

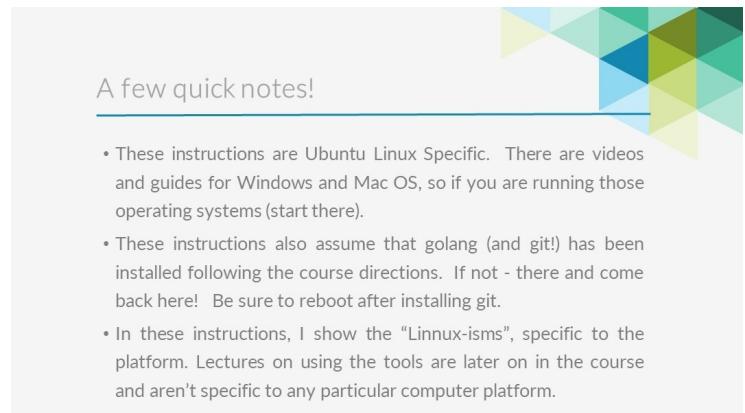


*The Complete Google  
Go Programming  
Course For Beginners*

Ubuntu Linux  
Installation  
Visual Studio  
Code



# insert instructions

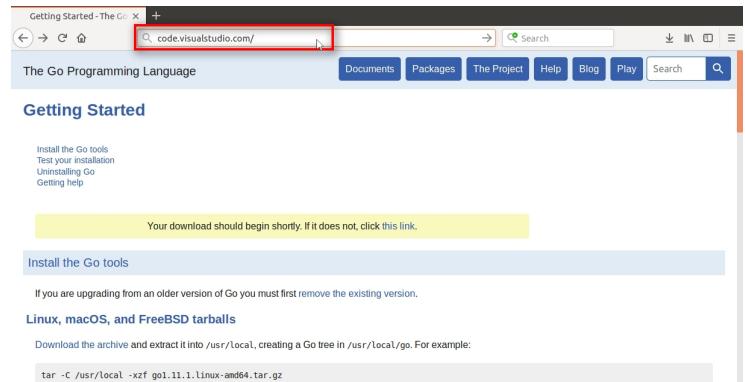


A few quick notes!

- These instructions are Ubuntu Linux Specific. There are videos and guides for Windows and Mac OS, so if you are running those operating systems (start there).
- These instructions also assume that golang (and git!) has been installed following the course directions. If not - there and come back here! Be sure to reboot after installing git.
- In these instructions, I show the “Linnux-isms”, specific to the platform. Lectures on using the tools are later on in the course and aren’t specific to any particular computer platform.

## Visit [code.visualstudio.com](https://code.visualstudio.com)

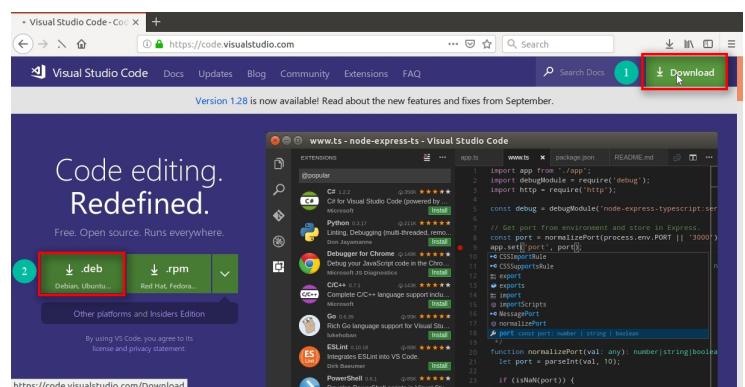
*Launch your favorite web browser and visit [code.visualstudio.com](https://code.visualstudio.com)*



## Download VS Code

*Click download at (1) to see different versions and choose one to download.*

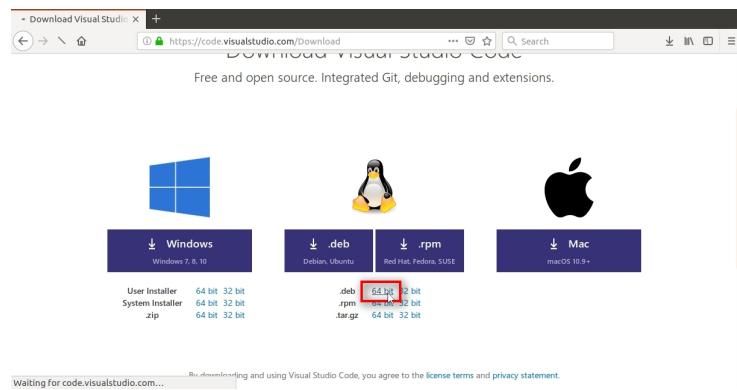
*Alternatively, you can select "Download for .deb" in (2).*



*The instructions are for download (1) in the top right corner*

# Select the Linux Version

Select the Linux version to begin the download. These instructions are for Ubuntu linux.



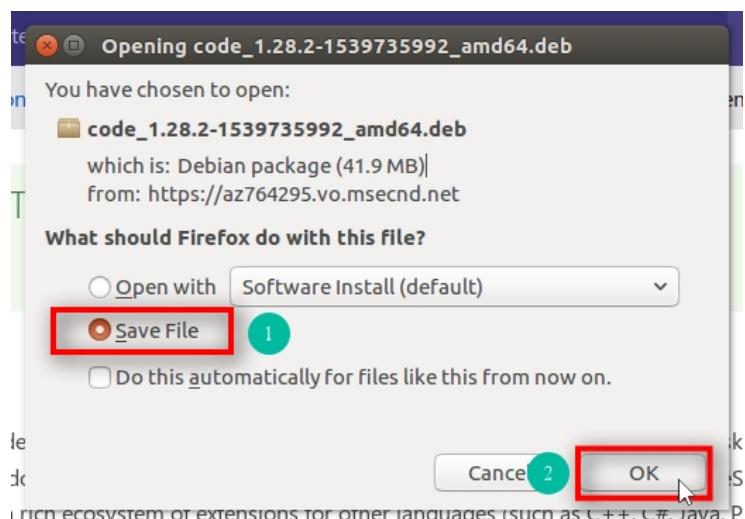
# Select Save File

We'll launch it manually, so select

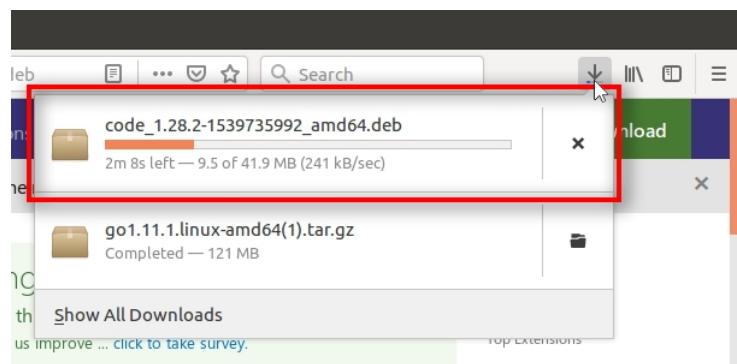
1) Save File

2) OK

to download.

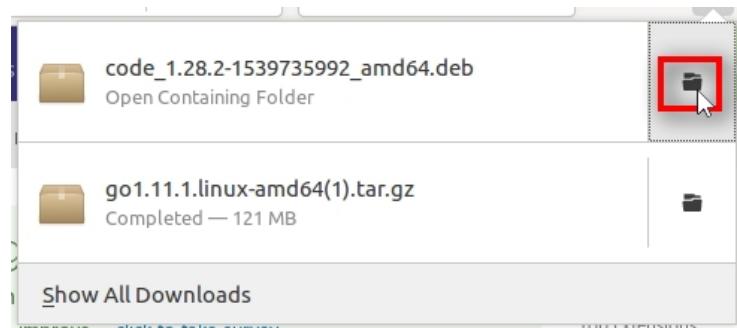


# Download will begin



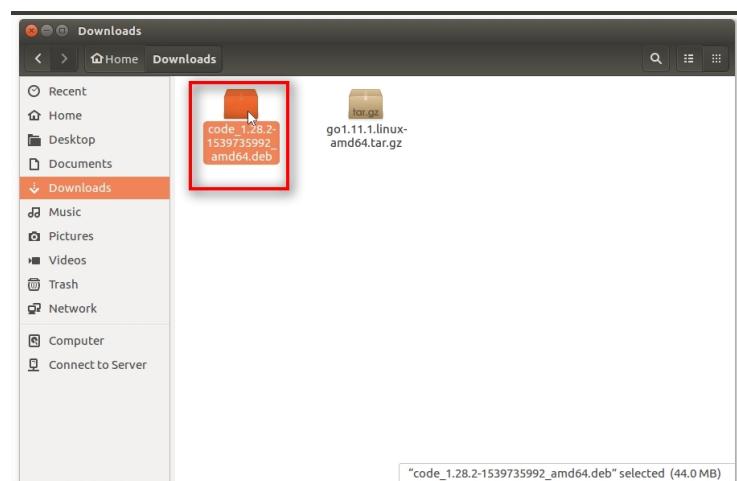
## Click on the finder icon to open.

*Click on the finder icon to open up the download folder.*



## Open the package

*Double click the downloaded .deb package to begin the installer.*



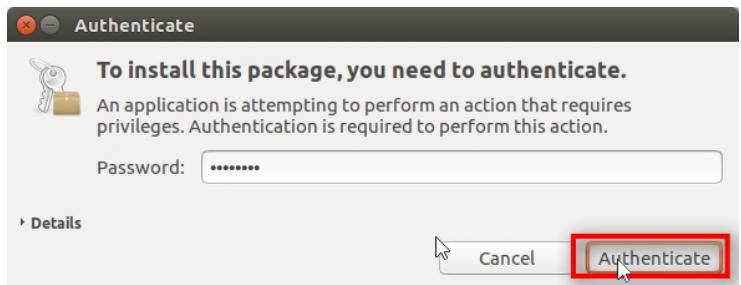
## Start installation

*Click install to begin the installation.*



# Authenticate

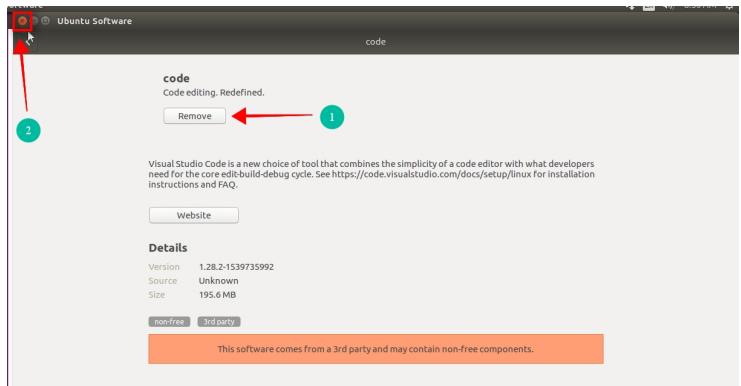
You will be prompted for your password. Enter it and select Authenticate to continue.



# Installation will complete

Notice that

- 1) Will change to "remove" once installation is complete.



Once complete, close the Ubuntu Software window down to continue.

# Launch Visual Studio Code

Launch visual studio code by:

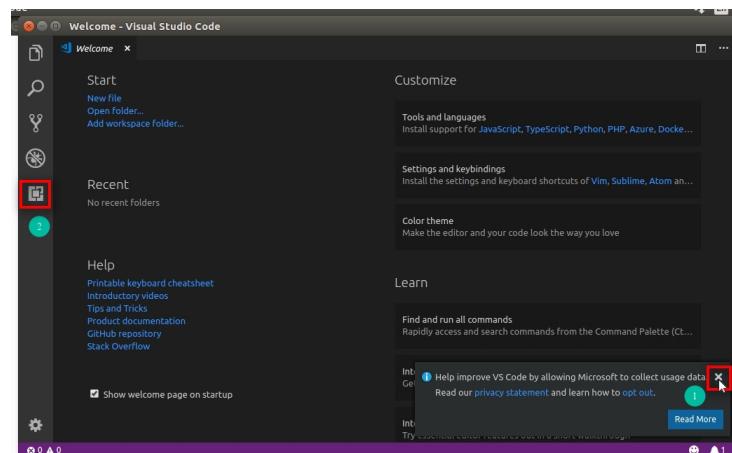


- 1) Selecting the Ubuntu Icon
- 2) Entering Visual
- 3) Selecting the visual studio icon

# Close Dialog & Open Extensions

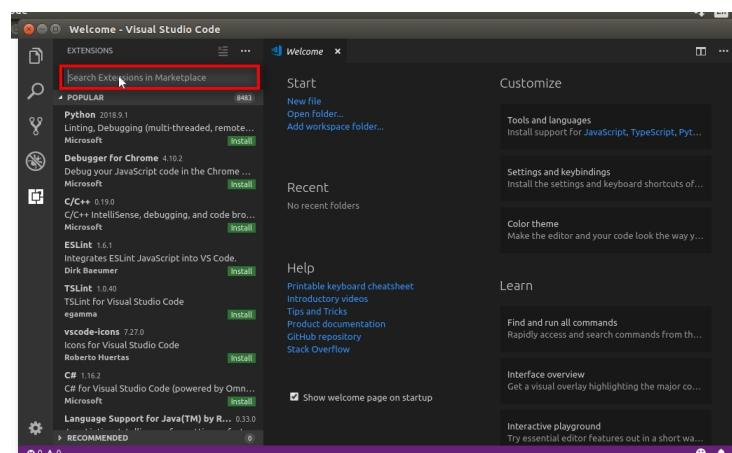
(1) Select close on the dialog box for usage data (you can review this later).

(2) Extensions to open the extensions window.



## Search for the Go extension

In the dialog box, type in Go

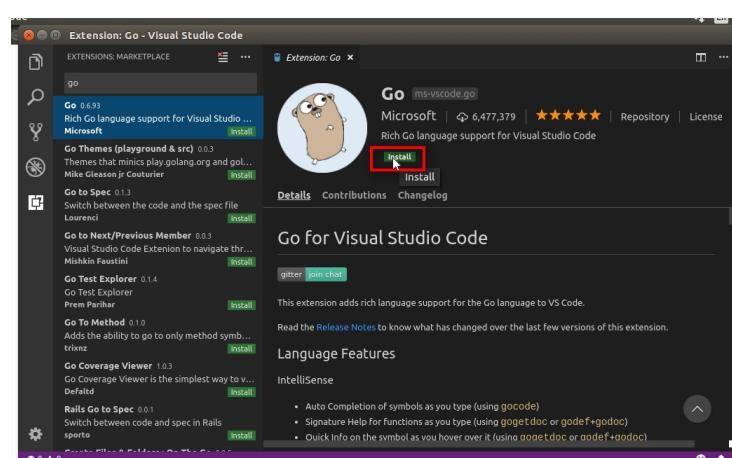


## Go for Visual Studio Code

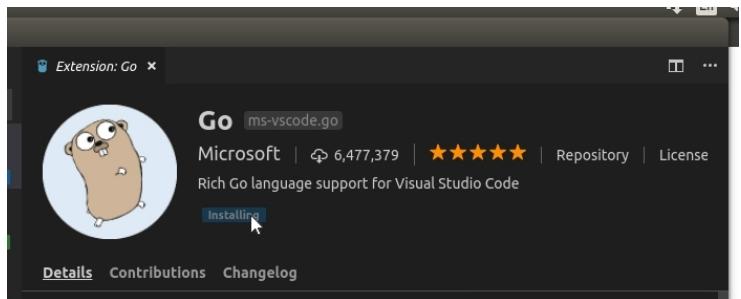
Go for Visual Studio Code, by Microsoft is the extension desired.

It will likely be the first one in the list when searched.

Click install to begin the installation process.

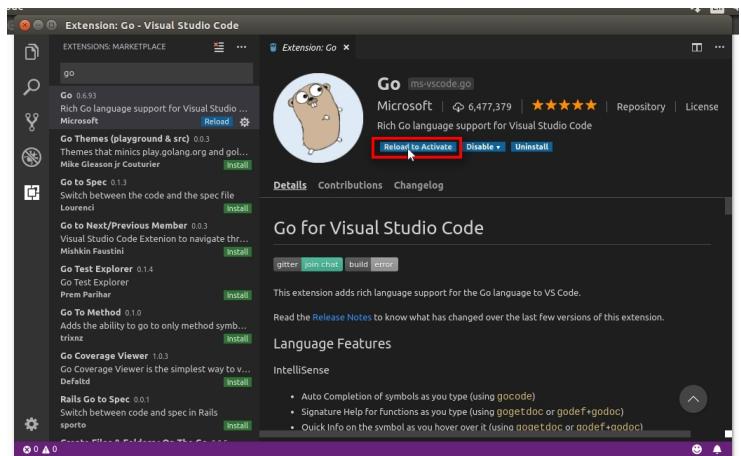


# Installation will begin



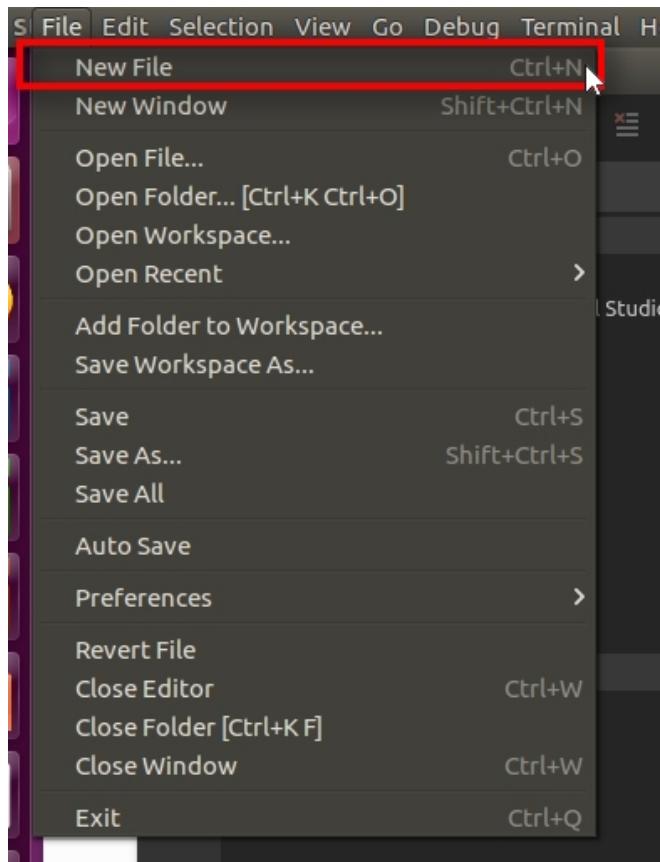
## Reload to Activate

*Once installation is complete,  
select "Reload to Activate",  
the extension in VS Code.*



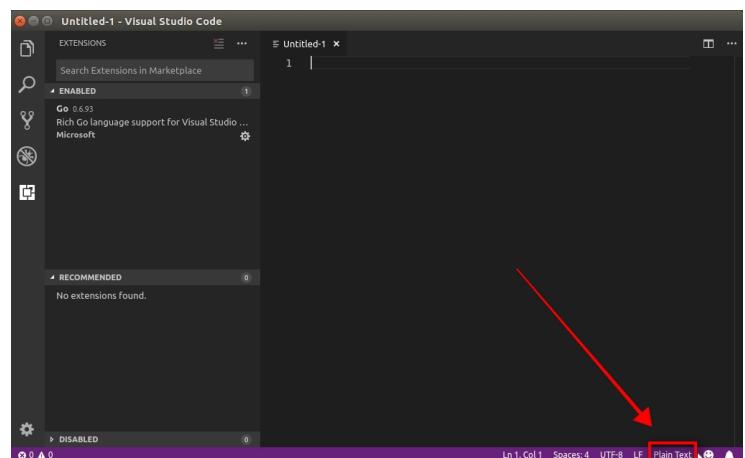
# Open a New File

Select File / New File. We'll use this to continue the installation process.



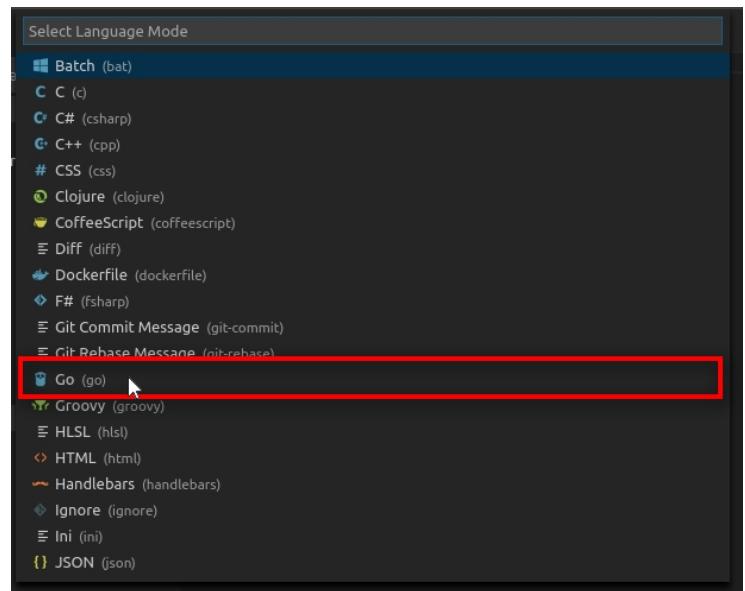
# Change "Plain Text"

Select Plain Text in the bottom right hand corner



## Select Go

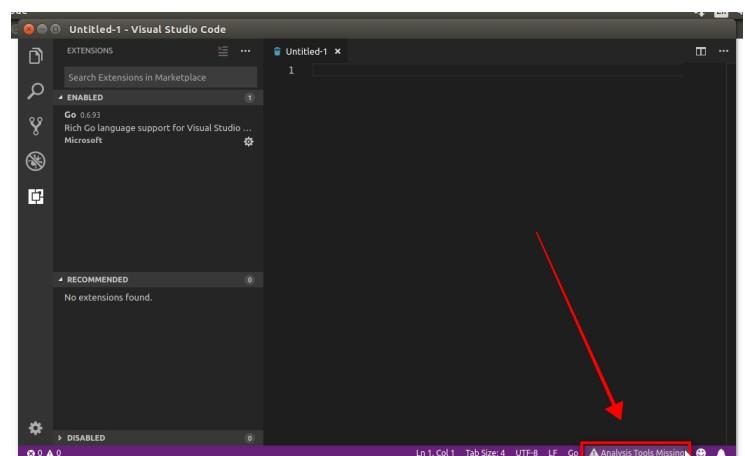
Select Go from the dropdown.  
This will force the type to  
change to a go source code  
file in VS Code.



## Analysis Tools Missing

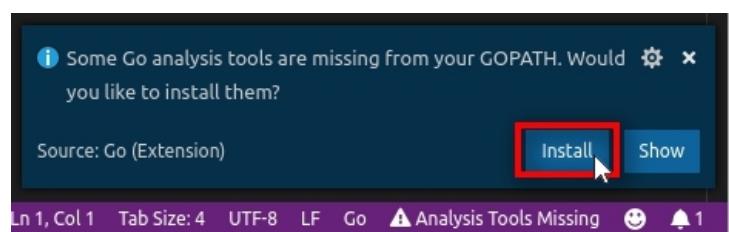
Once VS Code realizes the analysis tools for go are missing, it will put a message on the bottom right hand corner.

Click on it.



## Analysis tools

Select Install to install the analysis tools into VS code for Go



# Installation will begin

The output console will show you the progress of the installation. A total of 12 tools will be installed, so this will take some time. Don't rush it.

A screenshot of the Visual Studio Code interface. The title bar says "Untitled-1 - Visual Studio Code". The left sidebar shows "OPEN EDITORS" with "Welcome" and "Untitled-1" listed. The bottom status bar shows "Ln 1, Col 1 Tab Size: 4 UTF-8 LF Go". The main area has tabs for "PROBLEMS", "OUTPUT", "DEBUG CONSOLE", and "Go". The "OUTPUT" tab is active and displays the following text:

```
Installing 12 tools at /home/david/go/bin
gocode
gopkgs
go-outline
go-symbols
guru
gorename
dlv
gocode-gomod
godef
godef-gomod
goreturns
golint
```

# Installation is Complete

1) Installation is complete once you get the message "All tools successfully installed. You're ready to Go :)."

A screenshot of the Visual Studio Code interface. The title bar says "Untitled-1 - Visual Studio Code". The left sidebar shows "OPEN EDITORS" with "Welcome" and "Untitled-1" listed. The bottom status bar shows "Ln 1, Col 1 Tab Size: 4 UTF-8 LF Go". The main area has tabs for "PROBLEMS", "OUTPUT", "DEBUG CONSOLE", and "Go". The "OUTPUT" tab is active and displays the following text:

```
Installing github.com/mdempsky/gocode SUCCEEDED
Installing github.com/uudashr/gopkgs/cmd/gopkgs SUCCEEDED
Installing github.com/ramya-rao-a/go-outline SUCCEEDED
Installing github.com/acroca/go-symbols SUCCEEDED
Installing golang.org/x/tools/cmd/guru SUCCEEDED
Installing golang.org/x/tools/cmd/gorename SUCCEEDED
Installing github.com/derekparkerdelve/cmd/dlv SUCCEEDED
Installing github.com/stamblerre/gocode SUCCEEDED
Installing github.com/rogpeppe/godef SUCCEEDED
Installing github.com/ianthehat/godef SUCCEEDED
Installing github.com/sqs/goreturns SUCCEEDED
Installing golang.org/x/lint/golint SUCCEEDED
```

At the bottom of the output window, there is a red box around the message: "All tools successfully installed. You're ready to Go :)".

2) Note that this is `delve` - a debugger for the Go programming language

# Close

- 1) Close Untitled
- 2) Close VS Code

A screenshot of the Visual Studio Code interface. The title bar says "Untitled-1 - Visual Studio Code". The left sidebar shows "OPEN EDITORS" with "Welcome" and "Untitled-1" listed, where "Untitled-1" has a red box around its close button. The bottom status bar shows "Ln 1, Col 1 Tab Size: 4 UTF-8 LF Go". The main area has tabs for "PROBLEMS", "OUTPUT", "DEBUG CONSOLE", and "Go". The "OUTPUT" tab is active and displays the following text:

```
gocode
Installing github.com/mdempsky/gocode SUCCEEDED
Installing github.com/uudashr/gopkgs/cmd/gopkgs SUCCEEDED
Installing github.com/ramya-rao-a/go-outline SUCCEEDED
Installing github.com/acroca/go-symbols SUCCEEDED
Installing golang.org/x/tools/cmd/guru SUCCEEDED
Installing golang.org/x/tools/cmd/gorename SUCCEEDED
Installing github.com/derekparkerdelve/cmd/dlv SUCCEEDED
Installing github.com/stamblerre/gocode SUCCEEDED
Installing github.com/rogpeppe/godef SUCCEEDED
Installing github.com/ianthehat/godef SUCCEEDED
Installing github.com/sqs/goreturns SUCCEEDED
Installing golang.org/x/lint/golint SUCCEEDED
```

At the bottom of the output window, there is a message: "All tools successfully installed. You're ready to Go :)".

# Re-Launch Visual Studio Code

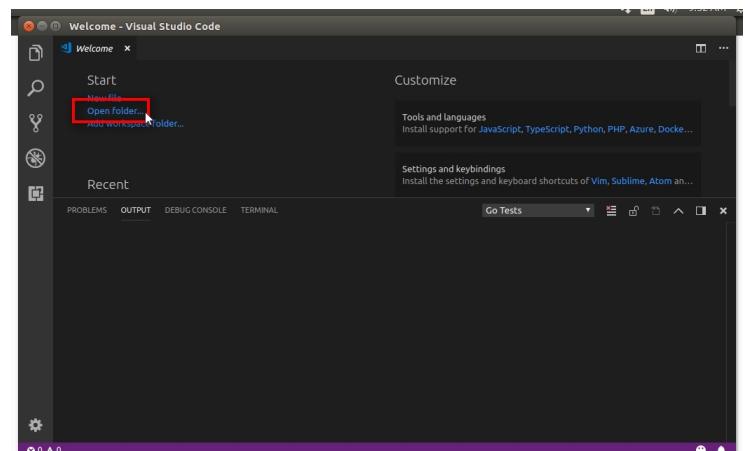
*Launch visual studio code again by:*



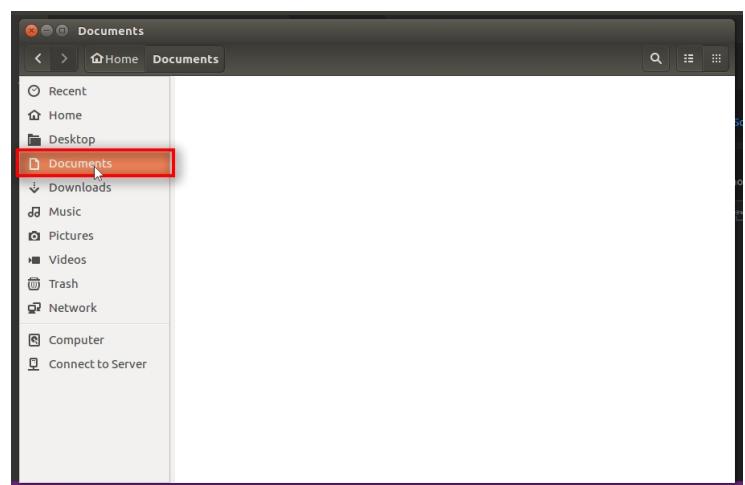
- 1) Selecting the Ubuntu Icon
- 2) Entering Visual
- 3) Selecting the visual studio icon

## Creating a project folder

*Select open folder, to begin creating a project folder where we'll have our Go code experiments*

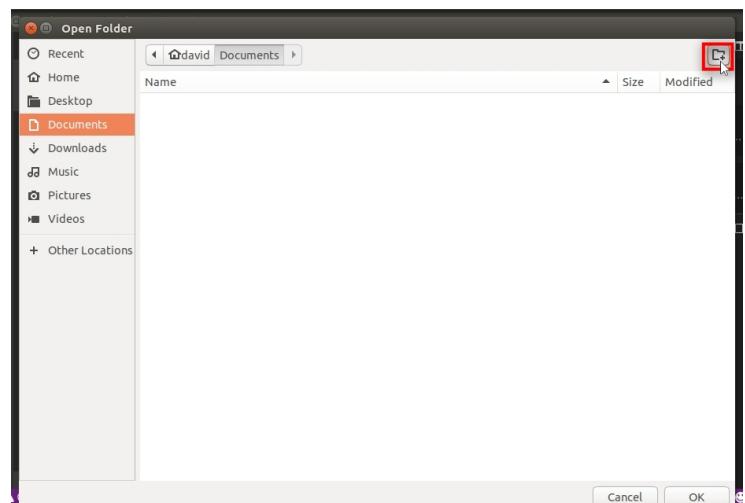


## Select Documents



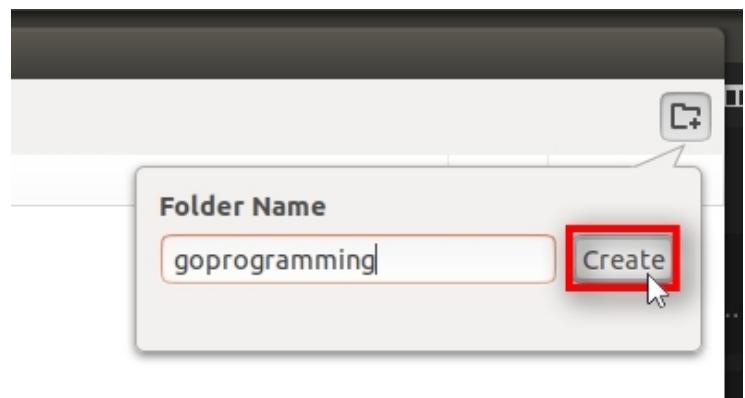
## Select new folder

Select the new folder icon at the top right.



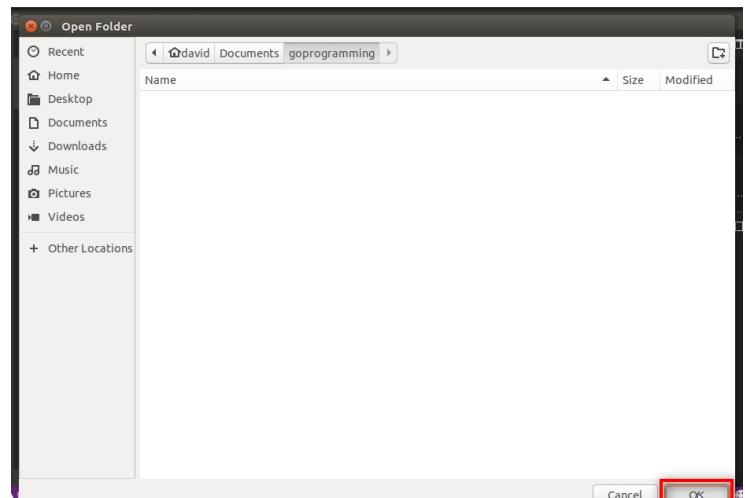
## Create goprogramming

Name the folder *goprogramming*, and select *create*.



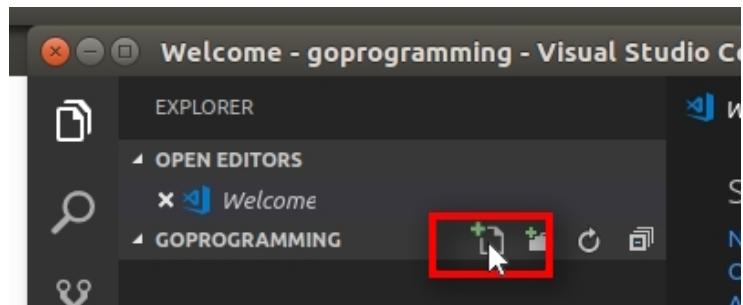
## Open

Select *OK* for this to be our working folder



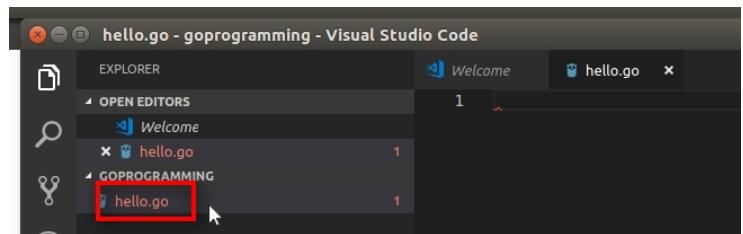
## Create a new file

From goprogramming, select the new file icon.



## hello.go

Enter hello.go and select it to open the hello.go source code file into the editor.



## Enter in the first golang program into the window.

// hello.go

```
Studio Code
Welcome hello.go •
1 // hello.go
2 package main
3
4 import "fmt"
5
6 func main() {
7     fmt.Println("Hello")
8 }
```

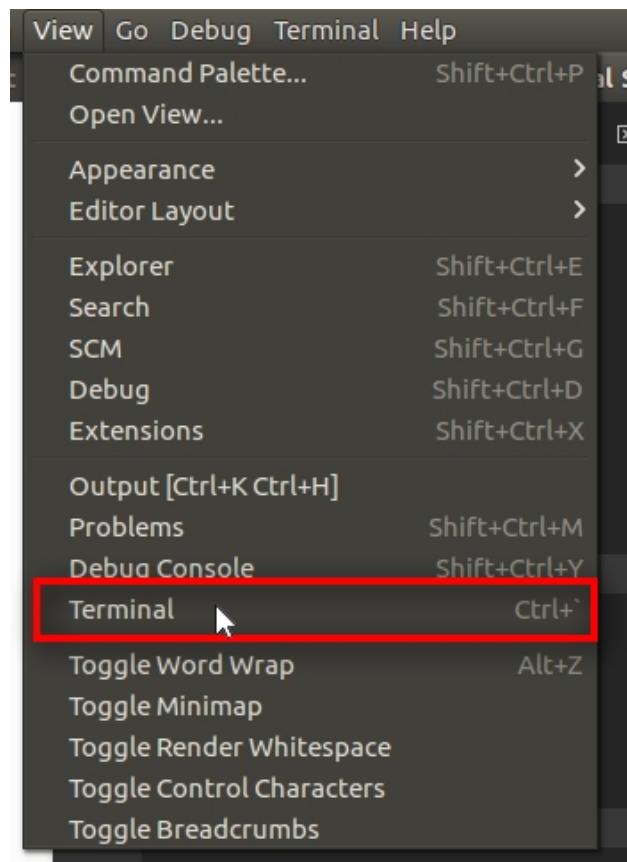
package main

import "fmt"

```
func main() {
    fmt.Println("Hello")
}
```

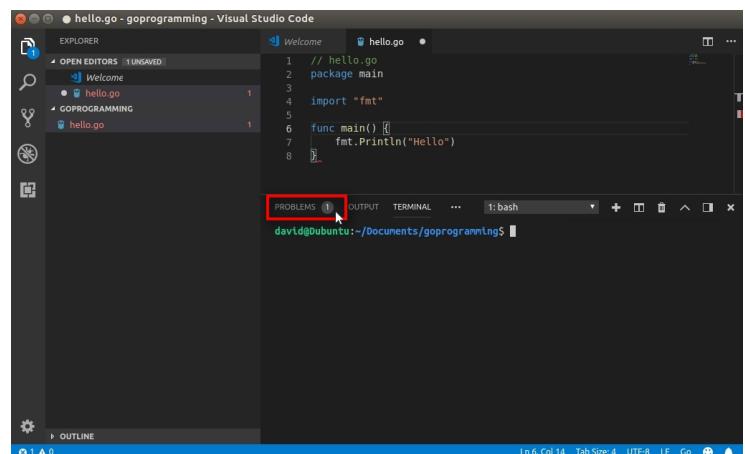
# Open the terminal view

Select view/terminal to launch the terminal.



# Notice there are problems reported.

Select the problems tab to see the problems reported.



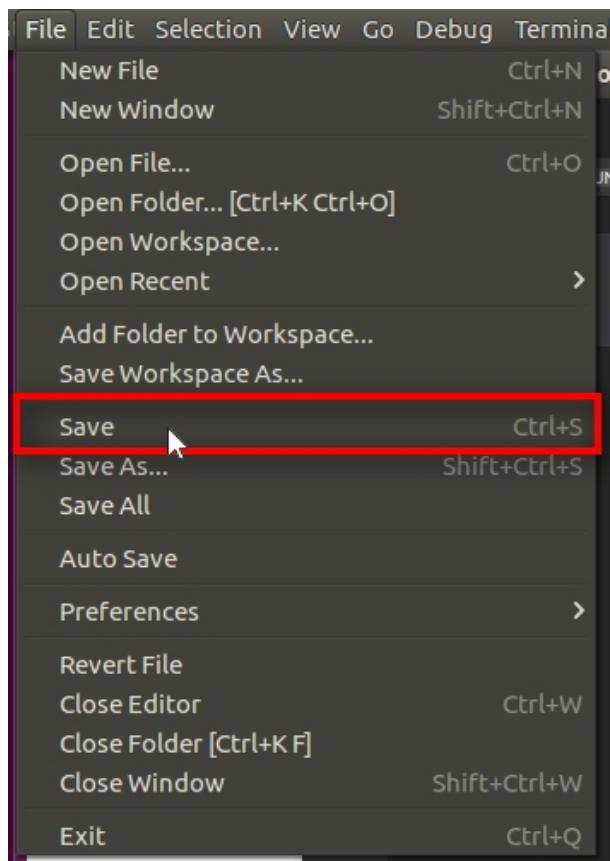
## Expected 'package' error

*Expected 'package', found 'EOF', is a common error message. It's solved by saving our program.*



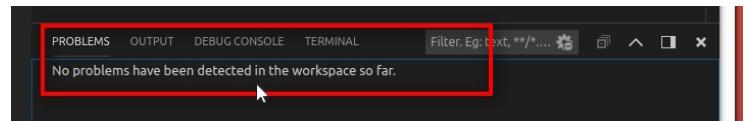
## Save the program

*Select File/Save to save the program.*



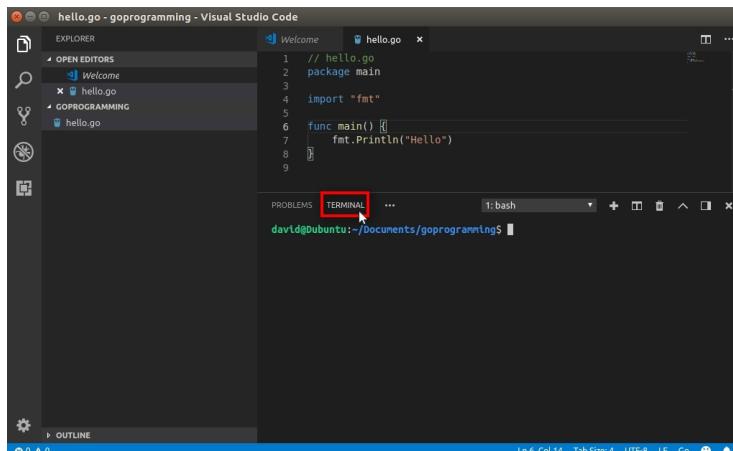
## Problem solved

*Notice the problem is no longer present once the file is saved.*



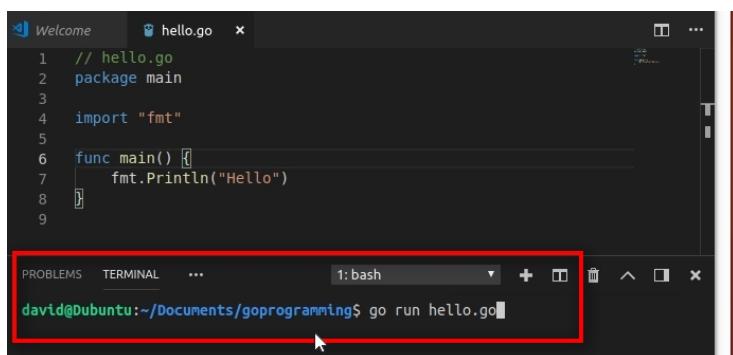
## Re-open terminal

*Click on the three dots if not visible, and then select terminal.*



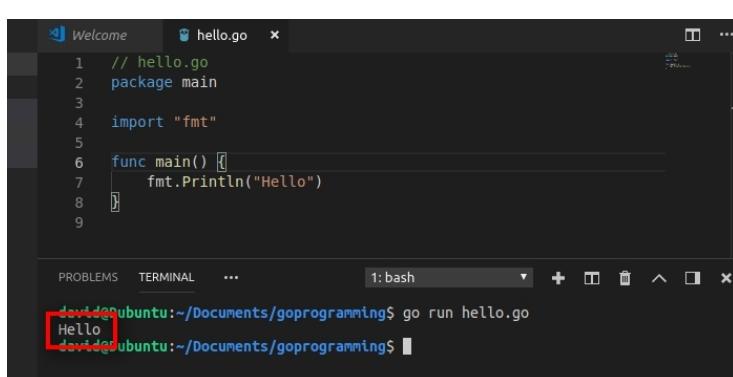
## Method 1 of running programs [Command Line]

*To run the program successfully, you can start go and simply type in the terminal window:  
go run hello.go  
and press enter.*



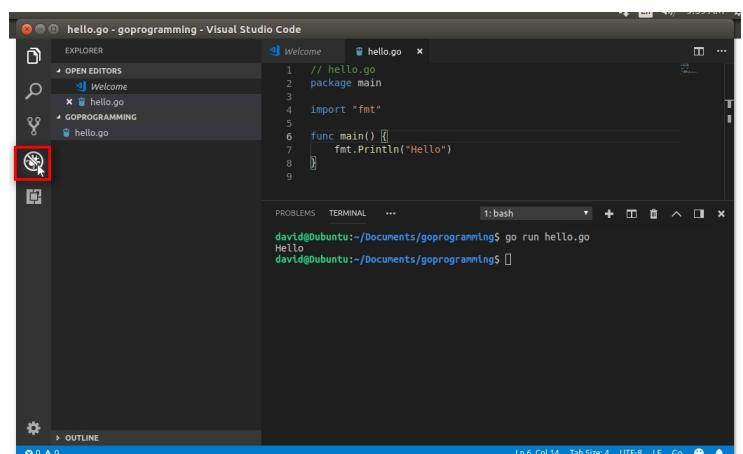
## The program runs

*The program successfully runs, and you see Hello appear in there terminal.*



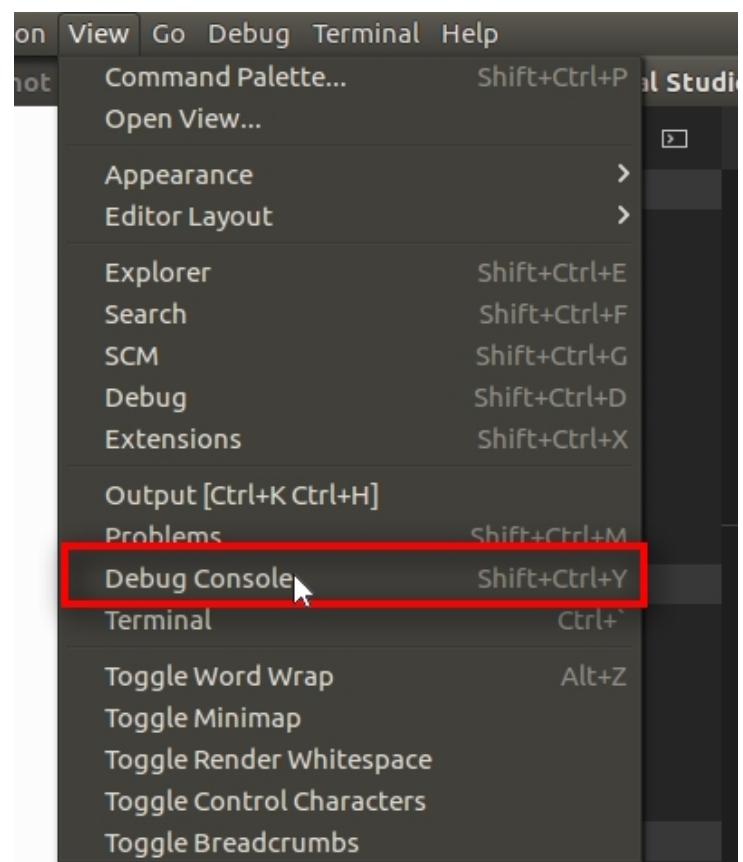
## Method 2 of running programs [Debugger]

*Start the debugger by selecting the "Debug option" on the left.*



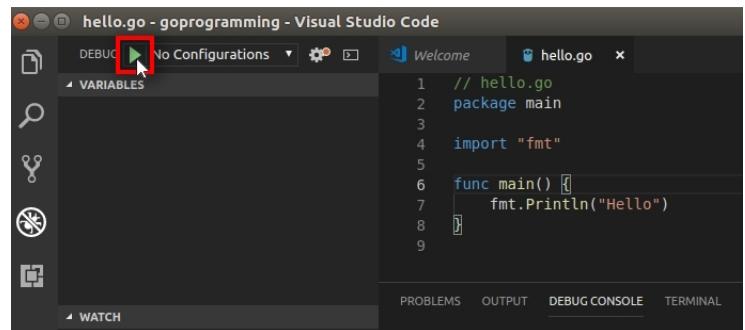
## Also open the debug console

*Select View / Debug Console to see the output of the program being run.*



# Run the program

*Run the program by selecting the green icon on the top left.*



# The program runs

*Finally, the debug console will show the output of the program running.*

