



*The Complete Google  
Go Programming  
Course For Beginners*

Windows  
Installation  
Visual Studio  
Code

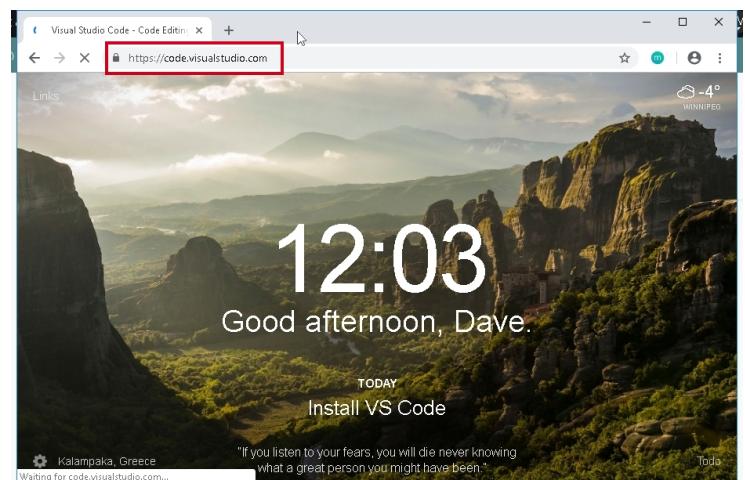


A few quick notes!

- These instructions are Windows Specific. There are videos and guides for Mac OS and Linux, 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 "Windows-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)

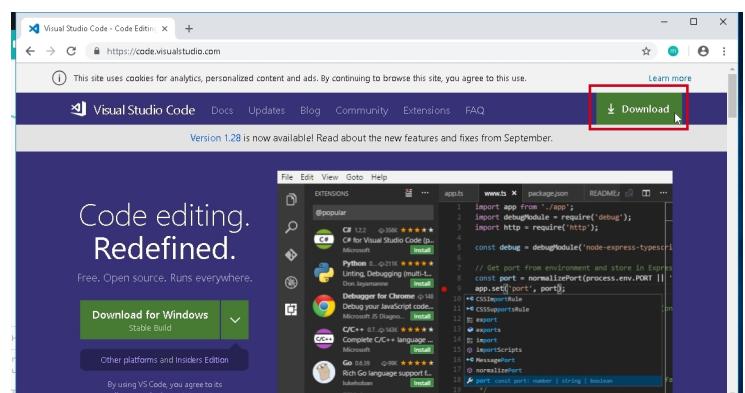
*Launch your favorite web browser and visit [code.visualstudio.com](https://code.visualstudio.com)*



## Download VS Code

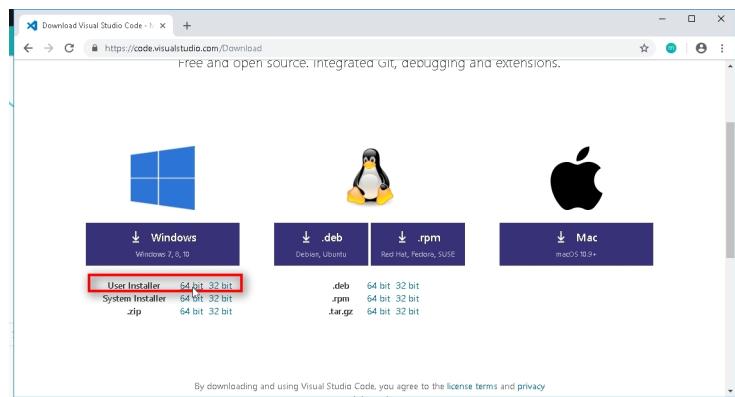
*Click download at (1) to see different versions and choose one to download.*

*Alternatively, you can select "Download for Mac" in (2). The instructions are for download (1) in the top right corner*



# Select the Windows Version

*Click on "User Installer". Note that user installer is the new standard ofr installation.*

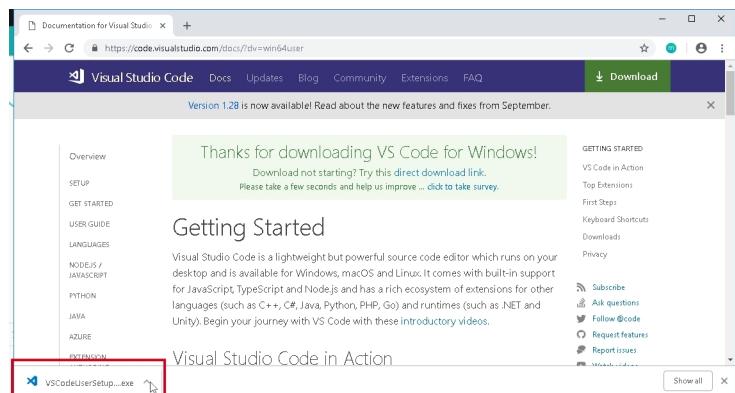


# Download will begin



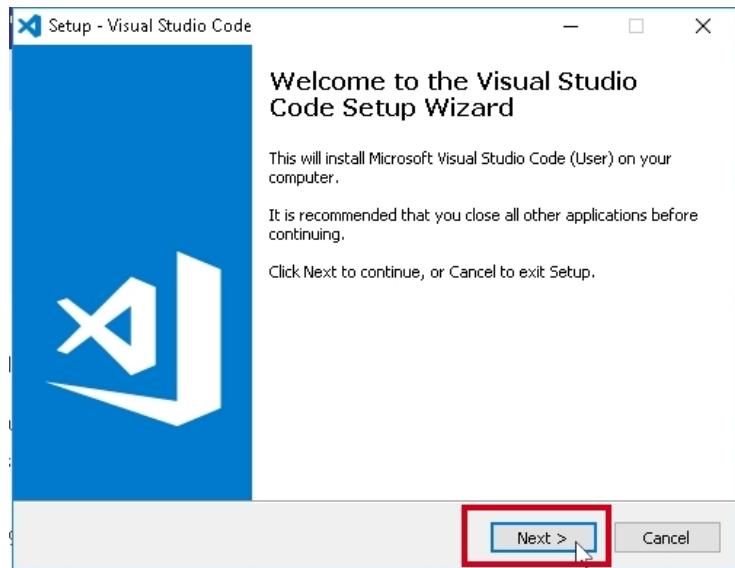
# Open the download

*Once complete, open the downloaded executable file to begin installation.*



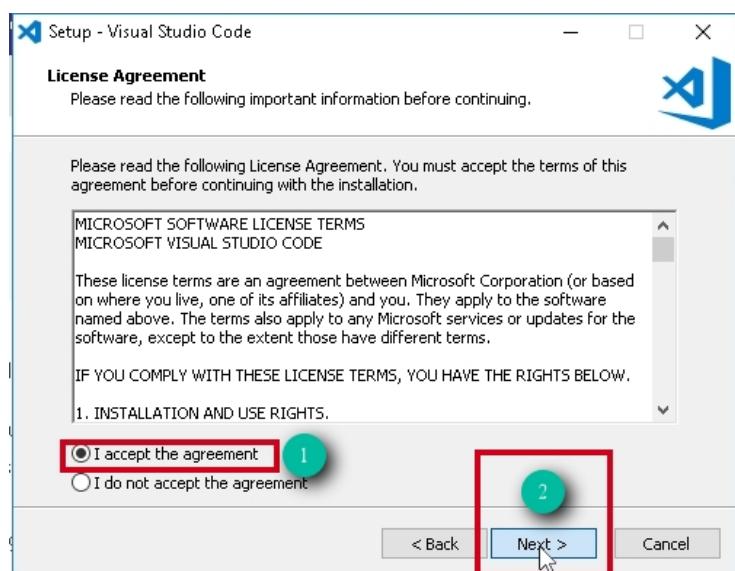
# Installation will begin

Select next to continue the installation.



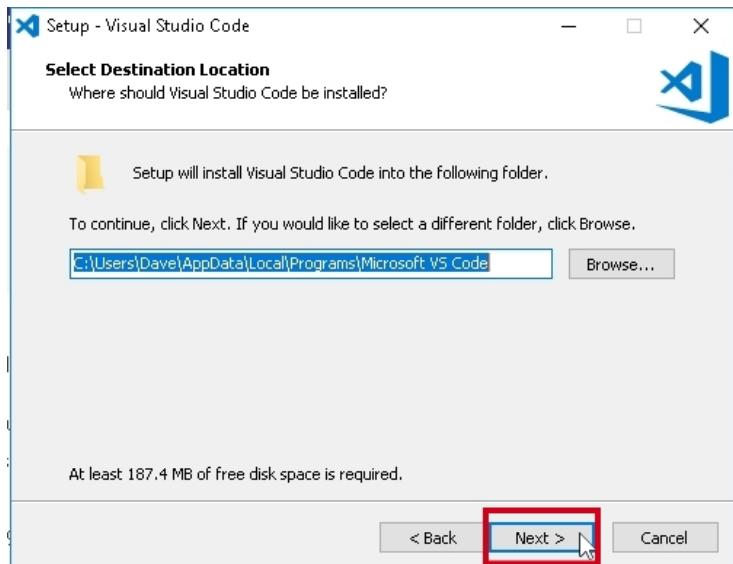
# License Agreement

- 1) accept the licences agreement
- 2) select next to continue installation



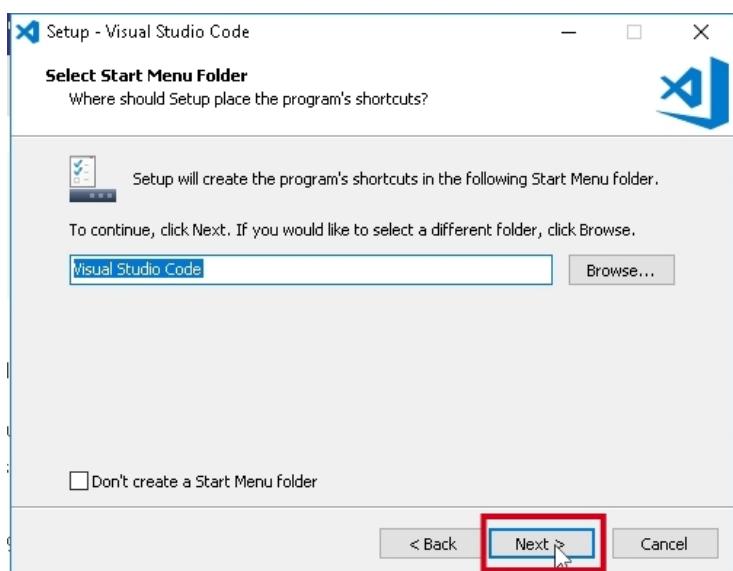
# Select Destination Location

Select next to accept the default destination location.



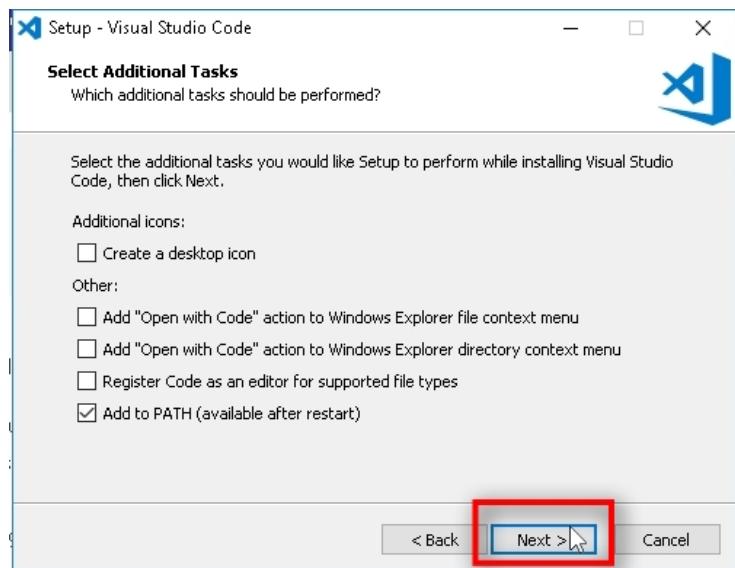
# Select Start Menu Folder

Select next to accept the default start menu folder.



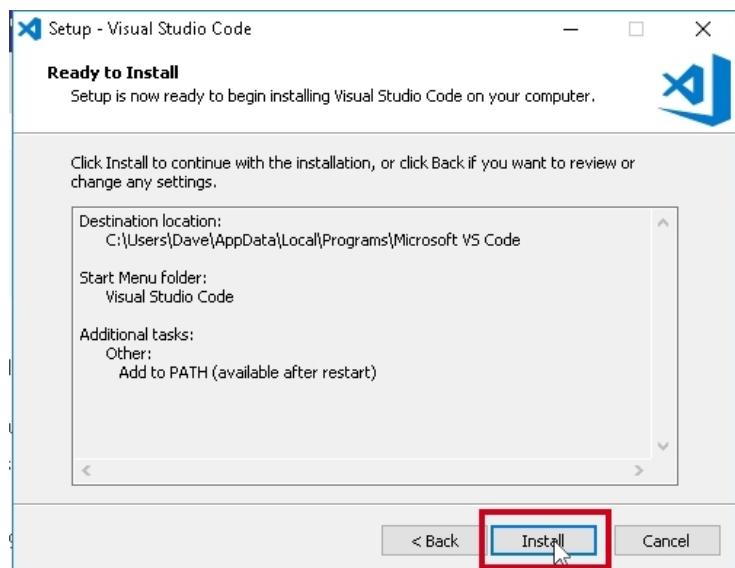
## Select additional Tasks

Select next to accept the default Additional Tasks.

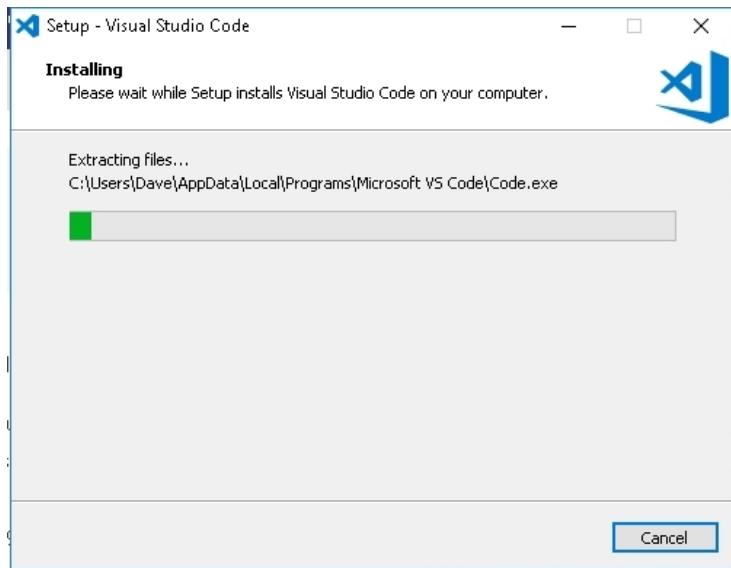


## Ready to Install

Select Install to begin installation.

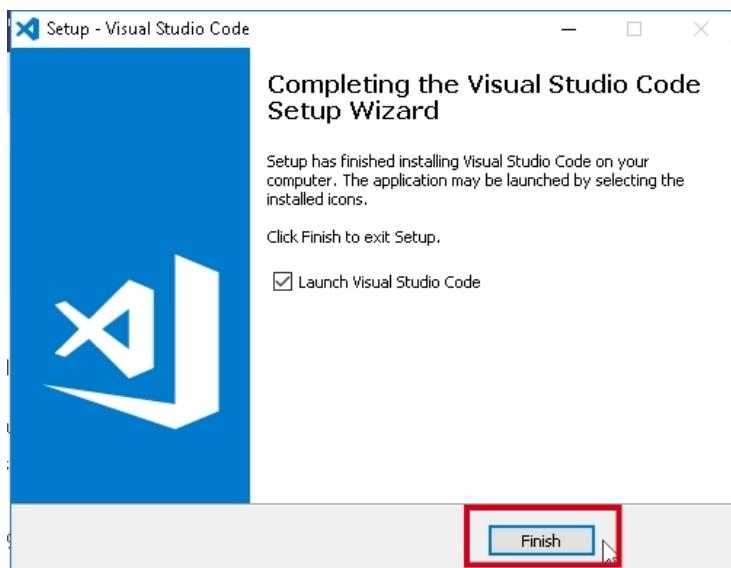


# Installation will begin



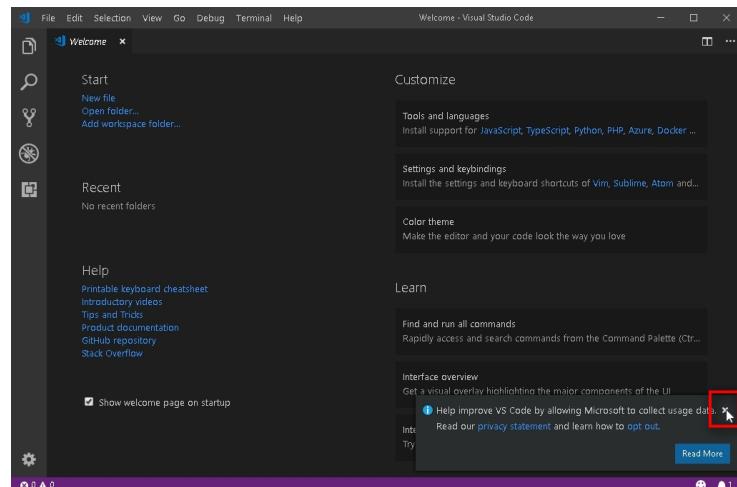
## Completing the Visual Studio Code Setup Wizard

*Select finish, with the Launch Visual Studio Code option selected, to complete installation and launch Visual Studio Code.*



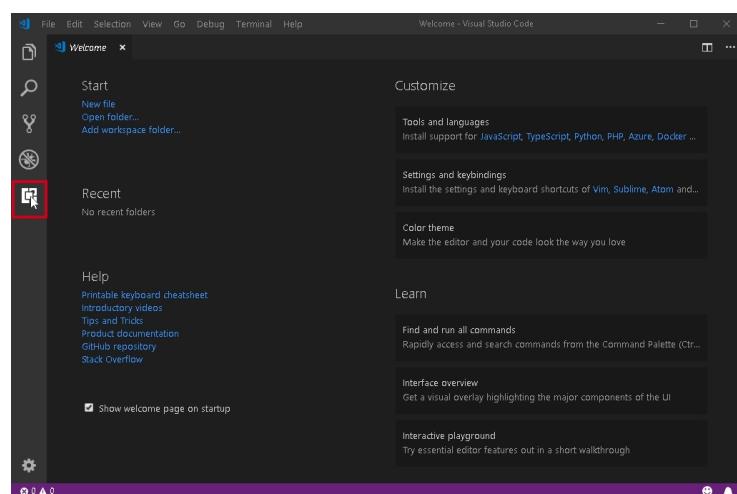
# Close Dialog

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



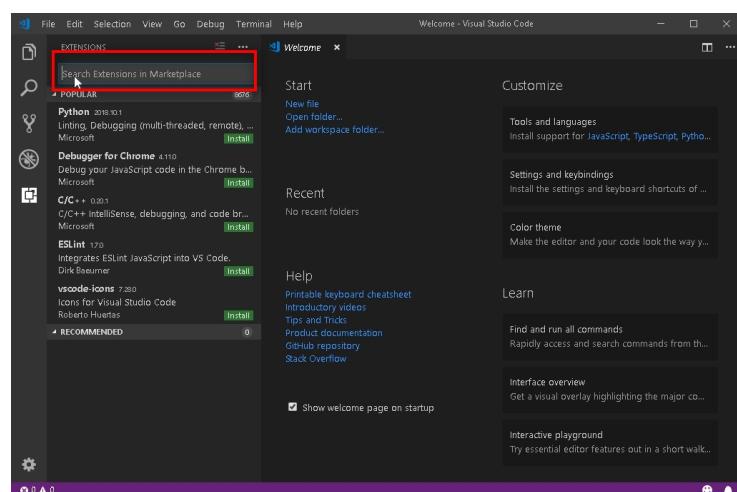
# Open Extensions

Click on the icon to open extensions, or select View / Extensions.



# Search for the Go extension

In the dialog box, type in Go

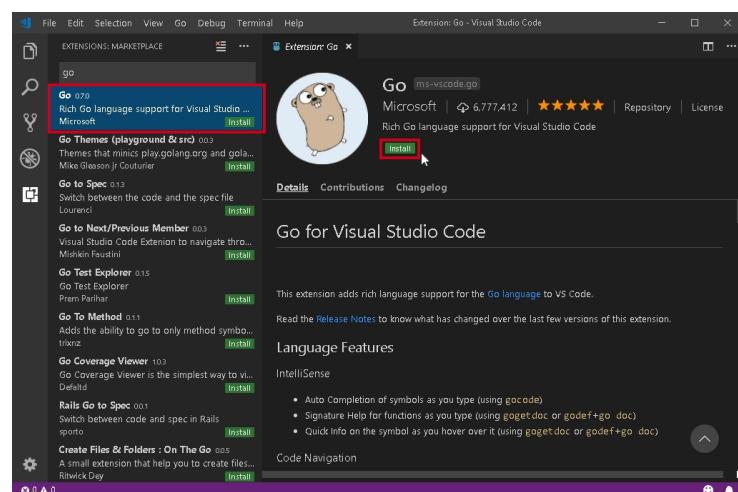


# Go for Visual Studio Code

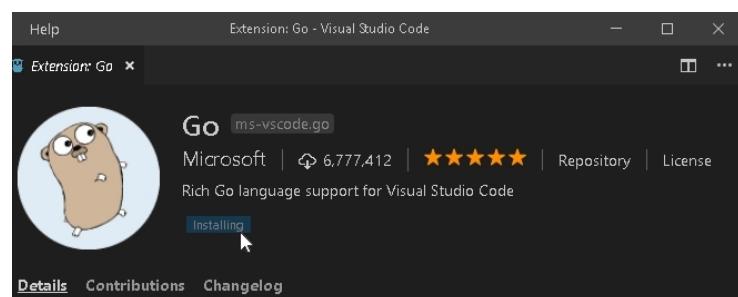
*Go for Visual Studio Code, by Microsoft is the extension desired.*

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

*Click install to begin the installation process.*

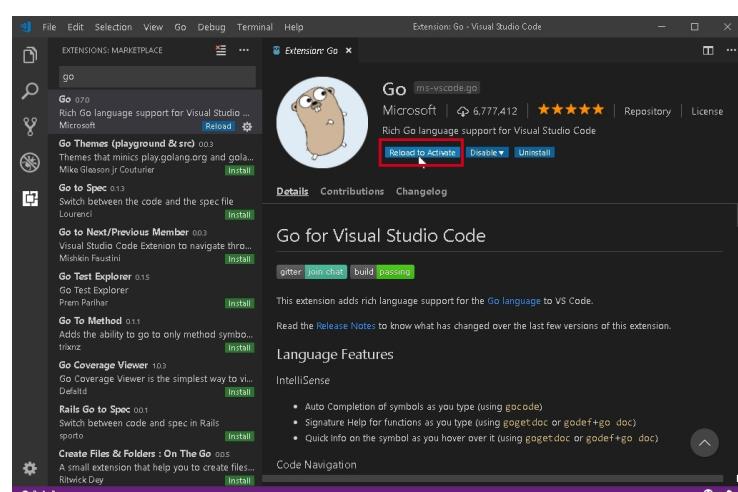


## Installation will begin



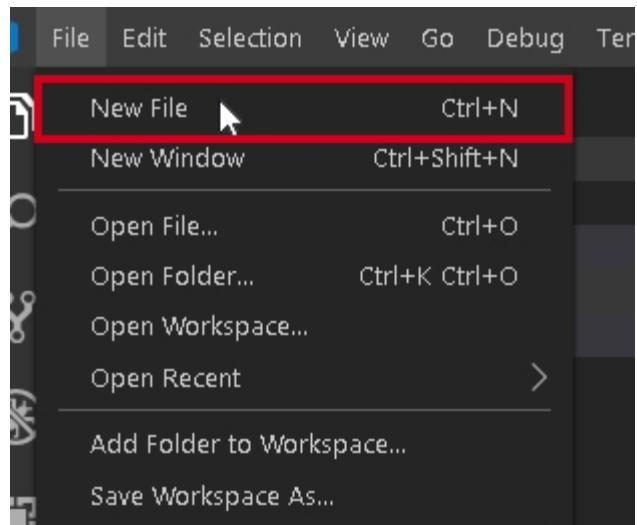
## Reload to Activate

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



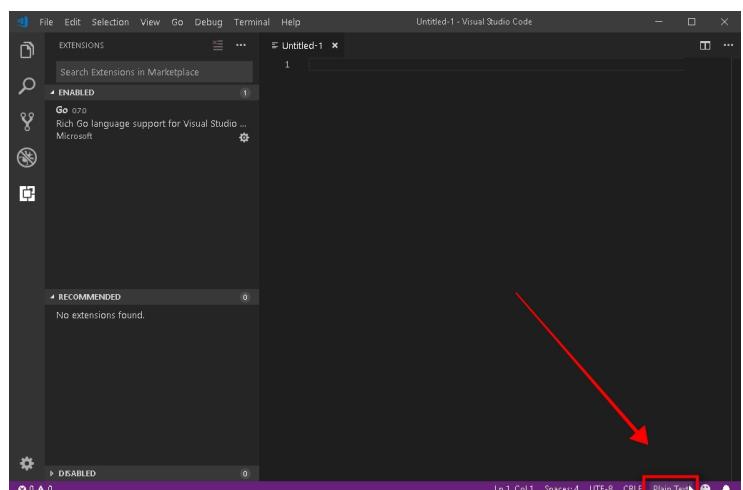
# Open a New File

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



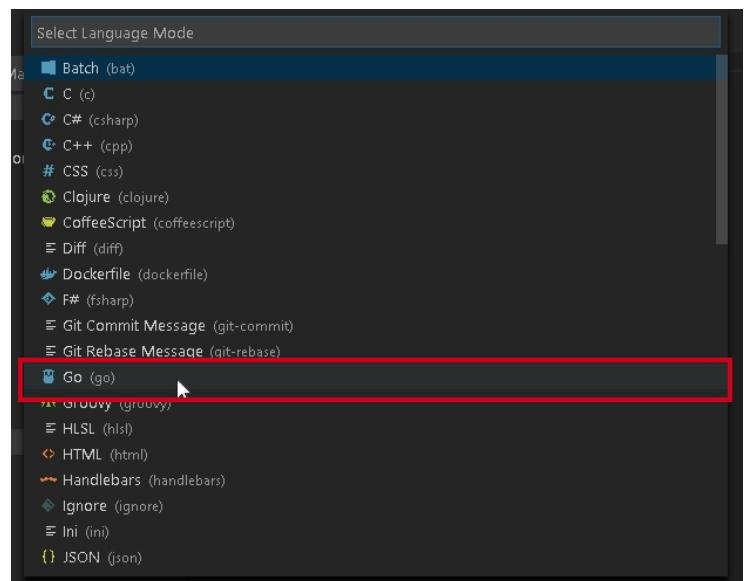
# Change "Plain Text"

Select Plain Text in the bottom right hand corner



## Select Go

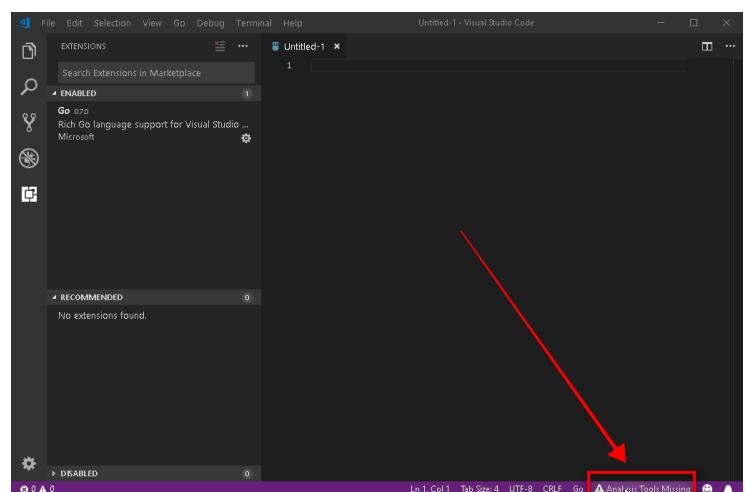
Select Go from the dropdown.  
This will force the type to  
change to a go source code  
file in VS Code.



## Analysis Tools Missing

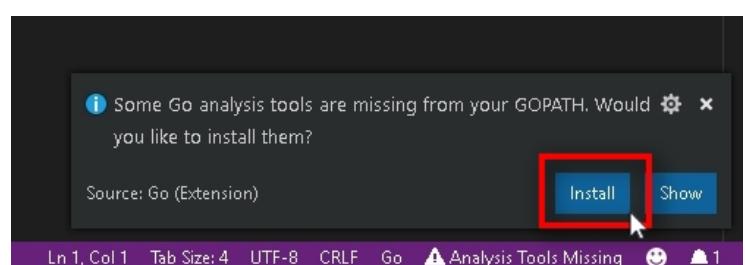
Once VS Code realizes the analysis tools for go are missing, it will put a message on the bottom right hand corner.

Click on it.



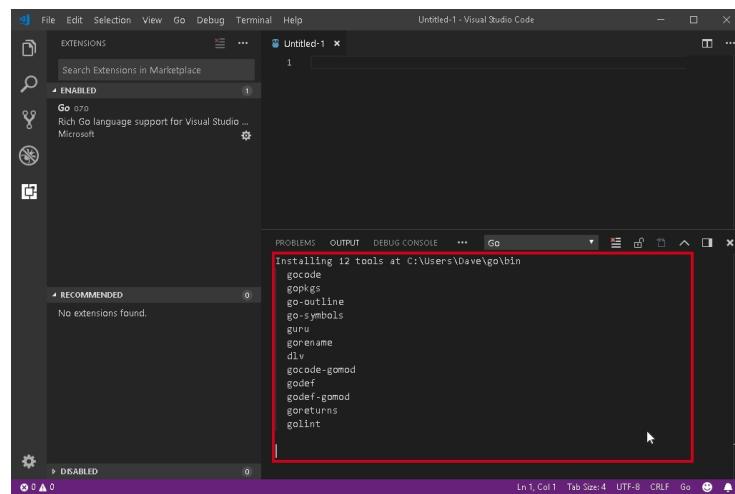
## Analysis tools

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.

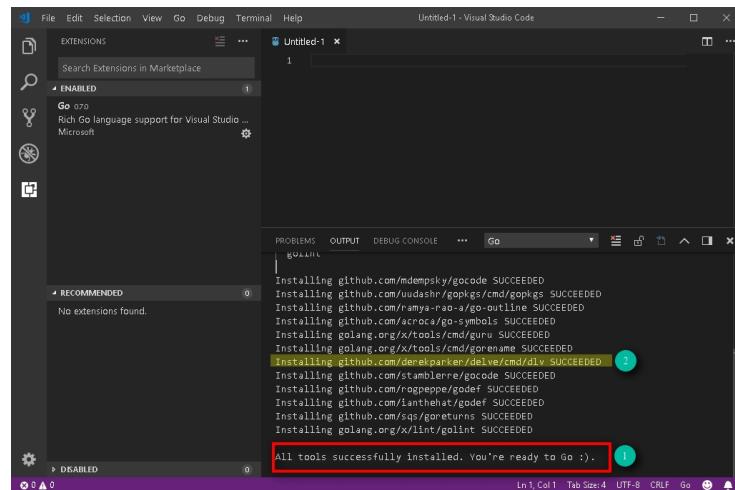


```
Installing 12 tools at C:\Users\Dave\go\bin
gocode
gopkg
go-outline
go-symbols
guru
gorenname
dlv
gocode-gomod
godef
godef-gomod
goreturns
golint
```

# Installation is Complete

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

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

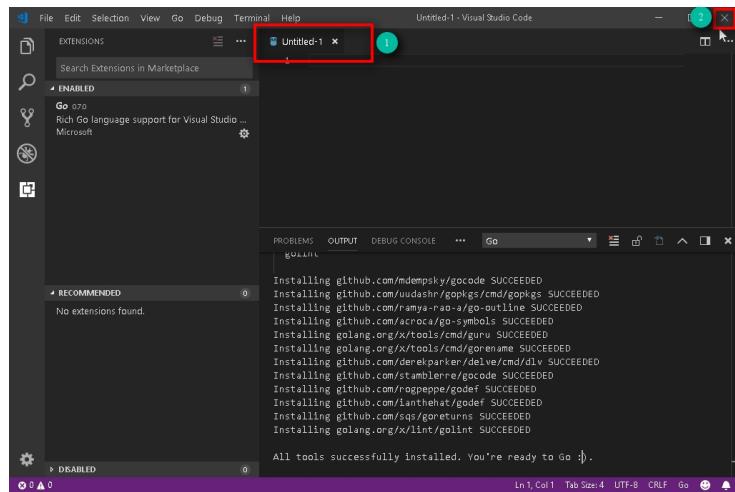


```
Installing github.com/mdempsky/gocode SUCCEEDED
Installing github.com/uudashn/gopkg/cmd/gopkg SUCCEEDED
Installing github.com/rmya-rao/a/go-outline SUCCEEDED
Installing github.com/acroca/go-symbols SUCCEEDED
Installing golang.org/x/tools/cmd/guru SUCCEEDED
Installing golang.org/x/tools/cmd/gorenname SUCCEEDED
Installing github.com/derekparker/delve/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
All tools successfully installed. You're ready to Go :) . 1
```

# Close

1) Close Untitled

2) Close VS Code



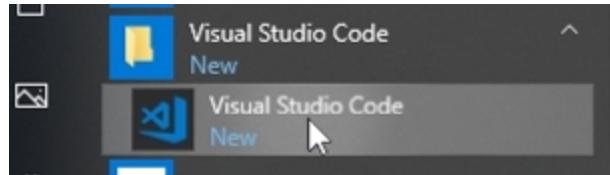
# Start Visual Studio Code

Select

1) Windows Icon

2) Visual Studio Code folder

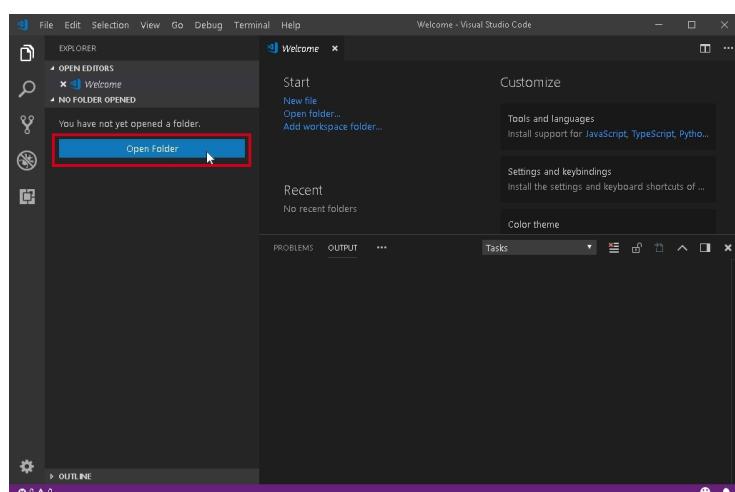
3) Visual Studio Code icon



to launch Visual Studio Code

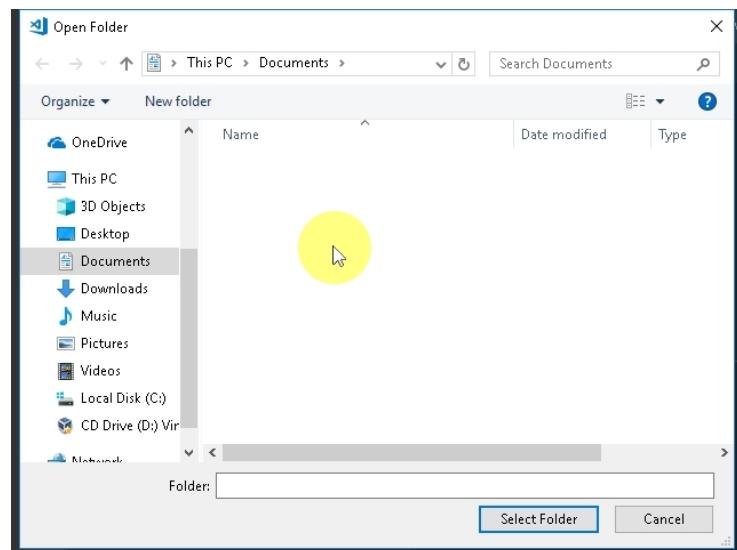
# Creating a project folder

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



# Create new folder

*Right click to open the dialog to create a new folder*



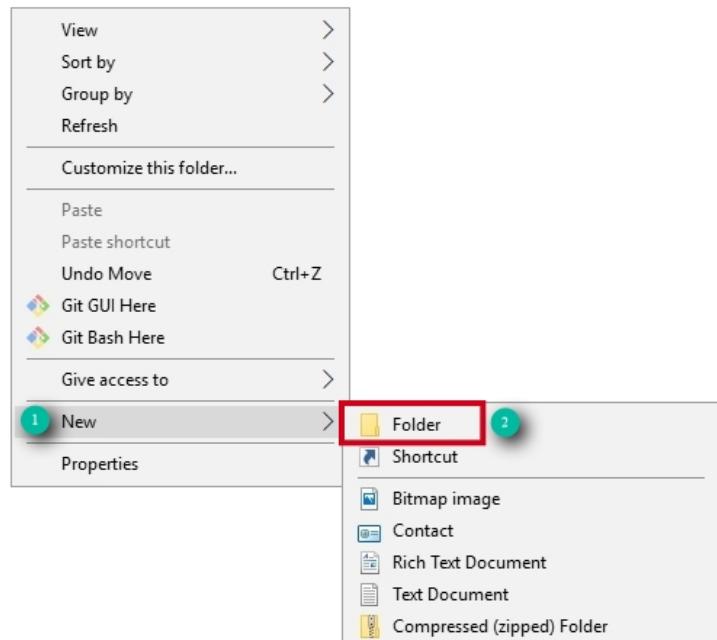
# Create new folder

*Select*

*1) New*

*2) Folder*

*To create a new folder*



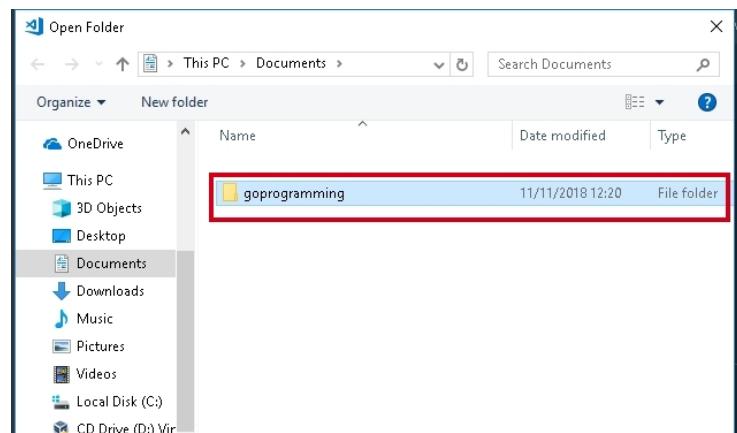
# Name the new folder



*Enter goprogramming to name the folder.*

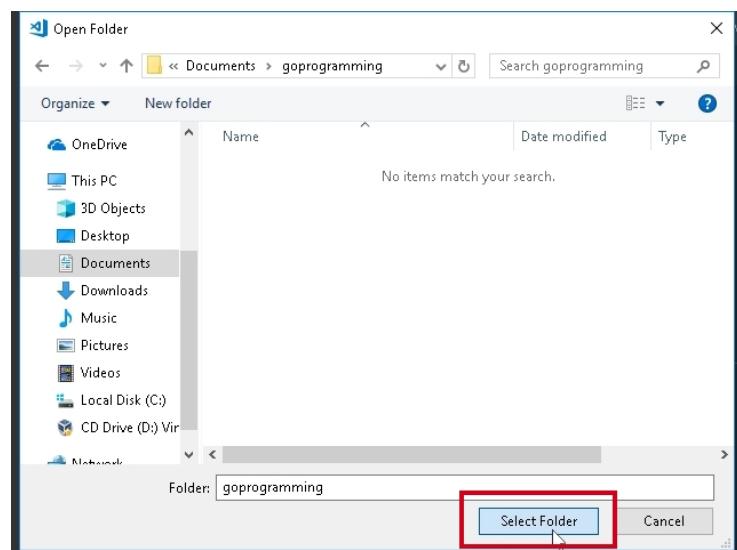
## Open goprogramming

*Open goprogramming to open the folder. (double click click it)*



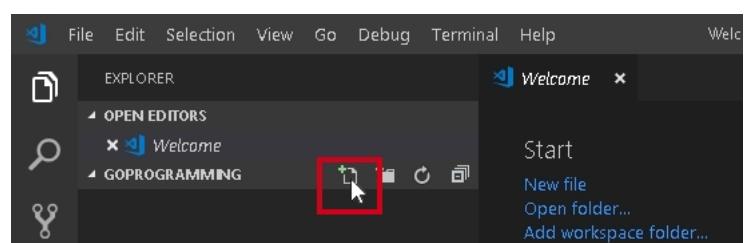
## Select folder

*Click on "Select folder" to confirm goprogramming as the folder selection.*



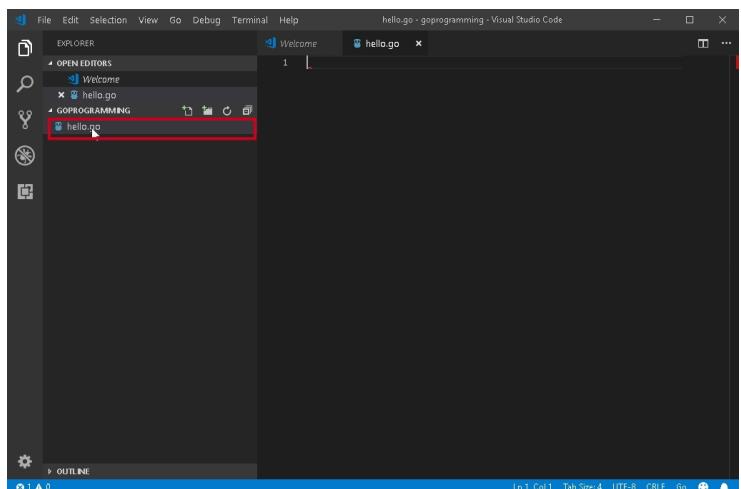
## Create a new file

*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`  
`package main`

A screenshot of the Visual Studio Code interface, specifically the 'hello.go' editor tab. The code shown is:

```
1 // hello.go
2
3 package main
4
5 import "fmt"
6
7 func main(){
8     fmt.Println("Hello")
9 }
```

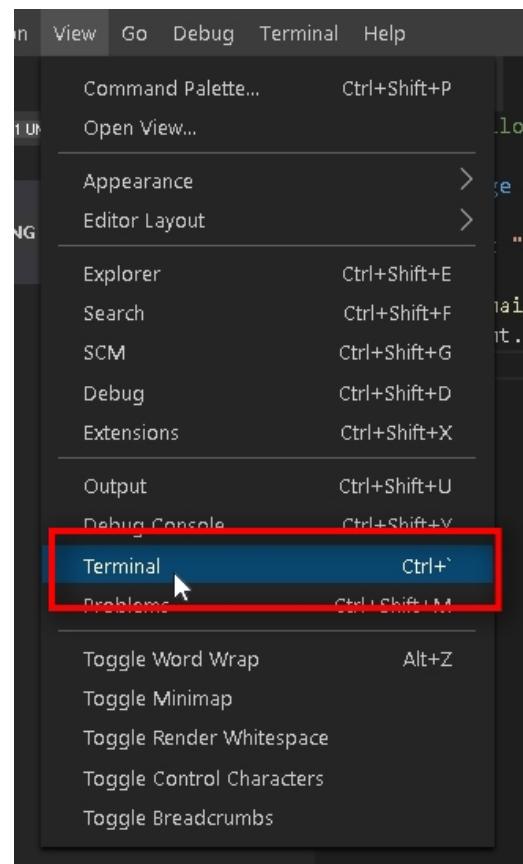
The code is syntax-highlighted with blue for keywords like `func`, `import`, and `fmt`. The code editor has a dark theme.

`import "fmt"`

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

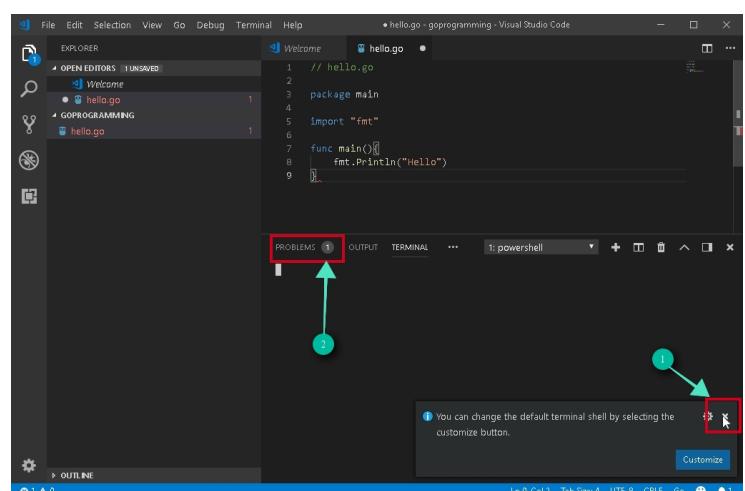
# Open the terminal view

Select view/terminal to launch the terminal.



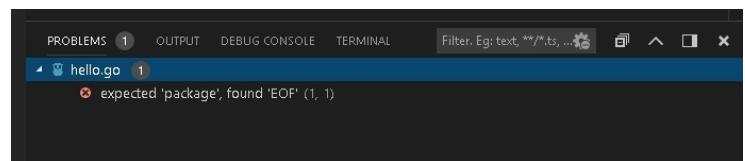
# Dialog box and problems

- 1) Close the dialog box
- 2) Notice there are problems reported. Select the problems tab to see the problems reported.



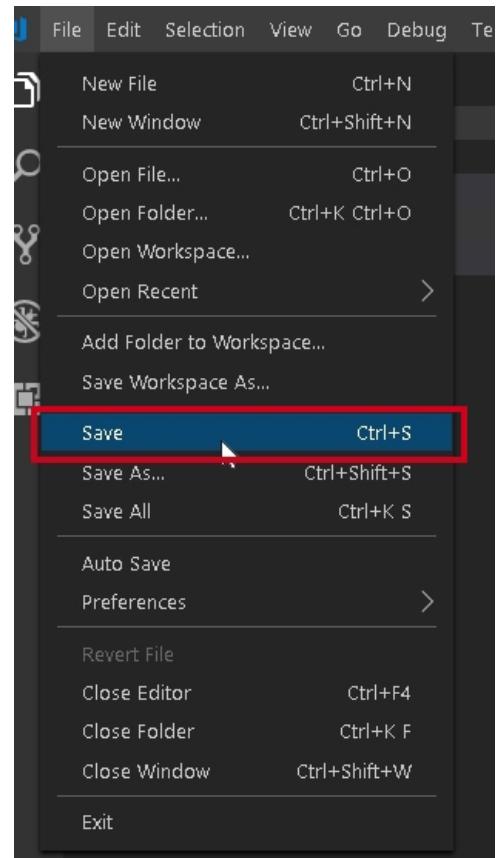
## Expected 'package' error

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



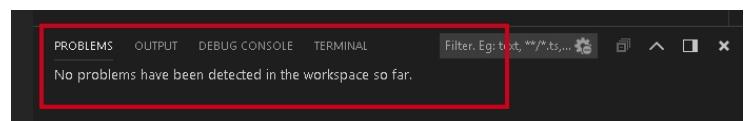
## Save the program

*Select File/Save to save the program.*



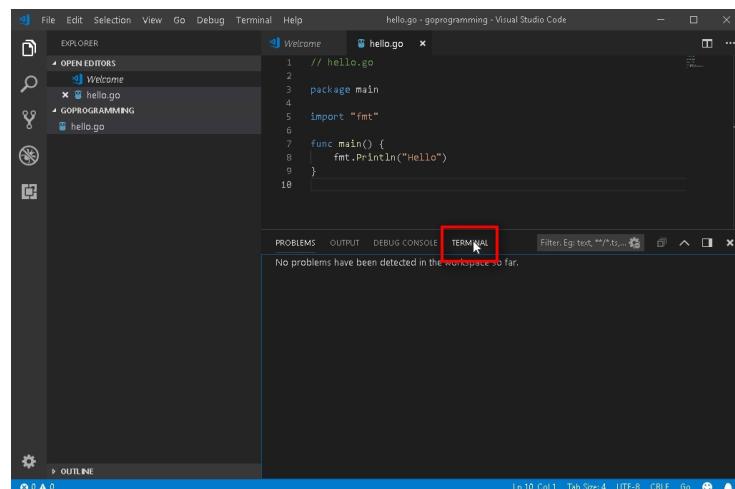
## Problem solved

*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.*



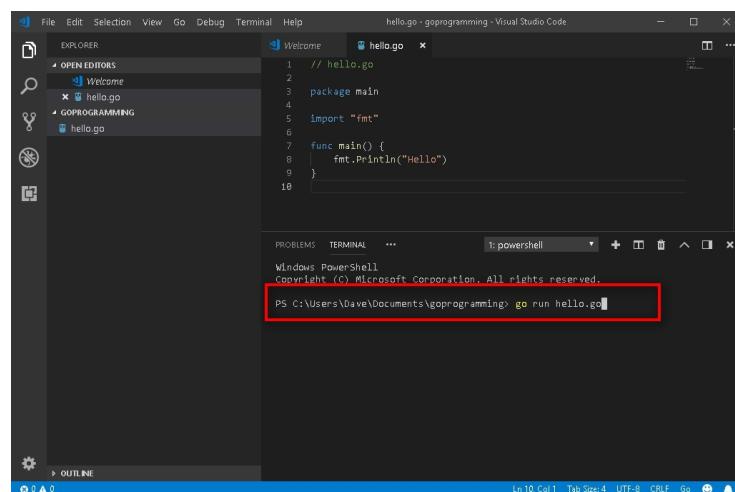
A screenshot of the Visual Studio Code interface. The top menu bar shows 'File', 'Edit', 'Selection', 'View', 'Go', 'Debug', 'Terminal', and 'Help'. The title bar says 'hello.go - goprogramming - Visual Studio Code'. The left sidebar has sections for 'EXPLORER', 'OPEN EDITORS' (with 'Welcome' and 'hello.go'), and 'GOPROGRAMMING' (with 'hello.go'). The main editor area shows a Go file named 'hello.go' with the following code:

```
// hello.go
package main
import "fmt"
func main() {
    fmt.Println("Hello")
}
```

The bottom status bar shows 'Ln 10 Col 1 Tab Size: 4 UTF-8 CRLF Go'. The bottom right corner has a gear icon. The bottom navigation bar has tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', and 'TERMINAL', with 'TERMINAL' being the active tab. A red box highlights the 'TERMINAL' tab.

## Method 1 of running programs [Command Line]

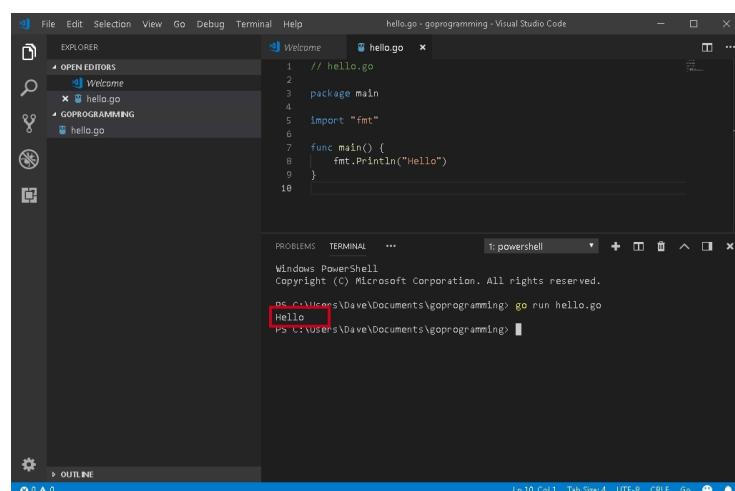
*To run the program successfully, you can start go and simply type in the terminal window:  
go run hello.go and press enter.*



A screenshot of the Visual Studio Code interface, similar to the previous one but with a different terminal output. The terminal tab is active. The terminal window shows a Windows PowerShell prompt: 'PS C:\Users\Dave\Documents\goprogramming>'. Below it, the command 'go run hello.go' is typed and highlighted with a red box. The output of the command, 'Hello', is shown below the command line.

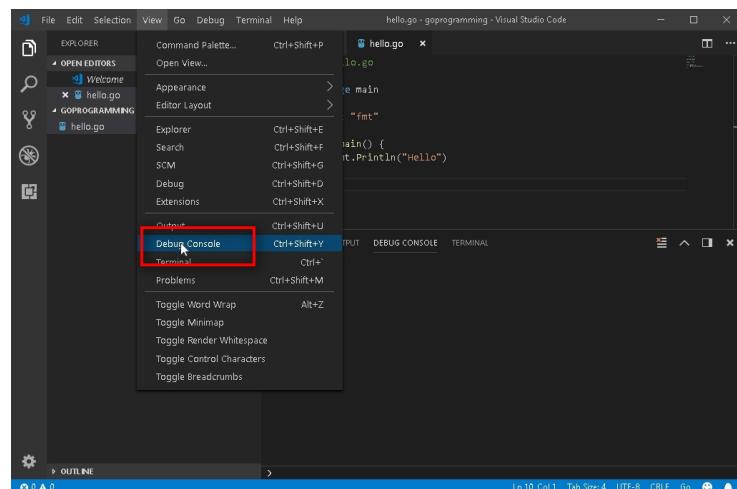
## The program runs

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

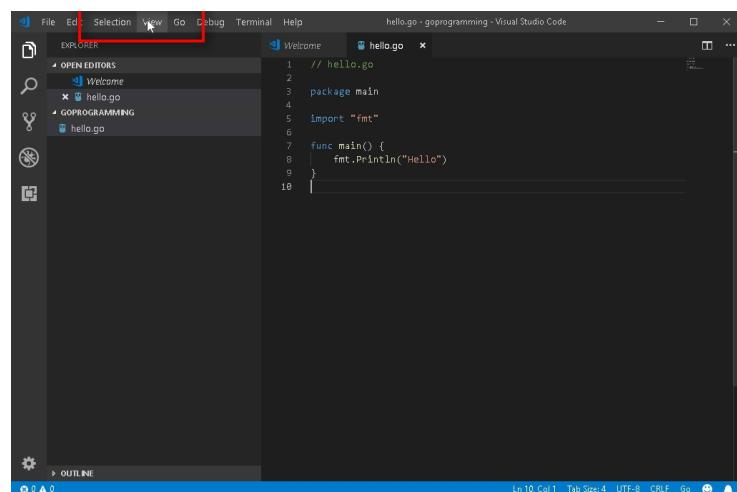


A screenshot of the Visual Studio Code interface, similar to the previous ones. The terminal tab is active. The terminal window shows a Windows PowerShell prompt: 'PS C:\Users\Dave\Documents\goprogramming>'. Below it, the command 'go run hello.go' is typed and highlighted with a red box. The output of the command, 'Hello', is shown below the command line. The terminal window also displays the copyright notice 'Windows PowerShell Copyright (C) Microsoft Corporation. All rights reserved.'

## Click on "Debug Console I"

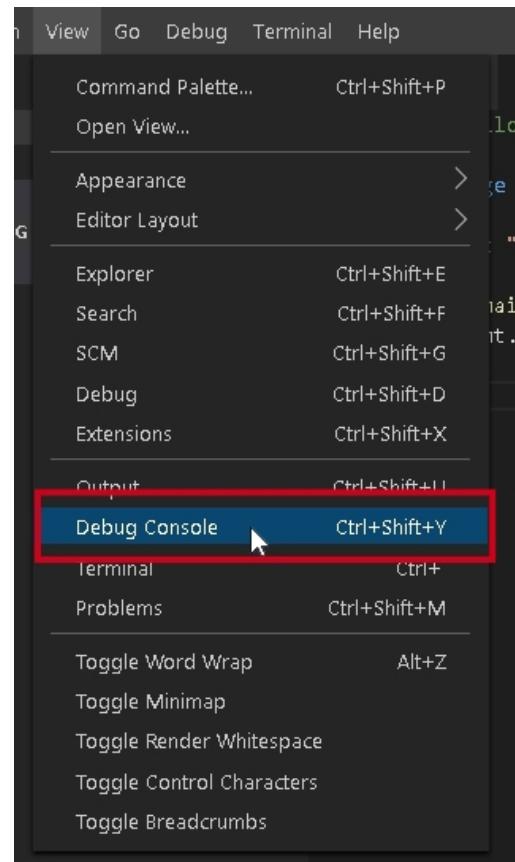


## Click on "Selection [View] Go"



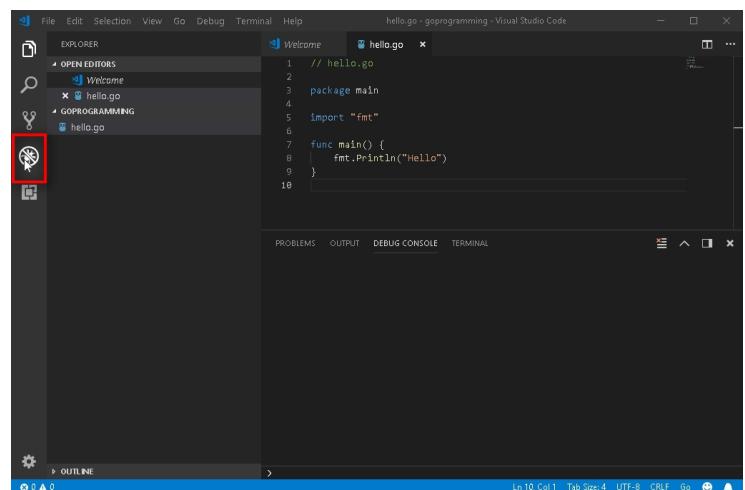
## Method 2 of running programs [Debugger]

*Open the debug console*



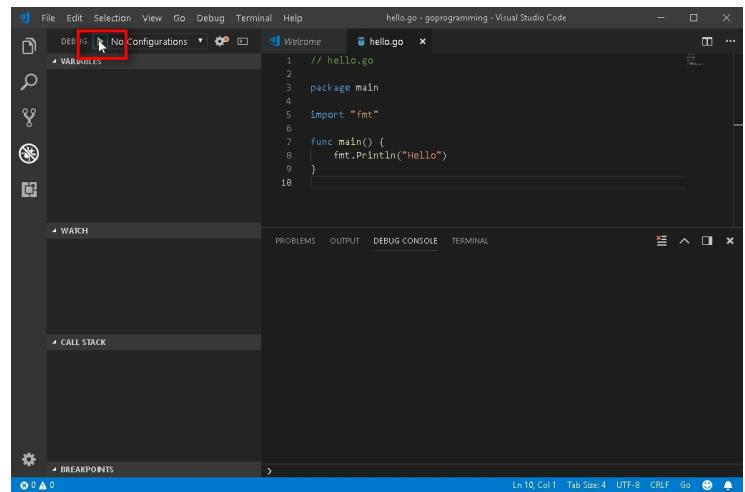
## Start the debugger

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



# 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.*

