

TinnR Editor 的基礎使用

by

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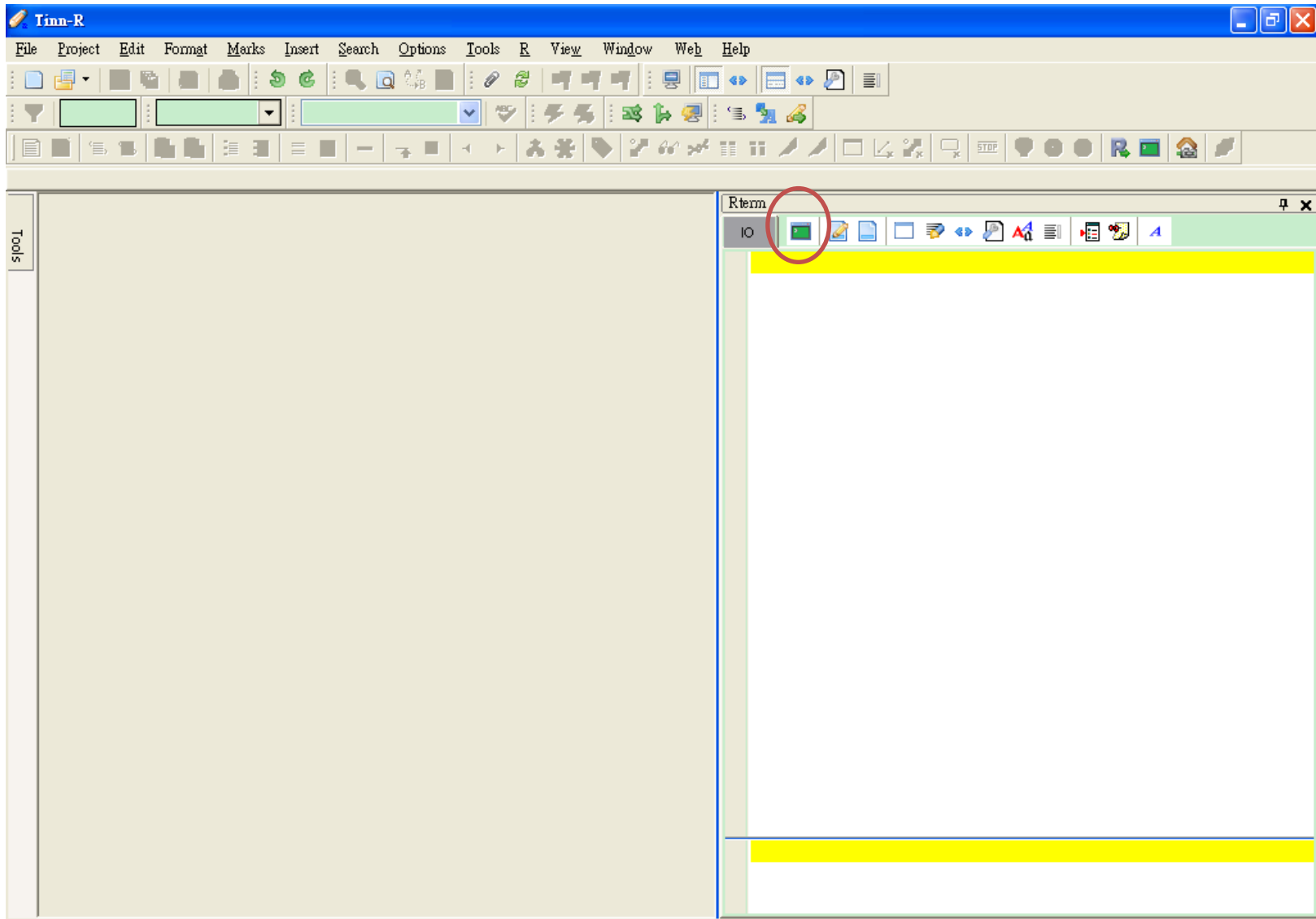
TinnR 的簡介

- 使用程式語言，須要很好的 Editor 編輯器。在各種系統，均有專屬的內建 Editor。例如，Matlab、Gauss、Stata 和 OX 等，都有其專用寫程式的區塊，這就是 Editor。Unix 系統下的 Emacs，以及 VBA 語法環境等等也是 Editor。
- R 是開放源碼，因此除了內建的 Editor 之外，也有許多組件，是和 R 完整密合的 Editor。
 - TinnR 是一個非常好用予寫 R 程式的 Editor。
 - 在程式部分，能夠顯示色彩區分物件類別
 - 設定工作目錄(set working directory)非常簡便。
 - 執行部分程式等等，非常簡便與多樣。
 - 使用 Latex 做爲文字編輯的載入與輸出。

TinnR 的裝置與基本使用

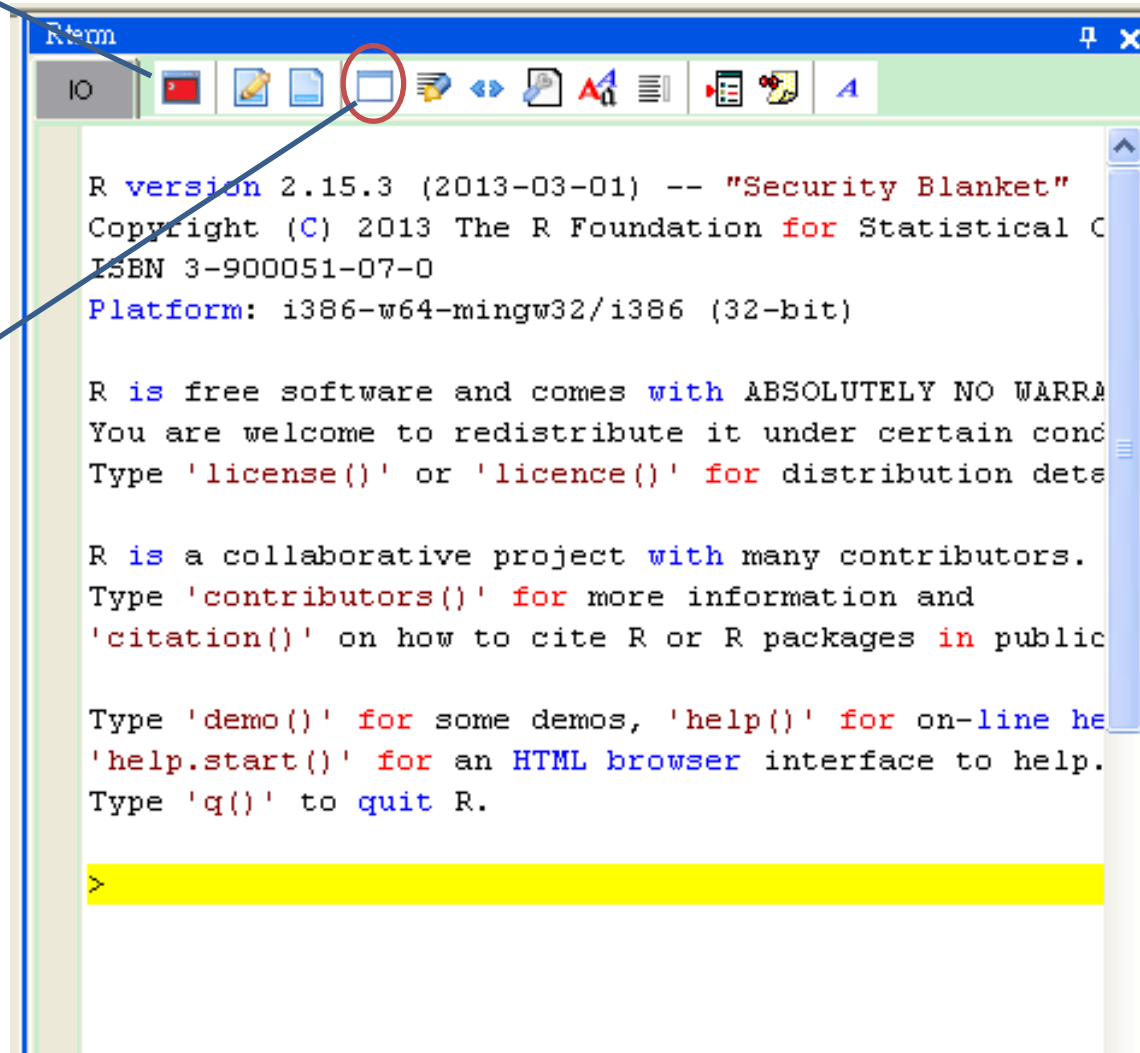
- 確定您的電腦已經裝置R完畢。
- 連結到數量中心 R 的學習資源網站，下載 TinnR，執行。TinnR 也是開放源碼，不用擔心，不是非法破解版。
- 執行下載的執行檔。
- 依後面三個步驟練習，您就進入TinnR 的使用者行列。
- 建議您已經使用過 R 內建的 Editor 。

Step 1. Open Rterm



請動後，反紅

清除視窗內文字



The image shows a screenshot of an R terminal window. The window title is "Rterm". The toolbar contains several icons, with the "Clear" icon (a white square with a black border) circled in red. A blue line connects this icon to a callout box on the left that says "請動後，反紅". Another blue line connects the "Clear" icon to a callout box on the left that says "清除視窗內文字". The terminal text is as follows:

```
R version 2.15.3 (2013-03-01) -- "Security Blanket"
Copyright (C) 2013 The R Foundation for Statistical Computing
ISBN 3-900051-07-0
Platform: i386-w64-mingw32/i386 (32-bit)

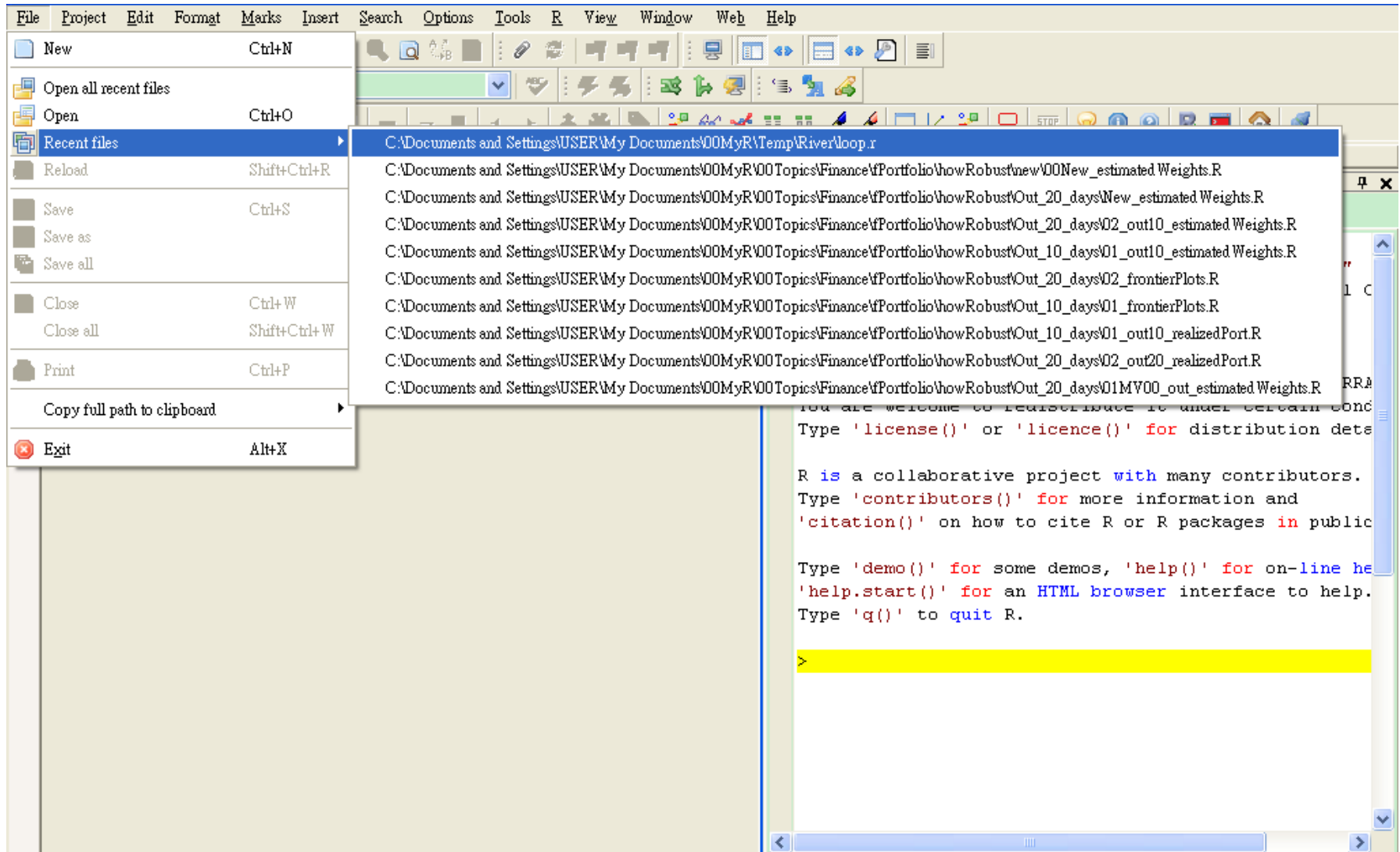
R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

>
```

Step 2. Open a File



Step 3. Set Working Directory (方法1)

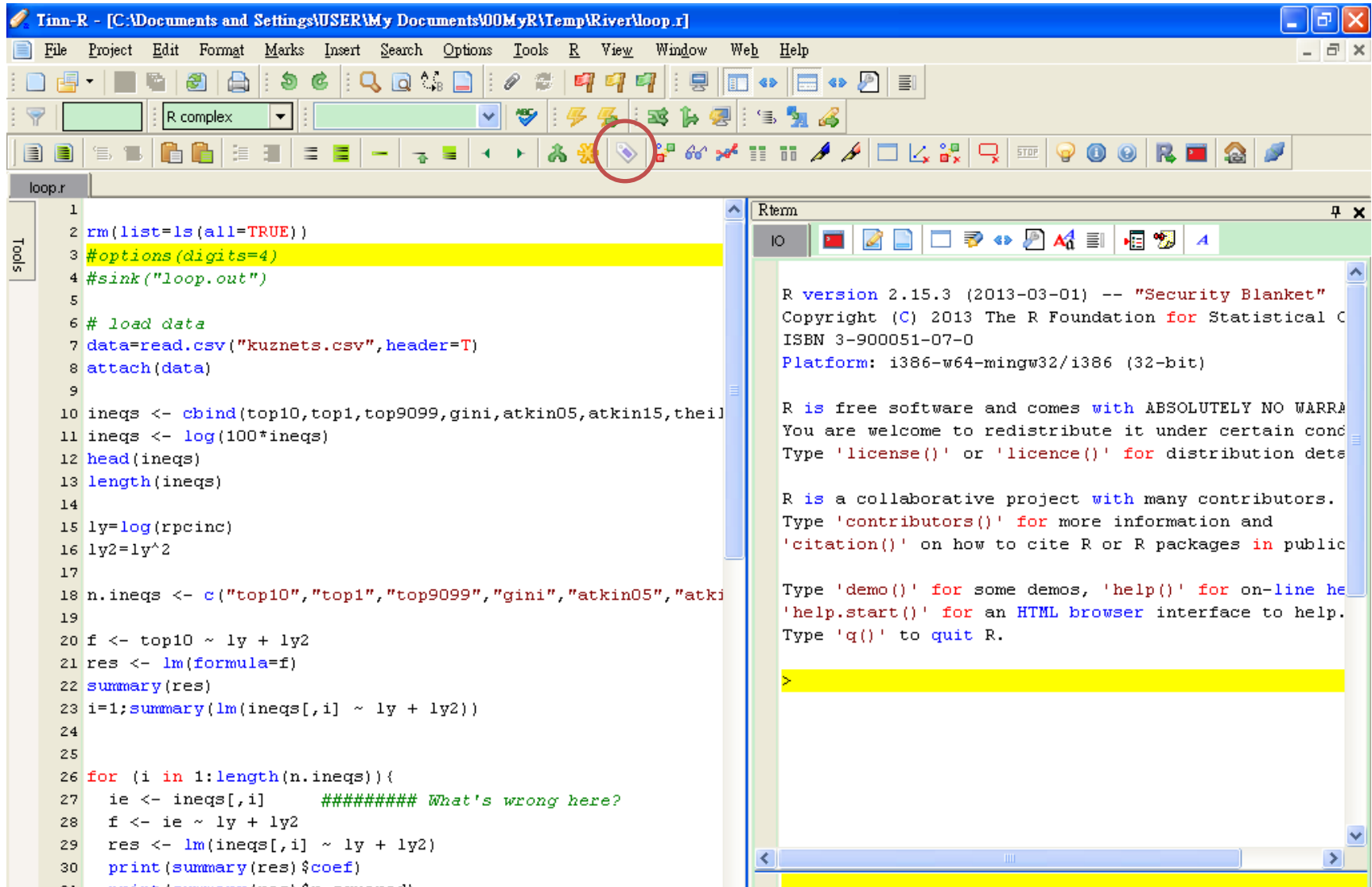
The screenshot shows the RStudio interface with the 'Control' menu open. The menu items are:

- Start/close and connections
- Rterm
- Customize
- Configure
- Send
- Editor: current line to top
- Control**
 - Set work directory (current file path)**
 - List all objects
 - Print content (selected)
 - List names (selected)
 - List structure (selected) F2
 - Edit (selected)
 - Fix (selected)
 - Plot (selected)
 - Clear console F9
 - Close all graphic devices F10
 - Remove all objects F11
 - Clear all F12
 - Escape
 - Help (selected) F1
 - Example (selected)
 - Help
 - Packages
- Hotkeys (operational system)

The background shows the R script editor with the following code:

```
1  
2 rm(list=ls(all=TRUE))  
3 #options(digits=4)  
4 #sink("loop.out")  
5  
6 # load data  
7 data=read.csv("kuznets.csv",header=T)  
8 attach(data)  
9  
10 ineqs <- cbind(top10,top1,top9099,gini,atkin05,atkin15,theil)  
11 ineqs <- log(100*ineqs)  
12 head(ineqs)  
13 length(ineqs)  
14  
15 ly=log(rpcinc)  
16 ly2=ly^2  
17  
18 n.ineqs <- c("top10","top1","top9099","gini","atkin05","atki  
19  
20 f <- top10 ~ ly + ly2  
21 res <- lm(formula=f)  
22 summary(res)  
23 i=1;summary(lm(ineqs[,i] ~ ly + ly2))  
24  
25  
26 for (i in 1:length(n.ineqs)){  
27 ie <- ineqs[,i] ##### What's wrong here?  
28 f <- ie ~ ly + ly2
```

Step 3. Set Working Directory (方法2)



The screenshot displays the RStudio interface. The top menu bar includes File, Project, Edit, Format, Marks, Insert, Search, Options, Tools, R, View, Window, Web, and Help. The toolbar below the menu contains various icons, with a red circle highlighting the 'Set Working Directory to Source File Location' icon (a folder with a magnifying glass). The main editor window shows a script named 'loop.r' with the following code:

```
1
2 rm(list=ls(all=TRUE))
3 #options(digits=4)
4 #sink("loop.out")
5
6 # load data
7 data=read.csv("kuznets.csv",header=T)
8 attach(data)
9
10 ineqs <- cbind(top10,top1,top9099,gini,atkin05,atkin15,theil)
11 ineqs <- log(100*ineqs)
12 head(ineqs)
13 length(ineqs)
14
15 ly=log(rpcinc)
16 ly2=ly^2
17
18 n.ineqs <- c("top10","top1","top9099","gini","atkin05","atkin15")
19
20 f <- top10 ~ ly + ly2
21 res <- lm(formula=f)
22 summary(res)
23 i=1;summary(lm(ineqs[,i] ~ ly + ly2))
24
25
26 for (i in 1:length(n.ineqs)){
27   ie <- ineqs[,i] ##### What's wrong here?
28   f <- ie ~ ly + ly2
29   res <- lm(ineqs[,i] ~ ly + ly2)
30   print(summary(res)$coef)
31   print(summary(res)$r.squared)
```

The R console window on the right shows the following output:

```
Rterm
IO
R version 2.15.3 (2013-03-01) -- "Security Blanket"
Copyright (C) 2013 The R Foundation for Statistical Computing
ISBN 3-900051-07-0
Platform: i386-w64-mingw32/i386 (32-bit)

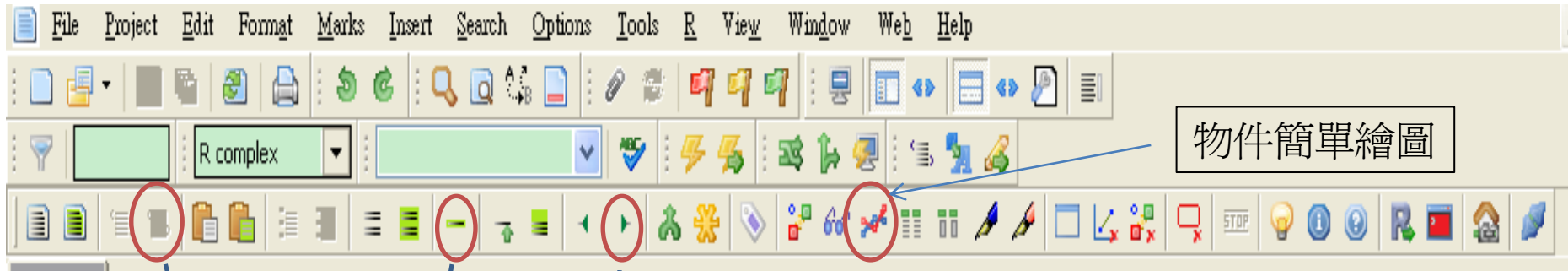
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'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

>
```


Practice. 利用下述 code, 練習 4 個 icon



執行單行程式

欲執行多行程式

欲執行單行中的單個物件(字)使用，**block**文字後才會顯示。例如，**block** 右方的 **y**, 再按此。

```
data=matrix(rnorm(300),,3)
x1=data[,1]
x2=data[,2]
rsd=data[,3]
```

```
y=3-1.5*x1+0.2*x2+rsd
```

```
out=lm(y~x1+x2)
```

```
summary(out)
```

```
plot(out,which=1)
```