

1.Count vowels in a given string

Input: "Groovy Programming"

Output: 6

PROGRAM:

```
def countVowels(String input) {  
    def vowels = ['a', 'e', 'i', 'o', 'u']  
    int count = 0  
    input.toLowerCase().each { ch ->  
        if (ch in vowels) {  
            count++  
        }  
    }  
    return count  
}  
  
def inputStr = "Groovy Programming"  
def vowelCount = countVowels(inputStr)  
println "Input: '${inputStr}'"  
println "Output: ${vowelCount}" // Output: 6
```

2.Reverse a string without using built-in reverse()

Input: "KnowCode"

Output: "edoKwonK"

PROGRAM:

```
def str = "KnowCode"  
def reversed = ""  
for (i = str.length() - 1; i >= 0; i--) {  
    reversed += str[i]  
}  
  
println "Input: $str"  
println "Output: $reversed"
```

3.Check if a number is prime

Input: 17

Output: true

PROGRAM:

```
def num = 17

def prime = true

if (num <= 1) {
    prime = false
} else {
    for (i = 2; i < num; i++) {
        if (num % i == 0) {
            prime = false
            break
        }
    }
}

println prime
```

4.Remove duplicates from a list

Input: [1, 2, 2, 3, 4, 4, 5]

Output: [1, 2, 3, 4, 5]

PROGRAM:

```
def list = [1, 2, 2, 3, 4, 4, 5]

def uniqueList = list.unique()

println uniqueList
```

5. Find common elements in two lists

```
def list1 = [1, 2, 3, 4]
def list2 = [3, 4, 5, 6]
```

PRPOGRAM:

```
def list1 = [1, 2, 3, 4]
def list2 = [3, 4, 5, 6]
def common = list1.intersect(list2)
println common
```

6. Check if two strings are anagrams

Input: "listen", "silent"
Output: true

PROGRAM:

```
def str1 = "listen"
def str2 = "silent"
def isAnagram = str1.toList().sort() == str2.toList().sort()
println isAnagram
```

7. Print Fibonacci series up to N terms

Input: n = 10
Output: 0 1 1 2 3 5 8 13 21 34

PROGRAM:

```
def n = 10
def a = 0, b = 1
print "$a $b "
for (i in 3..n) {
    def c = a + b
    print "$c "
    a = b
    b = c}
```

8.Check if a string is a palindrome

Input: "madam"

Output: true

PROGRAM:

```
def str = "madam"
```

```
def reversed = ""
```

```
for (int i = str.length() - 1; i >= 0; i--) {
```

```
    reversed += str[i]
```

```
}
```

```
def isPalindrome = str == reversed
```

```
println isPalindrome
```