**# Strings**

```
x='Single Quote-Example'
print(x)
y="Double Quote-Example"
print(y)
z="Single quote ' in between double quotes"
print(z)
p='Double quote " in between single quote'
print(p)
```

Output

```
[1] "Single Quote-Example"
 [1] "Double Quote-Example"
 [1] "Single quote ' in between double quotes"
 [1] "Double quote \" in between single quote"
```

---

```
# To find the length of a String in R, use nchar() function
# To find length of string
x = 'Hello Everyone!'
# find length using nchar(c)
length = nchar(x)
print (length)
```

```
[1] 15
```

**Example to find length of a number in R**

```
# to find length of number
x = 1234567
# find length using nchar(c)
length = nchar(x)
print (length)
```

```
[1] 7
```

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```
# To concatenate strings in r programming, use paste()
# Example R program to concatenate two strings
x = 'Hello'
y = 'Everyone!'
# concatenate two strings using paste function
z = paste(x,y)
print (z)
```

```
[1] "Hello Everyone!"
```

**Example: Concatenate Strings in R with no separator**

```
x = 'Hello'
y = 'World!'
# concatenate two strings using paste function
z = paste(x,y,sep="")
print (z)
```

```
[1] "HelloWorld!"
```

**# Concatenate Multiple Strings**

In this example, we shall use paste() function with the separator as hyphen, i.e., sep="-"

```
s1 = 'Hello'
s2 = 'Everyone!'
s3 = 'Learn'
s4 = 'R Programming!'
# concatenate two strings using paste function
res = paste(s1,s2,s3,s4,sep="-")
print (res)
[1] "Hello-Everyone!-Learn-R Programming!"
```

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```
# to extract Substring from a String
# Example R program to find substring
s = 'Hello everyone! Welcome to learn R programming language'
#substring(c, first, last)
subStr = substring(s, 17, 34)
print (subStr)
output:"Welcome to learn R"
# Example R program to find substring
s = 'Hello everyone! Welcome to learn R programming language'
#substring(c, first, last)
subStr = substring(s, 17)
print (subStr)
 [1] "Welcome to learn R programming language"
```

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**# The string characters can be converted to upper or lower case**

```
 # R program to Convert case of a string
 str<- "Hello EveRYoNe LEARN R"
 print(toupper(str))
 print(tolower(str))
 print(casefold(str, upper = FALSE))
  [1] "HELLO EVERYONE LEARN R"
  [1] "hello everyone learn r"
  [1] "hello everyone learn r"
```

```
 # R program to Convert case of a string
 str<- "Hello EveRYoNe LEARN R"
 print(toupper(str))
 print(tolower(str))
 print(casefold(str, upper = TRUE))
"HELLO EVERYONE LEARN R"
[1] "hello everyone learn r"
[1] "HELLO EVERYONE LEARN R"
```

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