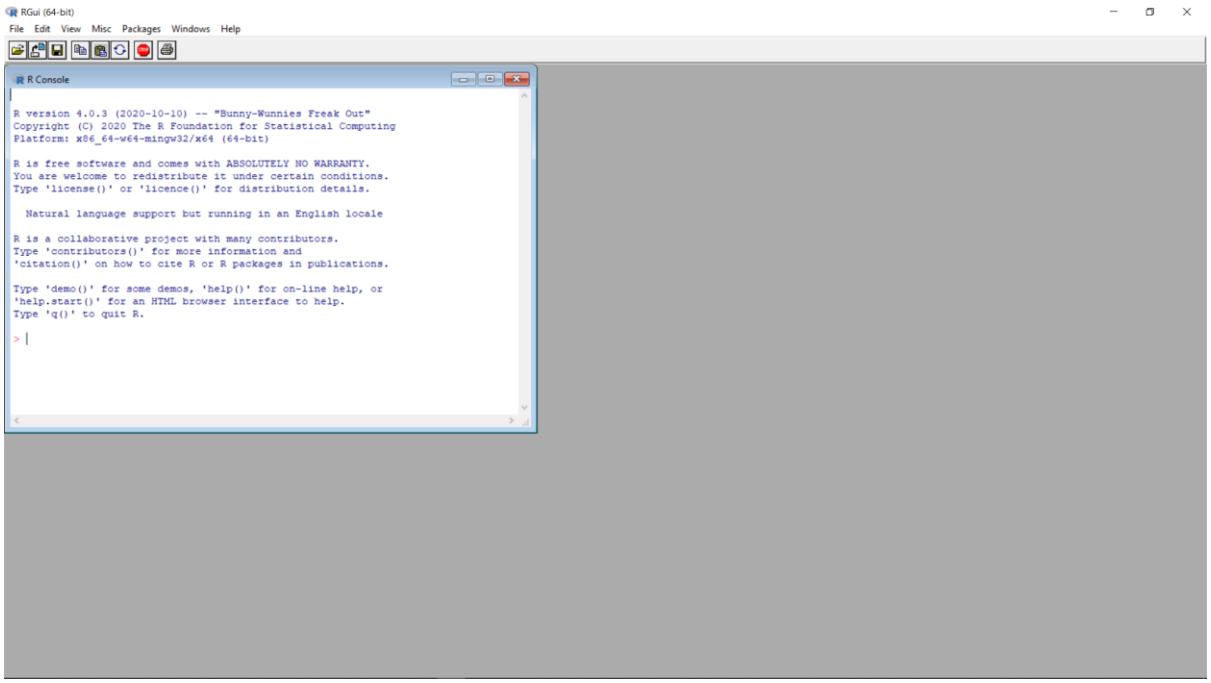
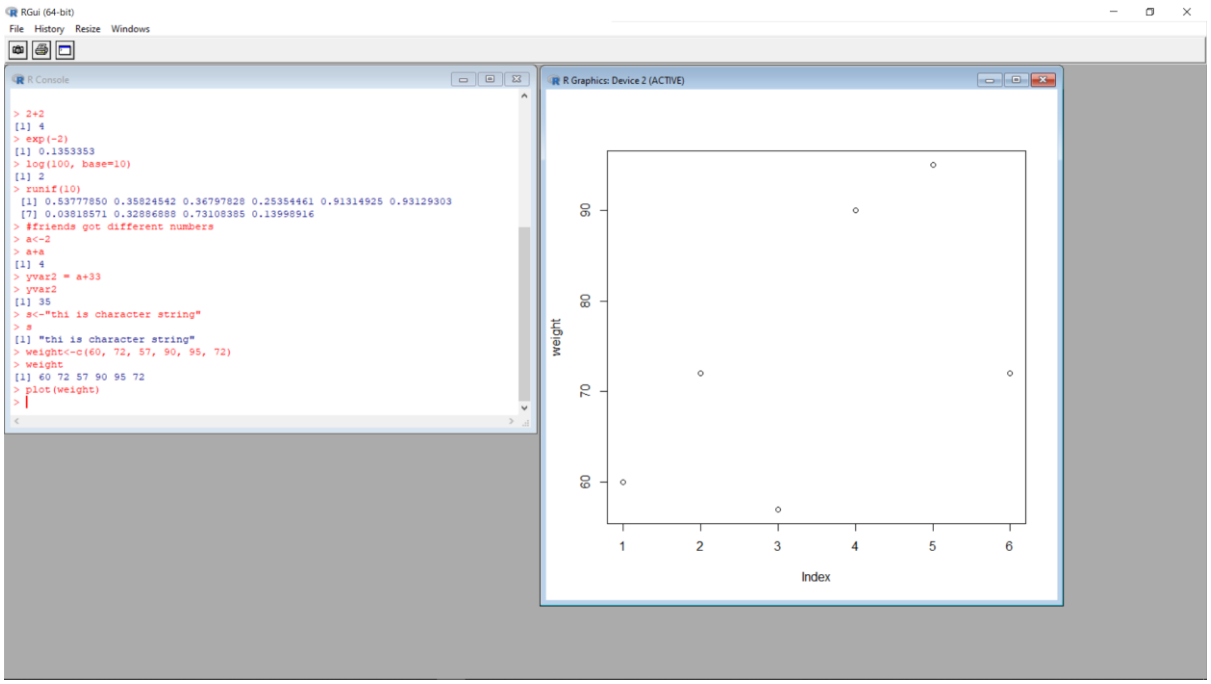
# SCS2211 Laboratory II

## R worksheet 1Assignment

18001645



seq {base} R Documentation

Sequence Generation

## Description

Generate regular sequences. `seq` is a standard generic with a default method. `seq.int` is a primitive which can be much faster but has a few restrictions. `seq_along` and `seq_len` are very fast primitives for two common cases.

## Usage

```
seq(...)

## Default S3 method:
seq(from = 1, to = 1, by = ((to - from)/(length.out - 1)),
    length.out = NULL, along.with = NULL, ...)

seq.int(from, to, by, length.out, along.with, ...)

seq_along(along.with)
seq_len(length.out)
```

## Arguments

`...` arguments passed to or from methods.

`from, to` the starting and (maximal) end values of the sequence. Of length 1 unless just `from` is supplied as an unnamed argument.

`by` number: increment of the sequence.

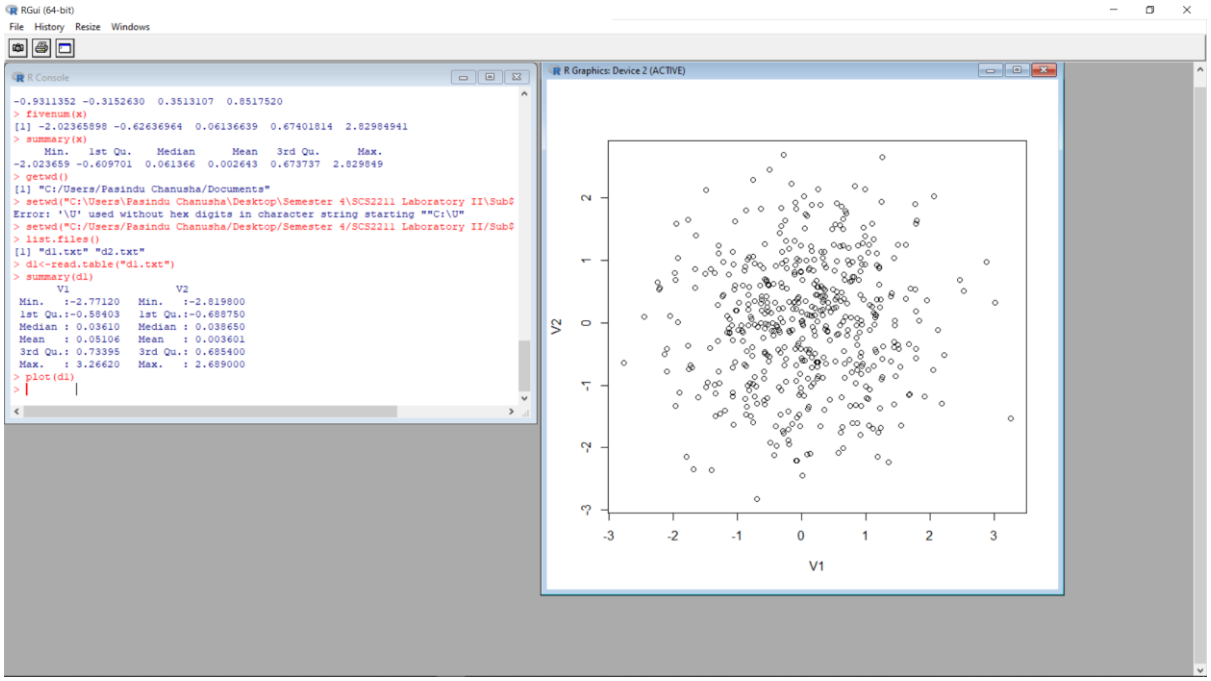
`length.out` desired length of the sequence. A non-negative number, which for `seq` and `seq.int` will be rounded up if fractional.

`along.with` take the length from the length of this argument.

## Details

Numerical inputs should all be finite (that is, not infinite, NaN or NA).

d2.txt d1.txt 18001645.pdf Show all



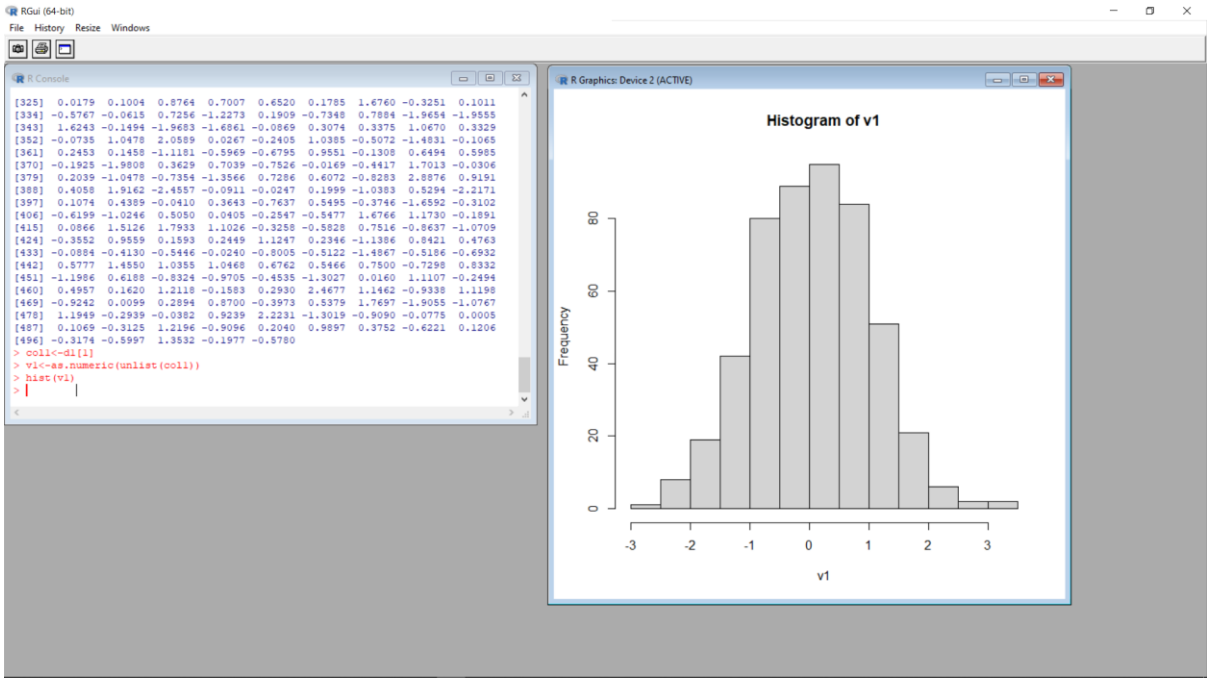
RGui (64-bit)

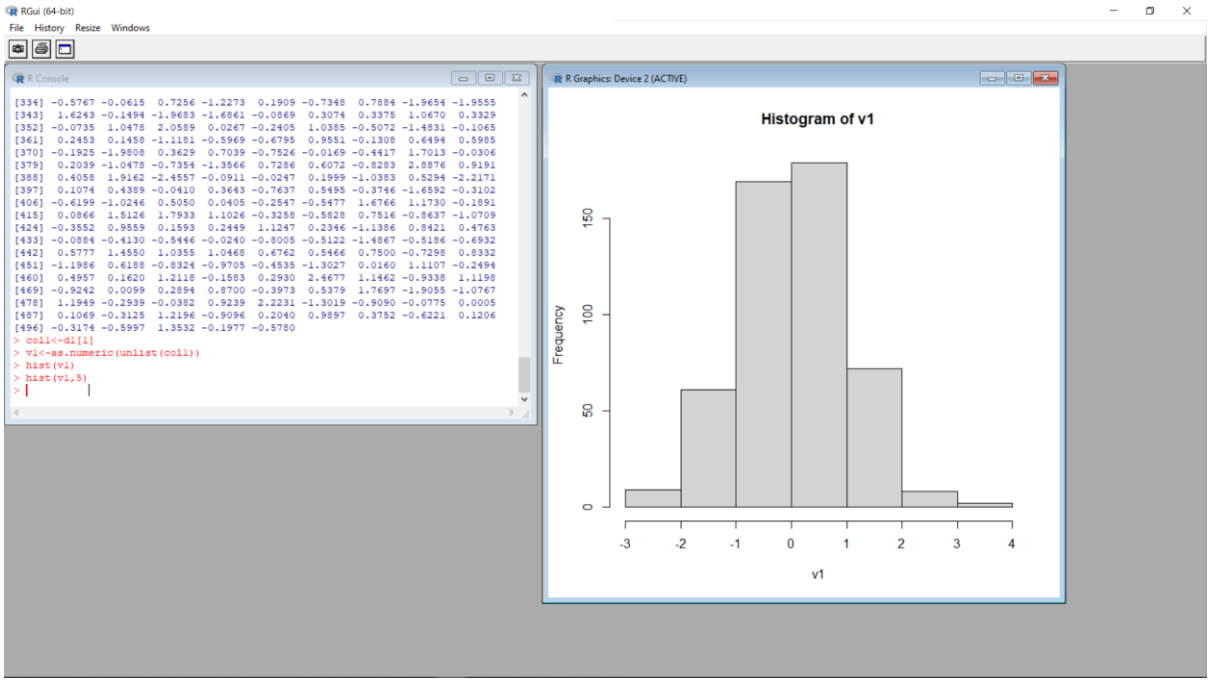
File History Resize Windows

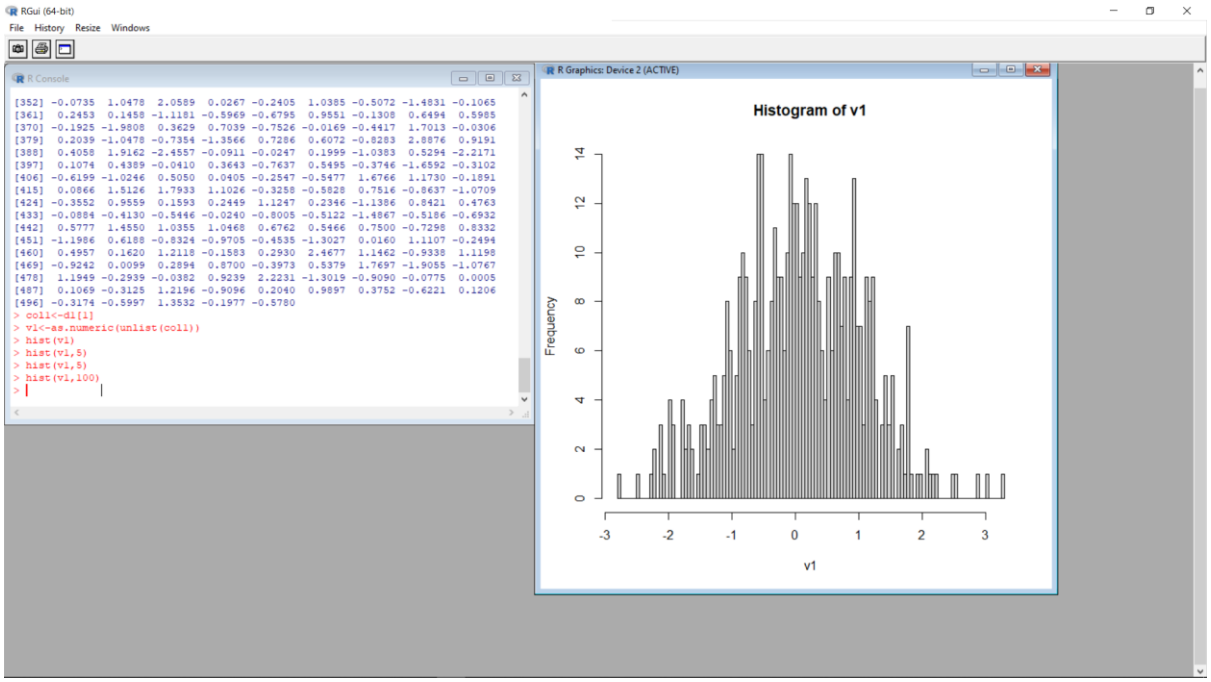
R Console

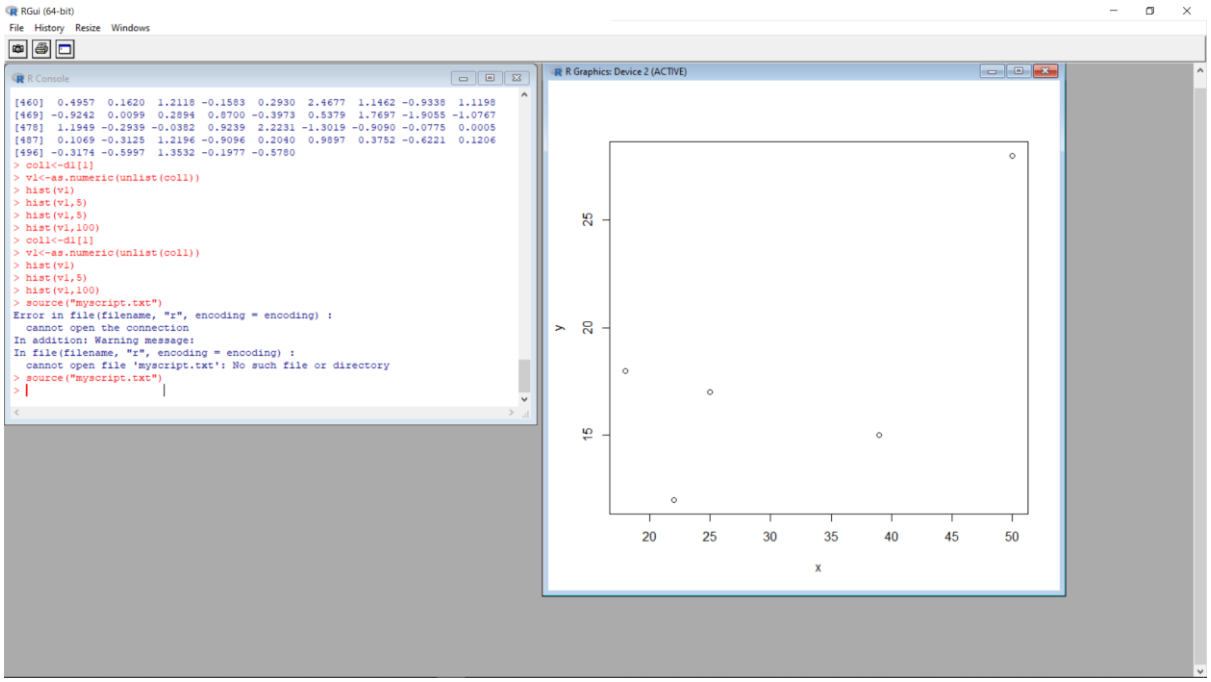
```
-0.9311352 -0.3152630  0.3513107  0.8517520
> fivenum(x)
[1] -2.02365898 -0.62636964  0.06136639  0.67401814  2.82984941
> summary(x)
     Min.   1st Qu.    Median      Mean   3rd Qu.      Max.
-2.023659 -0.609701  0.061366  0.002643  0.673737  2.829849
> getwd()
[1] "C:/Users/Pasindu Chanusha/Documents"
> setwd("C:\Users\Pasindu Chanusha\Desktop\Semester 4\SCS2211 Laboratory II\Sub$
Error: '\U' used without hex digits in character string starting ""C:\U"
> setwd("C:/Users/Pasindu Chanusha/Desktop/Semester 4/SCS2211 Laboratory II/Sub$
> list.files()
[1] "d1.txt" "d2.txt"
> d1<-read.table("d1.txt")
> summary(d1)
       V1                  V2
 Min.   :-2.77120   Min.   :-2.819800
 1st Qu.:-0.58403   1st Qu.:-0.688750
 Median : 0.03610   Median : 0.038650
 Mean   : 0.05106   Mean   : 0.003601
 3rd Qu.: 0.73395   3rd Qu.: 0.685400
 Max.   : 3.26620   Max.   : 2.689000
> plot(d1)
>
```

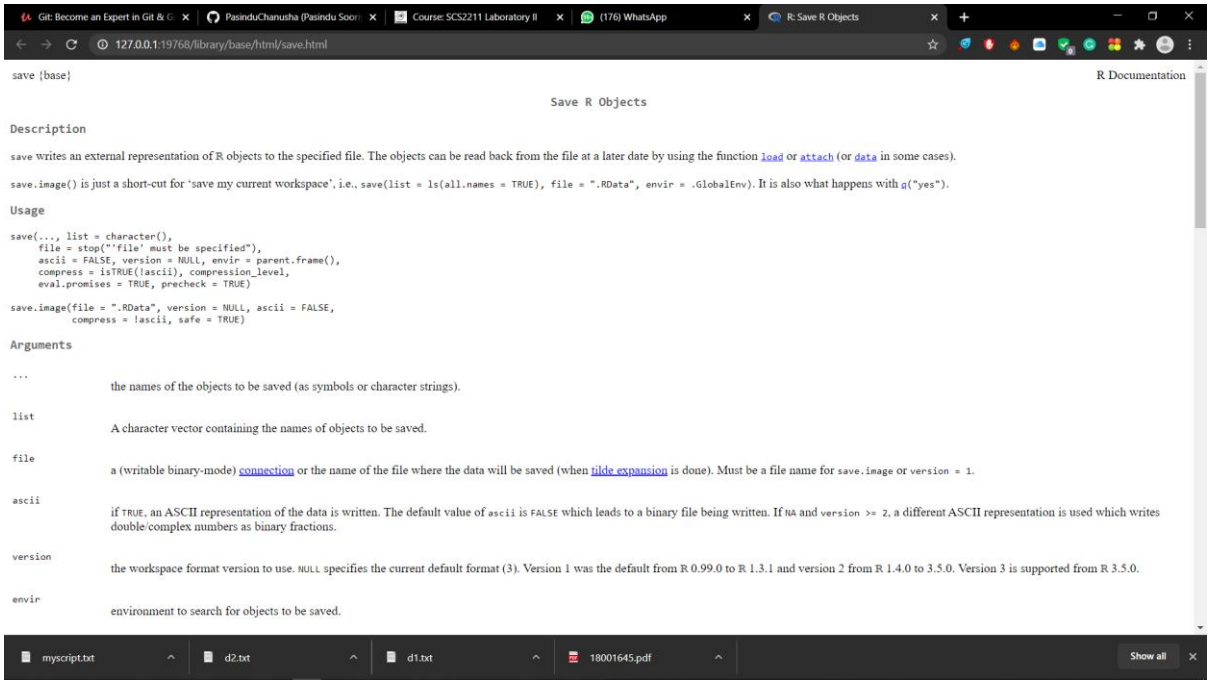
R Graphics: Device 2 (ACTIVE)


RGui (64-bit)
File History Resize Windows
R Console
[325] 0.0179 0.1004 0.8764 0.7007 0.6520 0.1785 1.6760 -0.3251 0.1011
[334] -0.5767 -0.0615 0.7256 -1.2273 0.1909 -0.7348 0.7884 -1.9654 -1.9555
[343] 1.6243 -0.1494 -1.9683 -1.6861 -0.0869 0.3074 0.3375 1.0670 0.3329
[352] -0.0735 1.0478 2.0589 0.0267 -0.2405 1.0385 -0.5072 -1.4831 -0.1065
[361] 0.2453 0.1458 -1.1181 -0.5969 -0.6795 0.9551 -0.1308 0.6494 0.5985
[370] -0.1925 -1.9808 0.3629 0.7039 -0.7526 -0.0169 -0.4417 1.7013 -0.0306
[379] 0.2039 -1.0478 -0.7354 -1.3566 0.7286 0.6072 -0.8283 2.8876 0.9191
[388] 0.4058 1.9162 -2.4557 -0.0911 -0.0247 0.1999 -1.0383 0.5294 -2.2171
[397] 0.1074 0.4389 -0.0410 0.3643 -0.7637 0.5495 -0.3746 -1.6592 -0.3102
[406] -0.6199 -1.0246 0.5050 0.0405 -0.2547 -0.5477 1.6766 1.1730 -0.1891
[415] 0.0866 1.5126 1.7933 1.1026 -0.3258 -0.5828 0.7516 -0.8637 -1.0709
[424] -0.3552 0.9559 0.1593 0.2449 1.1247 0.2346 -1.1386 0.8421 0.4763
[433] -0.0884 -0.4130 -0.5446 -0.0240 -0.8005 -0.5122 -1.4867 -0.5186 -0.6932
[442] 0.5777 1.4550 1.0355 1.0468 0.6762 0.5466 0.7500 -0.7298 0.8332
[451] -1.1986 0.6188 -0.8324 -0.9705 -0.4535 -1.3027 0.0160 1.1107 -0.2494
[460] 0.4957 0.1620 1.2118 -0.1583 0.2930 2.4677 1.1462 -0.9338 1.1198
[469] -0.9242 0.0099 0.2894 0.8700 -0.3973 0.5379 1.7697 -1.9055 -1.0767
[478] 1.1949 -0.2939 -0.0382 0.9239 2.2231 -1.3019 -0.9090 -0.0775 0.0005
[487] 0.1069 -0.3125 1.2196 -0.9096 0.2040 0.9897 0.3752 -0.6221 0.1206
[496] -0.3174 -0.5997 1.3532 -0.1977 -0.5780
> col1<-dl[1]
> v1<-as.numeric(unlist(col1))
> hist(v1)
R Graphics: Device 2 (ACTIVE)
Histogram of v1
Frequency
0
20
40
60
80
-3
-2
-1
0
1
2
3
v1


RGui (64-bit)
File History Resize Windows
R Console
[334] -0.5767 -0.0615 0.7256 -1.2273 0.1909 -0.7348 0.7884 -1.9654 -1.9555
[343] 1.6243 -0.1494 -1.9683 -1.6861 -0.0869 0.3074 0.3375 1.0670 0.3329
[352] -0.0735 1.0478 2.0589 0.0267 -0.2405 1.0385 -0.5072 -1.4831 -0.1065
[361] 0.2453 0.1458 -1.1181 -0.5969 -0.6795 0.9551 -0.1308 0.6494 0.5985
[370] -0.1925 -1.9808 0.3629 0.7039 -0.7526 -0.0169 -0.4417 1.7013 -0.0306
[379] 0.2039 -1.0478 -0.7354 -1.3566 0.7286 0.6072 -0.8283 2.8876 0.9191
[388] 0.4058 1.9162 -2.4557 -0.0911 -0.0247 0.1999 -1.0383 0.5294 -2.2171
[397] 0.1074 0.4389 -0.0410 0.3643 -0.7637 0.5495 -0.3746 -1.6592 -0.3102
[406] -0.6199 -1.0246 0.5050 0.0405 -0.2547 -0.5477 1.6766 1.1730 -0.1891
[415] 0.0866 1.5126 1.7933 1.1026 -0.3258 -0.5828 0.7516 -0.8637 -1.0709
[424] -0.3552 0.9559 0.1593 0.2449 1.1247 0.2346 -1.1386 0.8421 0.4763
[433] -0.0884 -0.4130 -0.5446 -0.0240 -0.8005 -0.5122 -1.4867 -0.5186 -0.6932
[442] 0.5777 1.4550 1.0355 1.0468 0.6762 0.5466 0.7500 -0.7298 0.8332
[451] -1.1986 0.6188 -0.8324 -0.9705 -0.4535 -1.3027 0.0160 1.1107 -0.2494
[460] 0.4957 0.1620 1.2118 -0.1583 0.2930 2.4677 1.1462 -0.9338 1.1198
[469] -0.9242 0.0099 0.2894 0.8700 -0.3973 0.5379 1.7697 -1.9055 -1.0767
[478] 1.1949 -0.2939 -0.0382 0.9239 2.2231 -1.3019 -0.9090 -0.0775 0.0005
[487] 0.1069 -0.3125 1.2196 -0.9096 0.2040 0.9897 0.3752 -0.6221 0.1206
[496] -0.3174 -0.5997 1.3532 -0.1977 -0.5780
> col1<-dl[1]
> v1<-as.numeric(unlist(col1))
> hist(v1)
> hist(v1,5)
R Graphics: Device 2 (ACTIVE)
Histogram of v1
Frequency
0
50
100
150
-3
-2
-1
0
1
2
3
4
v1


RGui (64-bit)
File History Resize Windows
R Console
[352] -0.0735 1.0478 2.0589 0.0267 -0.2405 1.0385 -0.5072 -1.4831 -0.1065
[361] 0.2453 0.1458 -1.1181 -0.5969 -0.6795 0.9551 -0.1308 0.6494 0.5985
[370] -0.1925 -1.9808 0.3629 0.7039 -0.7526 -0.0169 -0.4417 1.7013 -0.0306
[379] 0.2039 -1.0478 -0.7354 -1.3566 0.7286 0.6072 -0.8283 2.8876 0.9191
[388] 0.4058 1.9162 -2.4557 -0.0911 -0.0247 0.1999 -1.0383 0.5294 -2.2171
[397] 0.1074 0.4389 -0.0410 0.3643 -0.7637 0.5495 -0.3746 -1.6592 -0.3102
[406] -0.6199 -1.0246 0.5050 0.0405 -0.2547 -0.5477 1.6766 1.1730 -0.1891
[415] 0.0866 1.5126 1.7933 1.1026 -0.3258 -0.5828 0.7516 -0.8637 -1.0709
[424] -0.3552 0.9559 0.1593 0.2449 1.1247 0.2366 -1.1386 0.8421 0.4763
[433] -0.0884 -0.4130 -0.5446 -0.0240 -0.8005 -0.5122 -1.4867 -0.5186 -0.6932
[442] 0.5777 1.4550 1.0355 1.0468 0.6762 0.5466 0.7500 -0.7298 0.8332
[451] -1.1986 0.6188 -0.8324 -0.9705 -0.4535 -1.3027 0.0160 1.1107 -0.2494
[460] 0.4957 0.1620 1.2118 -0.1583 0.2930 2.4677 1.1462 -0.9338 1.1198
[469] -0.9242 0.0099 0.2894 0.8700 -0.3973 0.5379 1.7697 -1.9055 -1.0767
[478] 1.1949 -0.2939 -0.0382 0.9239 2.2231 -1.3019 -0.9090 -0.0775 0.0005
[487] 0.1069 -0.3125 1.2196 -0.9096 0.2040 0.9897 0.3752 -0.6221 0.1206
[496] -0.3174 -0.5997 1.3532 -0.1977 -0.5780
> col1<-dl[1]
> v1<-as.numeric(unlist(col1))
> hist(v1)
> hist(v1,5)
> hist(v1,5)
> hist(v1,100)
R Graphics: Device 2 (ACTIVE)
Histogram of v1
Frequency
v1
0
2
4
6
8
10
12
14
-3
-2
-1
0
1
2
3


RGui (64-bit)
File History Resize Windows
R Console
[460] 0.4957 0.1620 1.2118 -0.1583 0.2930 2.4677 1.1462 -0.9338 1.1198
[469] -0.9242 0.0099 0.2894 0.8700 -0.3973 0.5379 1.7697 -1.9055 -1.0767
[478] 1.1949 -0.2939 -0.0382 0.9239 2.2231 -1.3019 -0.9090 -0.0775 0.0005
[487] 0.1069 -0.3125 1.2196 -0.9096 0.2040 0.9897 0.3752 -0.6221 0.1206
[496] -0.3174 -0.5997 1.3532 -0.1977 -0.5780
> col1<-dl[1]
> v1<-as.numeric(unlist(col1))
> hist(v1)
> hist(v1,5)
> hist(v1,5)
> hist(v1,100)
> col1<-dl[1]
> v1<-as.numeric(unlist(col1))
> hist(v1)
> hist(v1,5)
> hist(v1,100)
> source("myscript.txt")
Error in file(filename, "r", encoding = encoding) :
cannot open the connection
In addition: Warning message:
In file(filename, "r", encoding = encoding) :
cannot open file 'myscript.txt': No such file or directory
> source("myscript.txt")
R Graphics: Device 2 (ACTIVE)
y
x
15
20
25
20
25
30
35
40
45
50



save {base} R Documentation

## Save R Objects

### Description

save writes an external representation of R objects to the specified file. The objects can be read back from the file at a later date by using the function load or attach (or data in some cases).

save.image() is just a short-cut for 'save my current workspace', i.e., save(list = ls(all.names = TRUE), file = ".RData", envir = .GlobalEnv). It is also what happens with q("yes").

### Usage

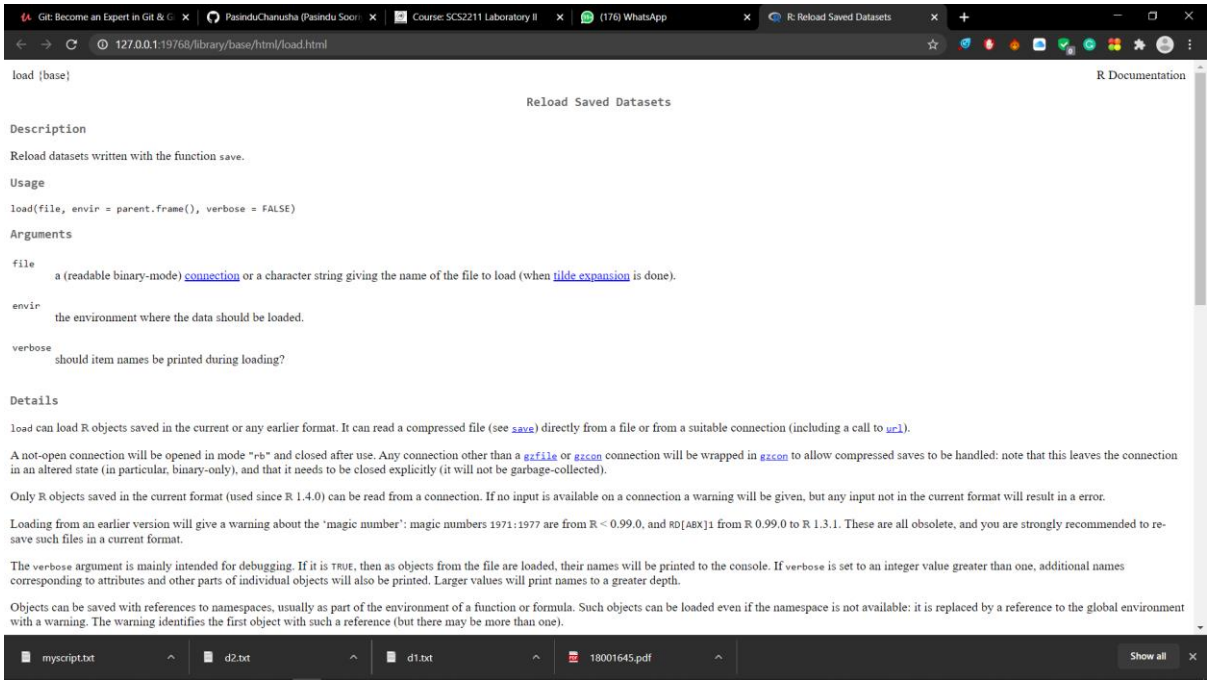
```
save(..., list = character(),
     file = stop("'file' must be specified"),
     ascii = FALSE, version = NULL, envir = parent.frame(),
     compress = isTRUE(!ascii), compression_level,
     eval.promises = TRUE, precheck = TRUE)

save.image(file = ".RData", version = NULL, ascii = FALSE,
           compress = !ascii, safe = TRUE)
```

### Arguments

| | |
|---|---|
| ... | the names of the objects to be saved (as symbols or character strings). |
| list | A character vector containing the names of objects to be saved. |
| file | a (writable binary-mode) connection or the name of the file where the data will be saved (when tilde expansion is done). Must be a file name for save.image or version = 1. |
| ascii | if TRUE, an ASCII representation of the data is written. The default value of ascii is FALSE which leads to a binary file being written. If NA and version >= 2, a different ASCII representation is used which writes double/complex numbers as binary fractions. |
| version | the workspace format version to use. NULL specifies the current default format (3). Version 1 was the default from R 0.99.0 to R 1.3.1 and version 2 from R 1.4.0 to 3.5.0. Version 3 is supported from R 3.5.0. |
| envir | environment to search for objects to be saved. |

myscript.txt d2.txt d1.txt 18001645.pdf Show all



load {base} R Documentation

## Reload Saved Datasets

### Description

Reload datasets written with the function save.

### Usage

```
load(file, envir = parent.frame(), verbose = FALSE)
```

### Arguments

| | |
|---|---|
| file | a (readable binary-mode) connection or a character string giving the name of the file to load (when tilde expansion is done). |
| envir | the environment where the data should be loaded. |
| verbose | should item names be printed during loading? |

### Details

load can load R objects saved in the current or any earlier format. It can read a compressed file (see save) directly from a file or from a suitable connection (including a call to url).

A not-open connection will be opened in mode "rb" and closed after use. Any connection other than a gzfile or gzcon connection will be wrapped in gzcon to allow compressed saves to be handled: note that this leaves the connection in an altered state (in particular, binary-only), and that it needs to be closed explicitly (it will not be garbage-collected).

Only R objects saved in the current format (used since R 1.4.0) can be read from a connection. If no input is available on a connection a warning will be given, but any input not in the current format will result in a error.

Loading from an earlier version will give a warning about the 'magic number': magic numbers 1971:1977 are from R < 0.99.0, and RD[ABX]1 from R 0.99.0 to R 1.3.1. These are all obsolete, and you are strongly recommended to re-save such files in a current format.

The verbose argument is mainly intended for debugging. If it is TRUE, then as objects from the file are loaded, their names will be printed to the console. If verbose is set to an integer value greater than one, additional names corresponding to attributes and other parts of individual objects will also be printed. Larger values will print names to a greater depth.

Objects can be saved with references to namespaces, usually as part of the environment of a function or formula. Such objects can be loaded even if the namespace is not available: it is replaced by a reference to the global environment with a warning. The warning identifies the first object with such a reference (but there may be more than one).

myscript.txt d2.txt d1.txt 18001645.pdf Show all