[2]}"

Output:

The first name is: Alice

The third name is: Charlie

4.Reading Input into a Variable:

#!/bin/bash

# Prompting the user for input

echo "Enter your name:"

read name

# Printing the input

echo "Your name is: $name"

Output:

Enter your name:

John

Your name is: John

These examples demonstrate the basic usage of variables in shell scripting. Variables can be assigned, modified, and referenced throughout the script to store and manipulate data as needed.