Setting Up the development environment for Ruby on Rails -- for Windows 7 without using Cygwin --Lecture Material for Object Oriented WEB Programming using Ruby, 2012, with the versions on May 15, 2012

When we set up Ruby on Rails on windows 7, the procedures differ from the case with Cygwin and without Cygwin. So, the first course material had been written for those Computers with Cygwin environment of the juniors' model of Hosei University. However, (probably,) when the development environment for Android OS applications had been installed, Cygwin did not support 'rvm' installation from gems, and such problems occurred. We may be able to avoid those problems by changing the configuration of tools, but to avoid spending time in vain (from trials and errors,) here the course lecture material to set up Ruby On Rails without Cygwin Environment.

<u>Step 1: Install msysgit</u>

Connect to the repository of "msysgit."

http://code.google.com/p/msysgit/downloads/list

Here we choose Git-1.7.10-preview20120409.exe. Download and execute.

\varTheta 🔿 🕤 Do	wnloads - msysgit - Git for Windows - Google	e Project Hos	ting	
👩 Downloads - msysgit - Git for 🕂				
code.google.com/p/msysgit/downloads/list		☆ マ ሮ (- Google	q
				My
Git for Windows				
Project Home Downloads Wiki Source				
Search Current downloads + for	Search			
Filename 🔻	Summary + Labels V	Uploaded v	ReleaseDate v	Size v Dov
Git-1.7.10-preview20120409.exe	Full installer for official Git for Windows 1.7.10 Featured Beta	Apr 9		14.6 MB
PortableGit-1.7.10-preview20120409.7z	Portable application for official Git for Windows 1.7.10 Beta Featured	Apr 9		19.6 MB
msysGit-netinstall-1.7.10-preview20120409.exe	Net installer if you want to hack on Git Beta Featured	Apr 9		2.7 MB
msysGit-fullinstall-1.7.10-preview20120409.exe	Full installer (self-contained) if you want to hack on Git \ensuremath{Beta} Featured	Apr 9		39.8 MB
Git-1.7.9-preview20120201.exe	Full installer for official Git for Windows 1.7.9	Feb 1	Feb 1	14.4 MB

This is the installation tool of Git for Windows.

🕹 Git-1.7.10-preview20120409.e	xe - msysgit - Full installer f	for official Git for V	Vindows 1.7.10 - Git fo	r Windows - Google	Proj 🗆 🔍 🗙
ファイル(E) 編集(E) 表示(⊻) 履	歴(<u>S)</u> ブックマーク(<u>B</u>) ツー	-ル(I) ヘルプ(<u>H</u>)	and should show the same		
@ Git-1.7.10-preview20120409.e	xe +				
				My	<u>favorites</u> ▼ <u>Sign in</u>
moverit					
🛭 🛓 MSYSGIL					
Git for Windows					Search projects
Project Home Downloads	Wiki Source				
Search Current downloads	✓ for full installer official git		Search		
Download: Full installer 1 55 people starred Uploaded by: johannes@gmail.cor	for official Git for Win this download n	1.7.10 ndows			
Released: Uploaded: Apr 9, 2012	File:	Git-1.7.10	-preview2012040	9.exe 14.6 MB	
Downloads: 136520	Description:				
Type-Installer	SHA1 Checksum: 78f	764d486640e40fa0	41d584ade8b08095897	40 What's this?	
Featured					
Beta	FET3:036	ล			
Order-1		-1			
	- A9124309				
	- KRYZ/200	è .			
	N20155623				

There would be several confirmation if you could execute the programs downloaded from Internet Environment, please answer [Yes] to permit the execution. When the Installation is invoked, the following screen would appear.

😸 Git Setup	
	Welcome to the Git Setup Wizard
	This will install Git version 1.7.10-preview20120409 on your computer.
	It is recommended that you close all other applications before continuing.
	Click Next to continue, or Cancel to exit Setup.
6	
	Next > Cancel

Simply click 'Next.'

Click 'Next' for the GNU License agreement screen, after reading it through.



We invoke git via GUI (by clicking desktop icon), and we may not start it from command prompt. Therefore, we do not change the installation path from the default settings.

😸 Git Setup		
Select Destination Locat Where should Git be insta	ion Illed? # Git Setup	
Setup will instal To continue, click Next. J C:¥Program Files¥Git	Select Components Which components should be in Select the components you war install. Click Next when you are	Installed?
At least 75.5 MB of free http://msysgit.googlecode.com/	Additional icons In the Quick Launch On the Desktop Windows Explorer integrat Simple context menu (F Git Bash Here Git GUI Here Git GUI Here O Advanced context mer	Select Start Menu Folder Where should Setup place the program's shortcuts? Setup will create the program's shortcuts in the following Start Menu folder. To continue, click Next. If you would like to select a different folder, click Browse.
	Associate .git* configurati	Browse
		Don't create a Start Menu folder http://msysgit.googlecode.com/

Not change from default settings. Simply click 'Next' for above pop-ups. Register to Start Menu with the name of 'Git'. I have not tried the multi-git environment, so if you need to distinguish those gits clearly, use the name of 'msysgit' for Start Menu registration.



For PATH setting, give check mark to 'Use Git Bash Only.'

Especially here, I am scared of competition between msysgit and Cygwin, (especially for Android Application Development Environment,) so, when it had come to the situation we had to change the PATH for msysgit, we do it manually, set up tools manually, and we do not change PATH automatically.

* In case you freely install Msysgit for the Windows 7 without Cygwin environment, it would be better using the option appeared the below most, (i.e. modify PATH, and use UNIX tools also.) For this case, our policy is to install rails via gems without using 'DevKit,' and we use DevKit only when the following errors appeared in the command line messages.

ERROR: Error installing rails:

The 'json' native gem requires installed build tools.

This course material is written on condition that there is Cygwin environbment, but we do not use Cygwin for Ruby on Rails.



For next option, we choose default option for using 'CRLF,' shown in the top most.

This is for using this Windows 7 PC as a server in this course, so that we could read and edit the text files easily on this Windows 7 environment.

<u>.</u>	Git Setup	
	Installing Please wait while Setup installs Git on your computer.	9
	Extracting files C:¥Program Files¥Git¥doc¥git¥html¥git-rm.html	
http	o://msysgit.googlecode.com/	Cancel

Wait until the installation is finished.

😸 Git Setup	
	Completing the Git Setup Wizard
	Setup has finished installing Git on your computer. The application may be launched by selecting the installed icons.
	Click Finish to exit Setup.
	View ReleaseNotes.rtf
6	
	Finish

If you see this screen, the installation is done.

This course memo is written on condition the Cygwin is installed, so if you need to install Ruby on Rails with Msysgit, please decide the tools carefully, depending

which kinds of tools are installed on that computer.

Step 2: Install Ruby

Ruby is already installed in Cygwin Environment, but we want to disconnect Cygwin and this Msysgit environment, we install ruby 1.9.2 independently from Cygwin for Windows 7. First, connect to the following site: http://rubyinstaller.org/



Click the most conspicuous Download button.



The latest version 1.9.3, but other materials are written on the basis of using 1.9.2, so choose Version 1.9.2.



Download and execute.

Kuby 1.9.2-p290 License Agreement		
Please read the following License Agreement and accept the the installation.	e terms before con	tinuing
Copyright (c) 2007-2011 RubyInstaller Team. All rights reserved. Except:		A II
Ruby is copyrighted free software by Yukihiro Matsumoto http://www.ruby-lang.org/en/LICENSE.txt		
The Book of Ruby is copyrighted by Huw Collingbourne. http://www.sapphiresteel.com/The-Book-Of-Ruby		÷
 I accept the License I dedine the License 		

Accept the license, and go Next.



We click Tcl/tk and add ruby PATH to the system environment variable. The reason is that we do want to tell Cygwin that there is msysgit, but we want to tell the presence of ruby1.9.2 to msysgit, and also we (may) have some chance to use tcl/tk during the build and installation.

- There is a warning message on the screen, this PATH setting may affect other development environment. In case this may badly affect Android Emulator environment, remove the system PATH of ruby binary manually, and add C:¥buty192¥bin path manually to git bash environment.
- If you failed to install with this memo, (or badly affect other development projects,) please consult the lecturer or TA.

Click install button.

Folder Exi	sts
?	The folder:
	C:¥Ruby192
	already exists. Would you like to install to that folder anyway?
	(まい(Y) いいえ(N)

The installer ask you to create the ruby192 folder, answer "YES."



Now the installation starts.



If you see this popup, the installation of Ruby 1.9.2 finished.

Step 3: (Skip) installation of MinGW

I leave the following memo with my first trial of installation. Step 4 is the installation of DevKit, and there is MinGW included in DevKit, so it is not needed to install MinGW separately. So we skip this procedure.

Just in case you failed to install DevKit, please follow this 'Step 3', to install MinGW.

Currently, I am not certain if we need MinGW installation for our purpose. The reason why the procedure is left in this material is I could have passed through the compile errors on the system environment both Android development and Cygwin for ruby. So, this may be one of the hints to solve the installation problem. Connect to the following site.

http://sourceforge.net/projects/mingw/files/

If you have installed MinGW for Android Application development environment already, this Step 3 is not needed.

C for sourceforge.net/projects/mingw/file	s/ ☆ ▼ 🛃 - mingw イ
SOURCEFORGE Find Open Source Software Br	owse Blog Support Jobs Newsletters Resources
ADL Uncompressor	無料ダウンロード
MinGW - Minimalist GNU for Windows 👞 estrauss	, cwilso11, earnie, keithmarshall
Summary Files Reviews Support Develop Host	ed Apps Tracker Mailing Lists Forums Code
Looking for the latest version <mark>Download mingw-get-inst-2012</mark> Home	0426.exe (662.7 kB) /Installer/mingw-get-inst/mingw-get-inst-2012 20120426.exe: released on 2012-04-27 02:48:5

Simply download the latest version.



After waiting for a moment, you would see the file save popup. Download and execute.





Check to download the latest catalog from the repository.

But if you have any anxiety about the consistency with other tools, (for my case, I had installed MinGW, then removed, several times, so you may not

face with this selection, though,) you may choose to use the pre-packaged repository catalogues, or even you may need not to install MinGW.



Please agree with the license condition.





🔣 Setup - MinGW-Get		
Select Start Menu Folder Where should Setup place the program's shortcuts?		
Setup will create the program's shortcuts in the following Start Menu fol	ler.	ínexť.
To continue, click Next. If you would like to select a different folder, click Browse.		
MinGW Browse		
Don't create a Start Menu folder	Cancel	
🕅 Setup - MinGW-Get		
Select Components Choose which optional components of MinGW to install (the C compiler is always installed)	Choose only	C compiler.
MinGW Compiler Suite	If you want	to enjoy Ada and
······································	angh alaga	ical programming
- Ohic Compiler	such class.	ical programming
Ada Compiler	languages, t	there would be no
	harm by doi	าฐรถ
	marin by don	15 50.
< Back Next > Cancel		
M Setup - MinGW-Get		
		Click (Install)
Ready to Install Setup is now ready to begin installing MinGW-Get on your computer.		Olick Ilistali
Click Install to continue with the installation, or click Back if you want to change any settings.	o review or	
Installing:	*	
mingw-get pkginfo		
C Compiler		
Downloading latest repository catalogues		
Destination location:		
C:¥MinGW		
	~	
×	+	
< Back Insta	Cancel	

C:¥Windows¥system3	2¥cmd.exe
Update catalogue:	package-list.xml
Update catalogue:	mingw32-package-list.xml
Update catalogue:	mingw32-autoconf.xml
Update catalogue:	mingw32-automake.xml
Update catalogue:	mingw32-basic-bsdtar.xml
Update catalogue:	mingw32-binutils.xml
Update catalogue:	mingw32-bzip2.xml

Download immediately, and start the repository update screen.

Just wait.

It depends on the communication speed, but

you have to wait only several minutes to 20-30 minutes at most...



If you saw this popup message, it finished.

Step 4: Install DevKit

The reason why we need to install DevKit is described in the following site; http://supportdoc.net/support-ror3/devkit.html

We could know the necessity of installing DevKit with the following error message;

Please update your PATH to include build tools or download the DevKit

from 'http://rubyinstaller.org/downloads' and follow the instructions at 'http://github.com/oneclick/rubyinstaller/wiki/Development-Kit'

As the result, we need to install DevKit. Download the file;

DevKit⁻tdm⁻32⁻4.5.2⁻20111229⁻1559⁻sfx.exe

from the site;

http://rubyinstaller.org/downloads

* Please note, that we are going to use ruby 1.9.2, so the DevKit must be the version 4.5.2, from the following message.

NOTE: for the legacy RubyInstaller v1.8.6 use the DevKit-3.4.5 available at our archive downloads page. For RubyInstaller versions 1.8.7, 1.9.2, and 1.9.3 use the DevKit 4.5.2 from our main downloads page.

If you had already installed other C compiler environment from MinGW or other tools, the message above may not shown. There could be the option that you install DevKit only when you faced with the above error message, and skip this step 4.

When you install DevKit, you would find the DevKit Install in the same screen where we obtained the Ruby installer.

Download the file, DevKit-tdm-32-4.5.2-20111229 -1559-sfx.exe and run.



It is a self decompression file, so if you start running, decompression starts. But it develop files WITHOUT CREATING parent folder, so please specify the parent (new) folder by yourself. Here we give the name of 'DevKit.'



37% Extracting	x.
	Cancel

When decompression ended, open the parent folder. Chage Directory (cd) to the given folder. You can use bash of msysgit.



In the 'Devkit' developed folder, run the following command.

ruby dk.rb init

If you receive the message;

Initialization complete!

then, run the following command.

ruby dk.rb install

It will finish shortly.

<u>Step 5: Install Rubygems</u>

Next step is to install rubygems.

Here we follow the procedure to download the source codes of rubygems, and

compile(build) them, and dispatch the tools to ruby environment.

Start git bash. Usually, when we do things in the UNIX environment, we \$ cd /usr
Ikuo@DELL-E5500-KOBA /usr
\$ mkdir local
Ikuo@DELL-E5500-KOBA /usr
\$ cd local
Ikuo@DELL-E5500-KOBA /usr/local
\$ pwd
/usr/local
Ikuo@DELL-E5500-KOBA /usr/local

create the working directory in /usr/local, but this msysgit-bash environment, when we create a directory 'local' under /usr directory, the entity of the directory is created in (assume that the user is 'admin',)

/Users/admin/AppData/Local/VirtualStore/Program Files/Git/Local It is rather deep from the root directory of C:¥ drive of Windows.

Then, we create rubygems_src directory in /usr/local directory.

```
Ikuo@DELL-E5500-KOBA /usr/local

$ mkdir rubygems_src

Ikuo@DELL-E5500-KOBA /usr/local

$ cd rubygems_src

Ikuo@DELL-E5500-KOBA /usr/local/rubygems_src

$
```

Type,

cd /usr/local

to move the directory to /usr/local, then type

mkdir rubygems_src

to create the directory which will contain the source codes of ruby gems. Then type,

cd rubygems_src

to move to the source code directory, and run the command

wget http://rubyforge.org/frs/download.php/76073/rubygems-1.8.24.tgz

If your system complains against you, that it does not have wget, then use curl instead.

curl -O http://rubyforge.org/frs/download.php/76073/rubygems-1.8.24.tgz

Ehter the above two commands are the ordinary method, but not knowing the reason, both of the above two commands does not work in some PC environment. (I guest the network constraint may block the connection to the server.)

At last, we may download the file directly from the site, (simply connect to) <u>http://rubyforge.org/frs/download.php/76073/rubygems-1.8.24.tgz</u>

and download the file, then, move the file into

/Users/admin/AppData/Local/VirtualStore/Program Files/Git/Local/ We follow do the above detour on the Windows 7 environment. It is far more smoother than to do them in Linux/Unix Shell environment. Use the explorer of Windows.

🚱 🔾 🗢 🚺 kuo¥AppData¥Local¥Virtu	ualStore¥Program Files¥Git¥local¥rubygems_src 🗸	4 7
整理 ▼ 🛛 📜 開く ライブラリに追	訕」▼ 共有 ▼ 新しいフォルダー	
\mu VirtualStore	^ 名前 ^	更新E
 Program Files Android Borland Daiso EasyRange Git etc local 	\mu rubygems-1.8.24.tgz	2012/

With the network environment in Koganei Campus of Hosei University, port is not open for git connection, so git commands will not work.

In this case too, we may download the file directly from github, and copy the file directly to the local directory to bypass the git port.

Incidentally, with the network environment in Chiba Campus of Teikyo Heisei University, proxy server blocks the gem connection, so we may need to set the system environment variable of the followings; set http_proxy=http://(URL of Proxy server):(port number of the proxy) set http_proxy_user=proxy registered user name set http_proxy_pass=proxy registered user password to use gems. For example, for my case, set http_proxy=http://proxy1.thu.ac.jp:80 set http_prox_user=i-kobaya set http_proxy_pass=mypassword to run gems for ruby. If you face with 'Proxy' problems, please use this hint.

So much for digressions,

admin@ADMIN-501MOKPBO <mark>/usr/local/rubygems_src</mark> \$ wget http://rubyforge.org/frs/download.php/75952/rubygems-1.8.21.tgz

or some other detours might be done, get back to the point to start copying files.

If 'wget' or 'curl' download succeeded, the command to decompress the file is, tar xvzf rubygems-1.8.21.tgz



If you download and copied the file in the Windows Environment, you can simply right click the file to decompress the file in the given directory.



(Sorry for the Japanese screen, but please guess what are they!)

When you start tar command, the decompressed folders and files will be shown in the command window. \$ tar xvzf rubygems-1.8.24.tgz

- rubygems-1.8.24/
- rubygems-1.8.24/.autotest
- rubygems-1.8.24/.document

rubygems-1.8.24/.gemtest

rubygems-1.8.24/bin/

(omitted)

If you see them in the Windows folder, just like it is show in the right.



If you finish developing the source codes, then start the set up. Once again, just make sure the check the curl existence.

curl --version

You should do the following procedure where your computer is connected to the network. If curl did not reply, then check the Step 4 DevKit installation or Step 3 MinGW setup.

5500-KOBA /usr/local/rubygems_src curl --version
curl 7.21.1 (i686-pc-mingw32) libcurl/7.21.1 OpenSSL/0.9.8r zlib/1.2.3
Protocols: dict file ftp ftps http https imap imaps ldap ldaps pop3 pop3s rtsp s
ntp smtps telnet tftp
Features: Largefile NTLM SSL SSPI libz uo@DELL-E5500-KOBA /usr/local/rubygems_src \$ cd rubygems-1.8.24 kuo@DELL-E5500-KOBA /usr/local/rubygems_src/rubygems-1.8.24 ls cruise_config.rb hide_lib_for_update lib istory.txt ICENSE.txt Manifest.txt UPGRADING.rdoc setup.rb README.rdoc Rakefile test util bin ci_build.sh IT.txt xuo@DELL-E5500-KOBA /usr/local/rubygems_src/rubygems-1.8.24 iruby --version uby 1.9.2p290 (2011-07-09) [i386-mingw32] @DELL-E5500-KOBA /usr/local/rubygems_src/rubygems-1.8.24 ruby setup.rb

Change directory to rubygems-1.8.24

cd rubygems-1.8.24

then run

ruby setup.rb

With the above attached screen shots, the command 'ls' is to show the list of the contents of directory, and 'ruby --version' is just to make sure the ruby is installed properly.

When you finished the setup shortly, the following messages will be shown.



Confirm that the version number will given with the command;

gem -v

<u>Step 6: Install rake</u>

Rake is the build management tool for ruby environment.

We install rake with gem.

Type the following command;

gem install rake

admin@ADMIN-501MOKPBO /usr/local/rubygems_src/rubygems-1.8.21 \$ gem install rake Fetching: rake-0.9.2.2.gem (100%) Successfully installed rake-0.9.2.2 1 gem installed Installing ri documentation for rake-0.9.2.2... Installing RDoc documentation for rake-0.9.2.2... admin@ADMIN-501MOKPBO /usr/local/rubygems_src/rubygems-1.8.21

If the installation finished shortly, type the following command to check the version,

rake --version

<u>Step 7: (Skip) install rvm</u>

We usually use rvm to control the ruby version, using git. However, with the composition shown in this memo, it seems that rvm does not work well. So please skip to the Step 8 pik install.

If there is any necessity to use rvm, the explanation is intentionally left described in this memo. Usually, please skip the following; Move directory to /usr/local with the following command,

cd /usr/local

Installation command of rvm is

git clone --depth 1 git://github.com/wayneeseguin/rvm.git

```
admin@ADMIN-501M0KPB0 /usr/local

$ git clone --depth 1 git://github.com/wayneeseguin/rvm.git

Cloning into 'rvm'...

remote: Counting objects: 5901, done.

remote: Compressing objects: 100% (3031/3031), done.

Receiving objects: remote: Total 5901 (delta 3926), reused 3953 (delta 2202)98

(5783/5901)

Receiving objects: 100% (5901/5901), 2.02 MiB | 272 KiB/s, done.

Resolving deltas: 100% (3926/3926), done.

admin@ADMIN-501M0KPB0 /usr/local
```

When the download is completed, then start installation. Move to rvm directory which is generated in /usr/local, by typing the following command,

cd rvm

Here type the following command,

./install



When Android Application Development Environment exists on the PC, it may happen to see the following error messages, and I guess competition of the path to C compilers. (I have not investigated well. Sorry.)



If you had faced with the above message, please discard to setup rvm, and move to the next Step 8.

When you success, the following message will be shown.



To make the rvm installation effective, you move to your home (login) directory, and then edit the following file,

.bashrc

If you can use either vi(vim) or emacs, it would be enough.

Add the next line to .bashrc, at the last of the file, [[-s \$HOME/.rvm/scripts/rvm]] && source "\$HOME/.rvm/scripts/rvm"

When you edit with vim, moving cursor by pressing arrow keys, to the bottom line, and then, type 'o' to 'insert the new line to the next line.' If you finished typing the entire line, the press [ESC] to switch to 'cursor movement mode,' and then type ':w' to submit command of 'overwrite file,' and type ':q' to exit from vim.

Please consult to the internet environment regarding "How to use 'vim'."

When you edit with emacs, you can directly input the command.

By pressing Ctrl-x, Ctrl-s to overwrite file, and press Ctrl-x, Ctrl-c to exit from emacs. There are not 'insert(input) mode', and 'command mode' in emacs. Also please consult to the internet environment regarding "How to use 'emacs."

By typing the command.

pwd(print working directory)

to check where you are, If you are at the home directory, then type the following command to see the content of .bashrc file.

cat .bashrc



If you want to reflect the content of .bashrc to the shell, then type , source $\sim\!\!/.bashrc$

Futher more, add the following one line to the file ".bash_profile" export LIBRARY_PATH=/usr/lib/w32api:\$LD_LIBRARY_PATH

```
admin@ADMIN-501MOKPBO ~
$ cat .bash_profile
export LIBRARY_PATH=/usr/lib/w32api:$LD_LIBRARY_PATH
[[ -s $HOME/.rvm/scripts/rvm ]] && source "$HOME/.rvm/scripts/rvm"
PATH=$PATH:$HOME/.rvm/bin # Add RVM to PATH for scripting
```

In above sample, I just added the same modification with ".bashrc" to the file ".bash_profile."

If you finish running git-bash, and then start again, then you would be able to use rvm. Just make sure that the version will be replied with the following command,

rvm --version

<u>Step 8: Install pik</u>

In the Windows 7 non-Cygwin environment, (it seems) rvm does not work fine, so we try to use pik. Please type the following command for gem, gem install pik

If you see the message 'successfully installed pik-x.x...,' then the installation was successful.



Then, we make sure that the "c:\Fruby192\Fbin" path is added to the environment variable, by typing

echo \$PATH



Now we move to the directory c:\Fruby192\Fbin and then type the following command,

pik_install c:/ruby192/bin

(Please note, that we type c:/(slash) not $\mathcal{Y}(back slash)$.



Now we go back to the home(~) directory to edit .bashrc file. Please follow the instruction at the last two lines from pik_install.

As for how to edit .bashrc with vi(vim) or emacs, please refer to the explanation shown in the step 7.



Just type the following;

pik list



If you see the above message, the pik installation was successful.

Step 9: Install rails Type the following command, gem install rails



It will complain that it cannot convert UTF-8 characters into Windows-31J environment, but just ignore its complaint. You can read English message. After the installation, type the following to make sure it replies the version number.

rails --version

Step 10: Confirmation of Version Numbers

With the above installation procedures, if you get the following version numbers, the installation was successful.

You may get the newer version, but it will be okay. It is quite likely if you follow this instruction several weeks(even days) after the dates of my screen shots.

All done! Then, enjoy programming with Ruby on Rails together!