Introduction to R Software

Strings – Display and Formatting
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Print and Format with Concatenate

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Formatting and Display of Strings

cat function

- The function `cat()` concatenate (link in the same sequence) and print the arguments in strings, concatenates them and prints the entire string in the command window.

- `cat` is useful for producing output in user-defined functions.

- It converts its arguments to character vectors, link them together in the same sequence to a single character vector, appends the given sep = string(s) to each element and then outputs them.

Formatting and Display of Strings

cat function

Usage

```
cat(... , file = "", sep = " ", …)
```

cat puts a space between each item by default.

One must provide a newline character (\n) (newline) to terminate the line.

Formatting and Display of Strings

The only way to print multiple items is to print them one at a time

```
> print("The zero occurs at"); print(2*pi);
print("radians")
[1] "The zero occurs at"
[1] 6.283185
[1] "radians"
```

The `cat` function is an alternative to print that lets you combine multiple items into a continuous output:

```
> cat("The zero occurs at", 2*pi, "radians.",
"\n")
The zero occurs at 6.283185 radians.
```

Formatting and Display of Strings

```
R Console
> print("The zero occurs at"); print(2*pi); print("radians")
[1] "The zero occurs at"
[1] 6.283185
[1] "radians"
>
> cat("The zero occurs at", 2*pi, "radians.", "\n")
The zero occurs at 6.283185 radians.
```

Formatting and Display of Strings

```
> d <- date()
> cat("Today is:", d, "\n" )

Today is: Wed Jan 04 23:49:52 2017
```

Formatting and Display of Strings

```
> x <- 7
> cat("The square of", x, "is", x^2, "!\n")

The square of 7 is 49 !
```
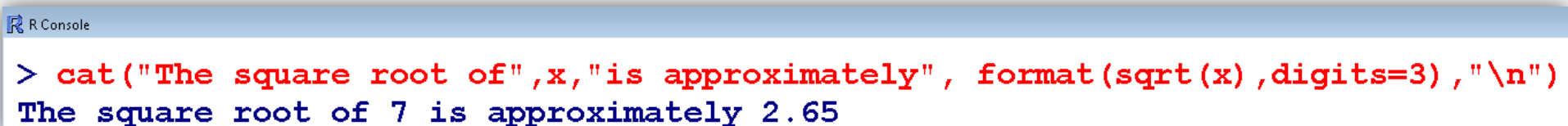
Formatting and Display of Strings

```
> cat("The square root of",x,"is
approximately", format(sqrt(x),digits=3),"\n")

The square root of 7 is approximately 2.65
```



```
> cat("The square root of",x,"is approximately", format(sqrt(x),digits=3),"\n")
The square root of 7 is approximately 2.65
```

Formatting and Display of Strings

The `cat` function can also print simple vectors

```
> evenno <- c(2,4,6,8,10)
> evenno
[1]   2   4   6   8 10

> cat("The first few even numbers are:",
evenno, "...\n")
The first few even numbers are: 2 4 6 8 10 ...
```

R Console
```
> evenno <- c(2,4,6,8,10)
> evenno
[1]   2   4   6   8 10
> cat("The first few even numbers are:", evenno, "...\n")
The first few even numbers are: 2 4 6 8 10 ...
```