

# Introduction to shell scripting

## How to create a shell file?

- Create a file with a `.sh` extension
- Add shebang at the beginning of the file

```
#!/bin/bash
```

- Make the file executable with

```
chmod +x <file-name>.sh
```

- Run the shell

```
./<file-name>.sh
```

## How to print in a shell script?

```
#!/bin/bash
echo "Hello World!!!"
```

## How to pass input?

```
#!/bin/bash
echo "Pass an input"
read user_input
echo $user_input
```

## How to declare a variable?

```
#!/bin/bash
variable="Hello World!!!"
echo $variable
```

## How to read environment files in a shell script?

```
ENV_FILE=".env"
```

## Function

```
#!/bin/bash
func(){
    echo "Hello World!!!"
}

func
```

## Parameterized Function

```
#!/bin/bash
add_numbers(){
    local num1="$1"
    local num2="$2"
    local sum=$((num1+num2))
    echo "The sum of $num1 and $num2 is: $sum"
}

add_numbers 10 20
```

## if-else

```
#!/bin/bash

echo "Enter a number:"
read number

if [ "$number" -eq 100 ]; then
    echo "The number is 100."
else
    echo "The number is not 100."
fi
```

## Nested if-else

```
#!/bin/bash
echo "Please enter a number:"
read user_input
if [ "$user_input" -gt 10 ]; then
    echo "The entered number is greater than 10."
else
    if [ "$user_input" -lt 10 ]; then
        echo "The entered number is less than 10."
    else
        echo "The entered number is equal to 10."
```

```
    fi  
fi
```

## Case

```
#!/bin/bash  
read -p "Enter a fruit name: " fruit  
case "$fruit" in  
    "apple")  
        echo "You selected an apple."  
        ;;  
    "banana")  
        echo "You selected a banana."  
        ;;  
*) # Code to execute if $variable doesn't match  
    echo "Unknown fruit."  
    ;;  
esac # Signal end of case statement
```

## For Loop

```
#!/bin/bash  
# Define an array of fruits  
fruits=("apple" "banana" "cherry" "date" "fig")  
# Iterate through the array using a for loop  
for fruit in "${fruits[@]}"; do  
    echo "I like $fruit."  
done
```

## While Loop

```
#!/bin/bash  
counter=1  
max=5  
# Use a while loop to count from 1 to 5  
while [ "$counter" -le "$max" ]; do  
    echo "Count: $counter"  
    counter=$((counter + 1))  
done
```

## Until Loop

```
#!/bin/bash  
count=1  
until [ $count -gt 5 ]
```

```
do
    echo "Count: $count"
    count=$((count + 1))
done
```