

# User-Built Functions in R

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# Creating and Calling a Function

## To Create:

```
functionName <-function(arg1,arg2,...)  
  {  
    statements  
    return(object)  
  }
```

## To Call:

```
functionName(arg1,arg2,...)
```

# Arguments in User-Built Functions

- Should set default values within the function:

```
functionName <-function(link=log,...)
```

- If user doesn't set argument, the "link" argument will automatically be set to "log"

- If arguments are optional, use "opt\_arg"

- `functionName(arg1, ..., opt_arg)`

- Arguments are required when calling a function, unless the `opt_arg` option is used or default is set

# General Information

- A function cannot be named anything that is already a system function (eg – summary, etc.)
- You can view function code by omitting the ()'s  
`functionName` vs. `functionName()`
- Use `stop` function for error-handling  
`stop("Function did not work.")`
- Use `warning` function for notes  
`warning("Function worked, but...")`

# User-Built Function Example

```
ExpSample <- function(reps=1000,lambda=10,seed=333)
{
  set.seed(seed)
  -log( runif(reps,0,1) ) / lambda
}
```

```
x <- ExpSample(reps=10000,lambda=10, seed=333)
hist(x)
```

