R Programming with MongoDB

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Outline

Installation of R

Installation of RStudio

Installation of Mongo

Integration of Rmongo package into Rstudio

Program in RMongo

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R is a programming language and software environment for statistical analysis, graphics representation and reporting.

Installation of R

https://cran.r-project.org/

Download R for Windows

install R for the first time.

Download R 3.3.2 for Windows (62 megabytes, 32/64 bit)





Open File	- Security W	/arning 🗾
The pu run this	blisher cou s software?	ld not be verified. Are you sure you want to
	Name:	C:\Users\Gurukul\Downloads\R-3.3.2-win.exe
	Publisher:	Unknown Publisher
	Type:	Application
	From:	C:\Users\Gurukul\Downloads\R-3.3.2-win.exe
		Run Cancel
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😼 Setup - R for Windows 3.3.2	
Information Please read the following important information before continuing.	R
When you are ready to continue with Setup, click Next.	
GNU GENERAL PUBLIC LICENSE Version 2, June 1991	<u>^</u>
Copyright (C) 1989, 1991 Free Software Foundation, Inc. 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.	
Preamble	
The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free softwareto make sure the software is free for all its users. This General Public License applies to most of the Free Software	Ŧ
< Back Next >	Cancel

🕞 Setup - R for Windows 3.3.2	
Select Destination Location Where should R for Windows 3.3.2 be installed?	R
Setup will install R for Windows 3.3.2 into the following folder.	
To continue, click Next. If you would like to select a different folder, clic	k Browse.
C:\Program Files\R\R-3.3.2	Browse
At least 1.2 MB of free disk space is required.	
< Back Next >	Cancel

Setup - R for Windows 3.3.2	- 0 💌
Select Components Which components should be installed?	R
Select the components you want to install; clear the components you do install. Click Next when you are ready to continue.	not want to
32-bit User installation	•
Core Files	67.0 MB
32-bit Files	43.8 MB
64-bit Files	44.5 MB
Message translations	7.3 MB
Current selection requires at least 111.8 MB of disk space.	
< Back Next >	Cancel

🕞 Setup - R for Windows 3.3.2		- • •
Startup options Do you want to customize the startup options?	?	R
Please specify yes or no, then click Next.		
Yes (customized startup)		
 No (accept defaults) 		
	< Back Next >	Cancel

🔁 Setup - R for Windows 3.3.2	
Select Start Menu Folder Where should Setup place the program's shortcuts?	R
Setup will create the program's shortcuts in the following Start N	1enu folder.
To continue, click Next. If you would like to select a different folder, click	Browse.
2	Browse
Don't create a Start Menu folder	
< Back Next >	Cancel

🔁 Setup - R for Windows 3.3.2	- • -
Select Additional Tasks Which additional tasks should be performed?	R
Select the additional tasks you would like Setup to perform while installing Windows 3.3.2, then click Next.	R for
Additional icons:	
Create a desktop icon	
Create a Quick Launch icon	
Registry entries:	
Save version number in registry	
Associate R with .RData files	
< Back Next >	Cancel

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You will see following Icon on your Desktop after successful completion of R Installation



R....First look

🙀 RGui (32-bit)	
File Edit View Misc Packages Windows Help	
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🙀 R Console	- • x
R version 3.3.2 (2016-10-31) "Sincere Pumpkin Patch" Copyright (C) 2016 The R Foundation for Statistical Computing Platform: i386-w64-mingw32/i386 (32-bit)	A
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.	
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4	E. 4

R....First Command

😨 R Console

```
R version 3.3.2 (2016-10-31) -- "Sincere Pumpkin Patch"
Copyright (C) 2016 The R Foundation for Statistical Computing
Platform: i386-w64-mingw32/i386 (32-bit)
```

```
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'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.
```

```
> myString <- "Hello to R World!"
> myString
[1] "Hello to R World!"
> |
```

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Installation of R studio

RStudio makes R easier to use. It includes a code editor, debugging & visualization tools.

RStudio is a set of integrated tools designed to help you be more productive with R. It includes a console, syntax-highlighting editor that supports direct code execution, and a variety of robust tools for plotting, viewing history, debugging and managing your workspace.

Installation of R studio....

Open a browser and type following Web address

http://www.rstudio.com

Installation of R studio...

 Following page will be displayed click on suitable option that you want to download(Here I downloaded Rstudio Desktop-Opensource)



Installation of R studio.....

Select proper version of Rstudio according to your OS Version.



rstudio::conf Products Resources

Pricing About Us

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KOLUUIO DESKLOP 1.0.100 - RELEASE NOLES

RStudio requires R 2.11.1+. If you don't already have R, download it here.

Installers for Supported Platforms

Installers	Size	Date	MD5
RStudio 1.0.136 - Windows Vista/7/8/10	81.9 MB	2016-12-21	93b3f307f567c33f7a4db4c114099b3e
RStudio 1.0.136 - Mac OS X 10.6+ (64-bit)	71.2 MB	2016-12-21	12d6d6ade0203a2fcef6fe3dea65c1ae
RStudio 1.0.136 - Ubuntu 12.04+/Debian 8+ (32-bit)	85.5 MB	2016-12-21	0a20fb89d8aaeb39b329a640ddadd2c5
RStudio 1.0.136 - Ubuntu 12.04+/Debian 8+ (64-bit)	92.1 MB	2016-12-21	2a73b88a12a9fbaf96251cecf8b41340
RStudio 1.0.136 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	84.7 MB	2016-12-21	fa6179a7855bff0f939a34c169da45fd
RStudio 1.0.136 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	85.7 MB	2016-12-21	2b3a148ded380b704e58496befb55545

Installation of R studio.....

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	📜 RStudio-1.0.13	36.zip				1
	which is: Comp from: https://d	pressed (zip lownload1.	ped) Folder (rstudio.org	118 MB)		
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	Save File					
	Do this <u>a</u> utor	matically fo	r files like this	from now o	n.	Ę
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				OK	Cancel	
					2	
			Click	on Sav	ve File (Option

Installation of R studio.....



RStudio-1.0.136.zip 118 MB — rstudio.com — 3:30 PM



R-3.3.2-win.exe 70.4 MB — r-project.org — 2:31 PM



2259_customer_satisfaction.zip

302 KB — free-power-point-templates.com — 11:33 AM

Show All Downloads



R studio has Installed successfully



Open R studio folder and click on bin folder

rganize 👻 Include	in library ▼ Share with ▼ New fo	older		
Favorites	Name	Date modified	Туре	Size
n Desktop	🌗 bin	2/8/2017 3:32 PM	File folder	
🐌 Downloads	퉬 R	2/8/2017 3:32 PM	File folder	
📃 Recent Places	resources	2/8/2017 3:32 PM	File folder	
	i www	2/8/2017 3:32 PM	File folder	
Libraries	퉬 www-symbolmaps	2/8/2017 3:32 PM	File folder	
Documents	COPYING	11/30/2016 8:33 PM	File	35 KB
J Music	INSTALL	11/30/2016 8:33 PM	File	6 KB
Pictures	NOTICE	11/30/2016 8:33 PM	File	167 KB
📑 Videos	README.md	11/30/2016 8:33 PM	MD File	2 KB
	SOURCE	11/30/2016 10:50	File	1 KB
👌 Homegroup	VERSION	11/30/2016 8:56 PM	File	1 KB

Find rstudio in bin folder and click on it.





RStudio							
File Edit Code View Plots Session Build	Debug Profile Tools Help						
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2 myString	line or selection	Va	lues				
	(Ctrl+Enter)	r	myString	"Hell	o to R Wo	nld!"	
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R version 3.3.2 (2016-10-31) "Sin Copyright (C) 2016 The R Foundation Platform: i386-w64-mingw32/i386 (32-	cere Pumpkin Patch" for Statistical Computing bit)						
R is free software and comes with AB You are welcome to redistribute it u Type 'license()' or 'licence()' for	SOLUTELY NO WARRANTY. nder certain conditions. distribution details.						
R is a collaborative project with ma Type 'contributors()' for more infor 'citation()' on how to cite R or R p	ny contributors. mation and ackages in publications.						
Type 'demo()' for some demos, 'help('help.start()' for an HTML browser i Type 'q()' to quit R.)' for on-line help, or nterface to help.						

Ctr+L to clear console screen

🗷 RStu	idio																	
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Installation of Mongo

Create one folder eg SNJB in bin folder of MongoDB

Goto command prompt

Goto bin dir of MongoDB and write following command

mongod --storageEngine=mmapv1 --dbpath SNJB (Server will started and listen at 27017 port)

Open another command prompt and give command mongo (Client will be started)

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RMongo & rjava Packages in RStudio

- Open Rstudio and on console write
- >install.packages("Rmongo")
- If error comes for Internet Connection then
 Set no proxy setting
 - Set no proxy setting
 - Default browser set Internet Explorer
- In Rstudio Menu ->Tool ->Global Options -> Packages -> Uncheck use Inrenet explorer library/proxy for HTTP and try again to install.packages("Rmongo")

RMongo & rjava Packages in RStudio

- In right side bottom window in Rstudio
- Package tab
- Check rjava and Rmongo
- If error comes then need to install java version from official website which will be compatible with R version you are using.
- If no error comes then write following command on console
- >help(package=Rmongo)

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First RMongo Script/Program

library(RMongo)
mg1<-mongoDbConnect('db1')
dbShowCollections(mg1)
dbInsertDocument(mg1,"stud",'{rno:1,name:"Amit"}')
res<-dbGetQuery(mg1,'stud',"{ }")
print(res)</pre>

• Note: Before running script make sure that Mongo Server is started.