

- 1) Check if a given number is even or odd.
- 2) Find the factorial of a given number.
- 3) Determine the largest among three numbers.
- 4) Check if a string is a palindrome.
- 5) Print the Fibonacci sequence up to a specified number of terms.
- 6) Check if a number is prime or not.
- 7) Calculate and print the multiplication table of a number.
- 8) Find the sum of all even numbers between 1 and N.
- 9) Find the sum of all natural numbers from 1 to N.
- 10) Reverse a given number.
- 11) Check if a file exists in a specified directory.
- 12) Calculate the factorial of a number using a while loop.
- 13) Find the sum of all digits in a number.
- 14) Create a menu-based script using a case statement for different actions.
- 15) Generate a random number and have the user guess it.
- 16) Calculate the average and sum of a list of numbers.
- 17) Calculate the exponent of a number using a for loop.
- 18) Check if a given year is a leap year.
- 19) Validate a string as a valid email address.
- 20) Build a simple calculator that performs basic arithmetic operations.
- 21) Check if a file is writable.
- 22) Find and display the second largest number in an array.
- 23) Count the number of words in a text file.
- 24) Generate a list of prime numbers up to a specified limit.
- 25) Determine the common elements between two arrays.
- 26) Convert a decimal number to binary.
- 27) Calculate the area of common geometric shapes (circle, triangle, rectangle) based on user input.
- 28) Generate a list of Armstrong numbers within a given range.

- 29) Implement a script to list files by their size in a directory.
- 30) Create a script that simulates a basic ATM machine for withdrawals and deposits.

For pattern printing

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

```
echo "Enter the height of the inverted right triangle: "
```

```
read height
```

```
for ((i = height; i >= 1; i--))
```

```
do
```

```
  for ((j = 1; j <= i; j++))
```

```
  do
```

```
    echo -n "*" "
```

```
  done
```

```
  echo
```

```
done
```

