

## R Examples

[Basics](#)  
[Functions](#)  
[Countdown](#)  
[User input](#)  
[Random number game](#)  
[Lists](#)  
[Reading data](#)  
[Filtering data](#)  
[More Examples](#)  
[How to run the code](#)  
[Finding data sources](#)

### Reading user input

```
readinteger <- function()
{
  n <- readline(prompt="Enter an integer: ")
  return(as.integer(n))
}

print(readinteger())

Enter an integer: 88
[1] 88
```

[R Style Guide](#)  
[R Language Definition \(pdf\)](#)  
[R Function Info](#)  
[RStudio IDE](#)

Made by Matt Zeunert

### The readline function

`readline()` lets the user enter a one-line string at the terminal.

The `prompt` argument is printed in front of the user input. It usually ends on ": ".

### The as.integer function

`as.integer` makes an integer out of the string.

### Preventing failure if no number is entered

Right now if the user doesn't enter an integer, `as.integer` will return `NA` (Not Available). We can avoid this by using `is.na` to check the user input and asking again if the value is `NA`:

```
readinteger <- function()
{
  n <- readline(prompt="Enter an integer: ")
  n <- as.integer(n)
  if (is.na(n)){
    n <- readinteger()
  }
  return(n)
}

print(readinteger())

Enter an integer:
Enter an integer: boo
Enter an integer: 44
[1] 44
Warning message:
In readinteger() : NAs introduced by coercion
```

However, a warning message is still shown. This is how to avoid it:

```
readinteger <- function()
{
  n <- readline(prompt="Enter an integer: ")
  if(!grepl("^[0-9]+$",n))
  {
    return(readinteger())
  }

  return(as.integer(n))
}

print(readinteger())
```

```
Enter an integer:
Enter an integer: 31r132weq
Enter an integer: effasdf
Enter an integer: 222
[1] 222
```

`grepl` returns TRUE if the regular expression `"^[0-9]+$"` is matched. (The expression checks for a string that consists of nothing but one or more digits.)

`!` negates the result and the if branch is executed if the user-entered string isn't an integer.

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