

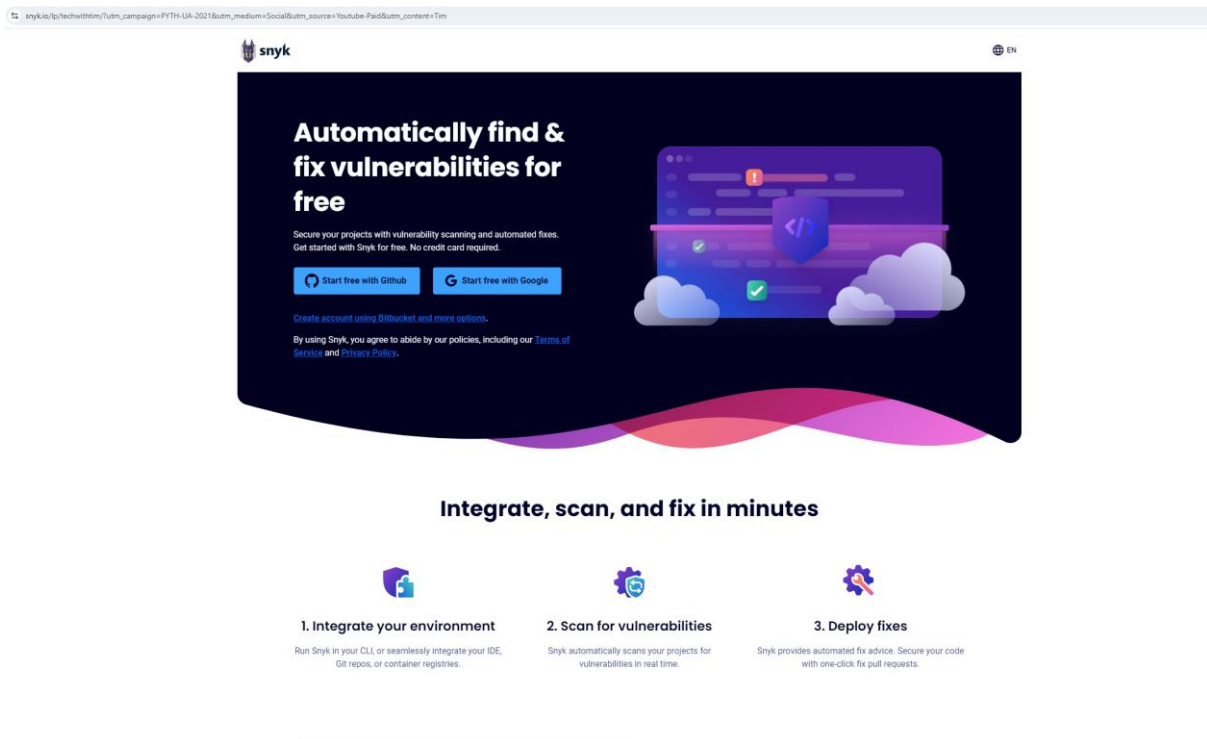
How to use Snyk

Introduction to Snyk

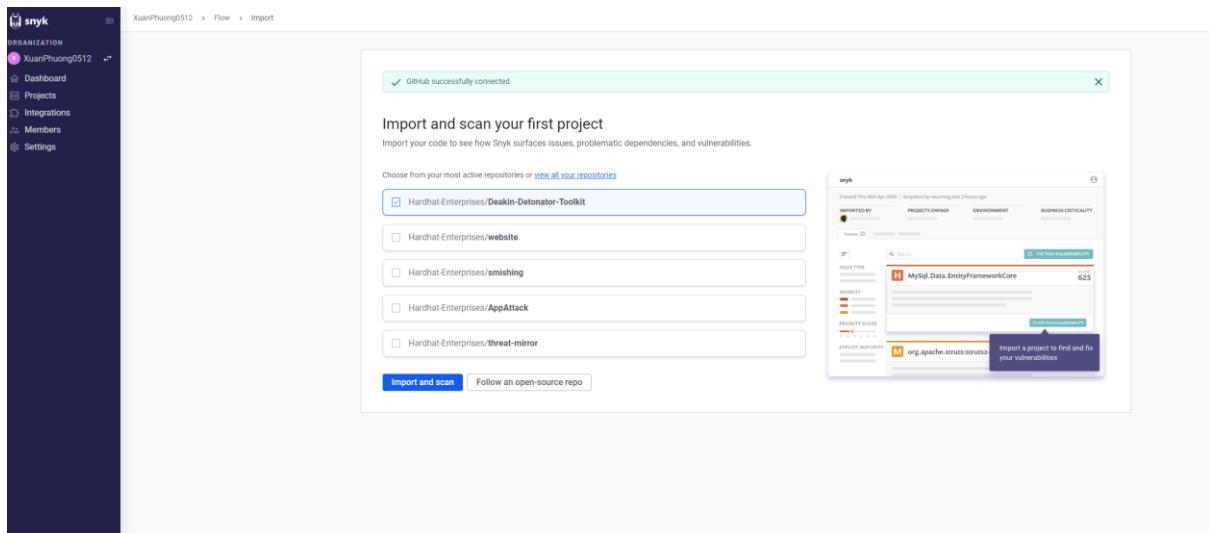
Snyk is a developer-first security platform designed to help organizations find, fix, and monitor vulnerabilities in their code, dependencies, containers, and infrastructure as code (IaC). It integrates seamlessly into the development process, enabling teams to identify security issues early in the software development lifecycle (SDLC) without disrupting productivity. By automating security checks and providing actionable insights, Snyk empowers developers to take ownership of security, ensuring that applications are secure from the start.

How to use Snyk on their website and GitHub

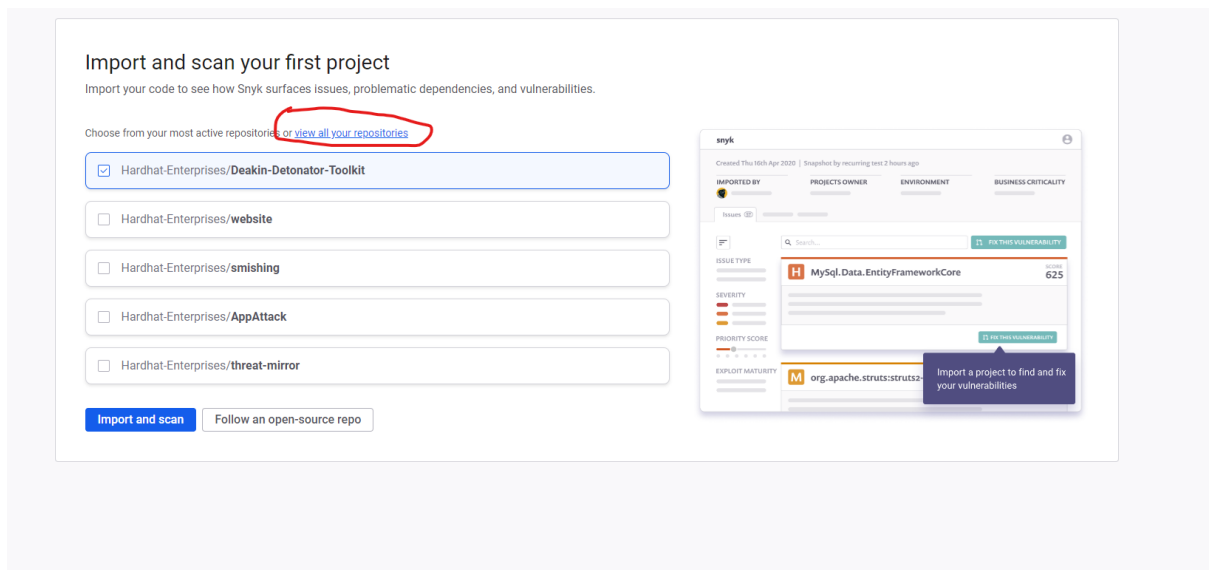
First, go to the snyk.io website https://snyk.io/lp/techwithtim/?utm_campaign=PYTH-UA-2021&utm_medium=Social&utm_source=Youtube-Paid&utm_content=Tim and log in using your account or GitHub for easy access.



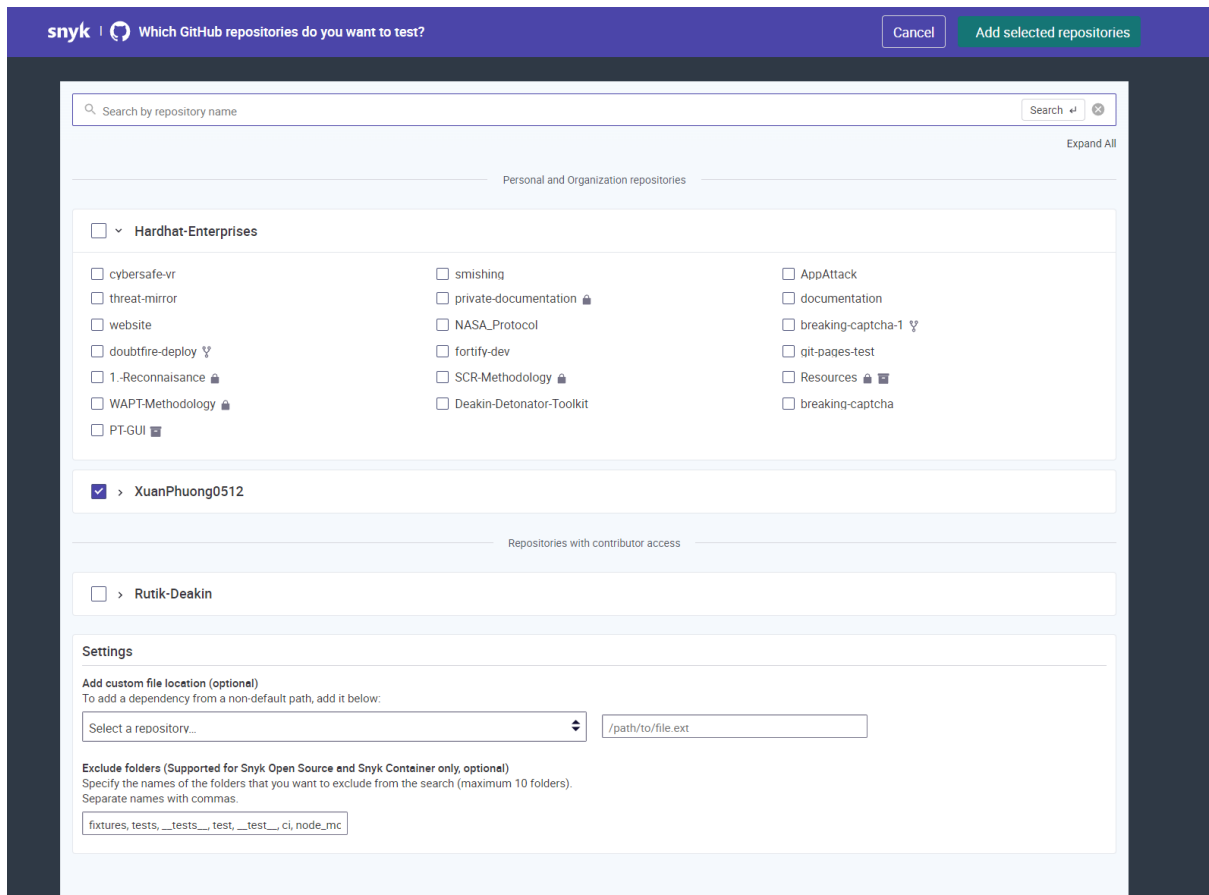
Once you are in, grant Snyk access to your GitHub to scan your projects for vulnerabilities. You can grant or deny access to any project you want. In my case, I let Snyk gain access to all my project for easy management.



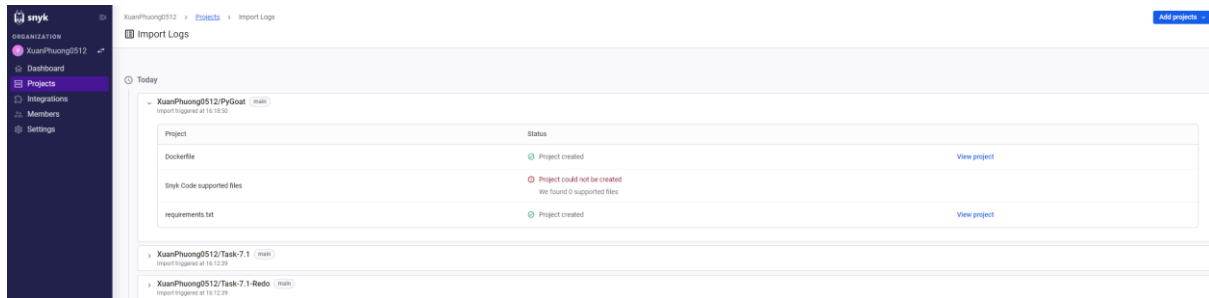
Now click on 'View all your repositories for any vulnerability' to choose which project of yours, you want to scan.



In this screen, I chose my own projects so that I can scan for any vulnerabilities



Here I uploaded a project with vulnerabilities provided by Snyk.



Click on View project and it will show you how many vulnerabilities that project have.

How to install Snyk on your computer

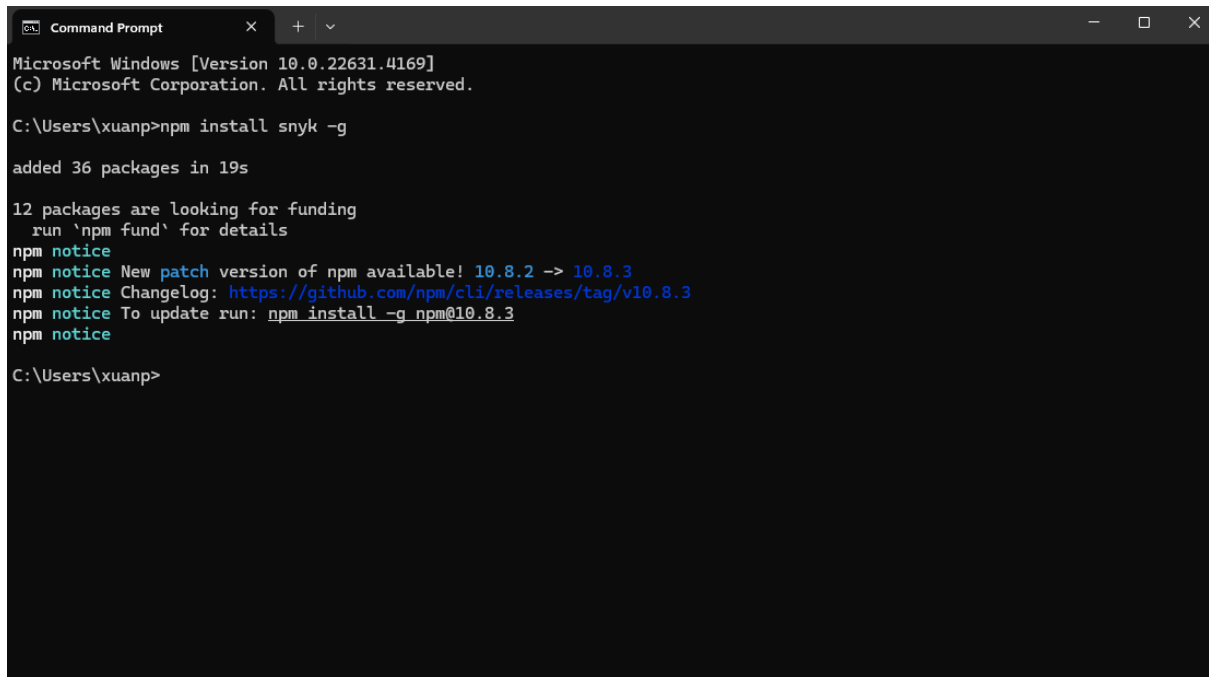
First, make sure you have node.js, go to this link to download: <https://nodejs.org/en>

If you want the official Snyk guide for installation go to this website

<https://docs.snyk.io/snyk-cli/install-or-update-the-snyk-cli>

Now, once you have installed node.js, go to your command prompt window and type in

npm install snyk -g



```
Microsoft Windows [Version 10.0.22631.4169]
(c) Microsoft Corporation. All rights reserved.

C:\Users\xuanp>npm install snyk -g

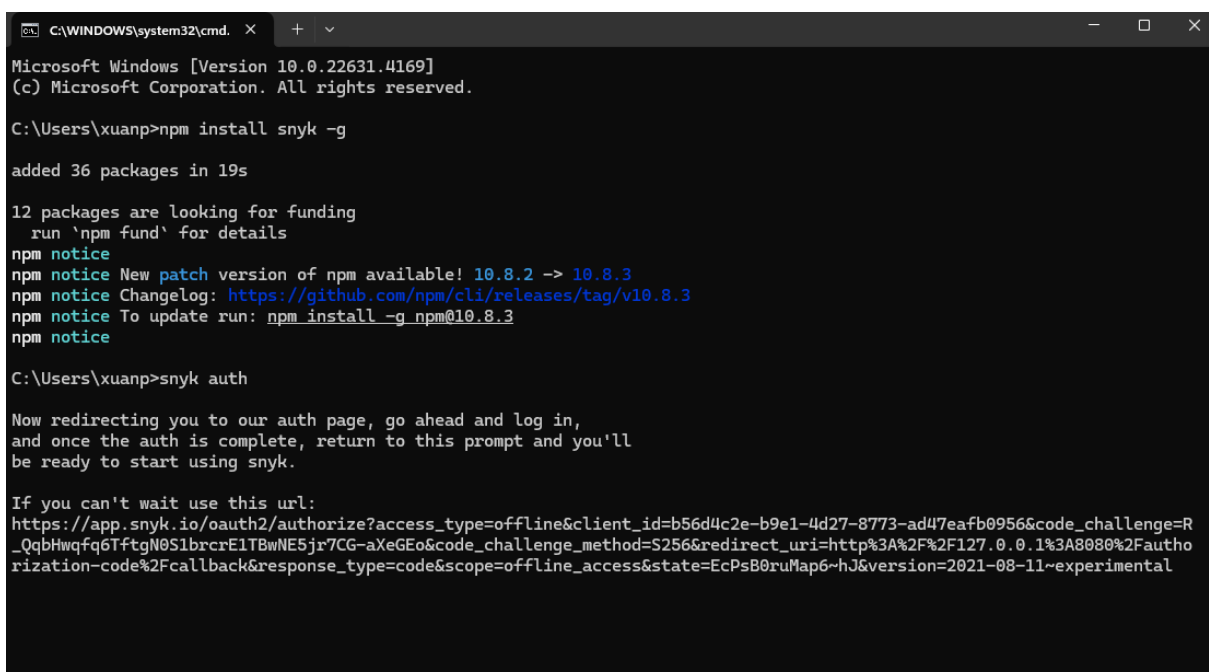
added 36 packages in 19s

12 packages are looking for funding
  run `npm fund` for details
npm notice
npm notice New patch version of npm available! 10.8.2 -> 10.8.3
npm notice Changelog: https://github.com/npm/cli/releases/tag/v10.8.3
npm notice To update run: npm install -g npm@10.8.3
npm notice

C:\Users\xuanp>
```

Now we need to authenticate ourselves to Snyk, by typing:

Snyk auth



```
C:\WINDOWS\system32\cmd. x + v
Microsoft Windows [Version 10.0.22631.4169]
(c) Microsoft Corporation. All rights reserved.

C:\Users\xuanp>npm install snyk -g

added 36 packages in 19s

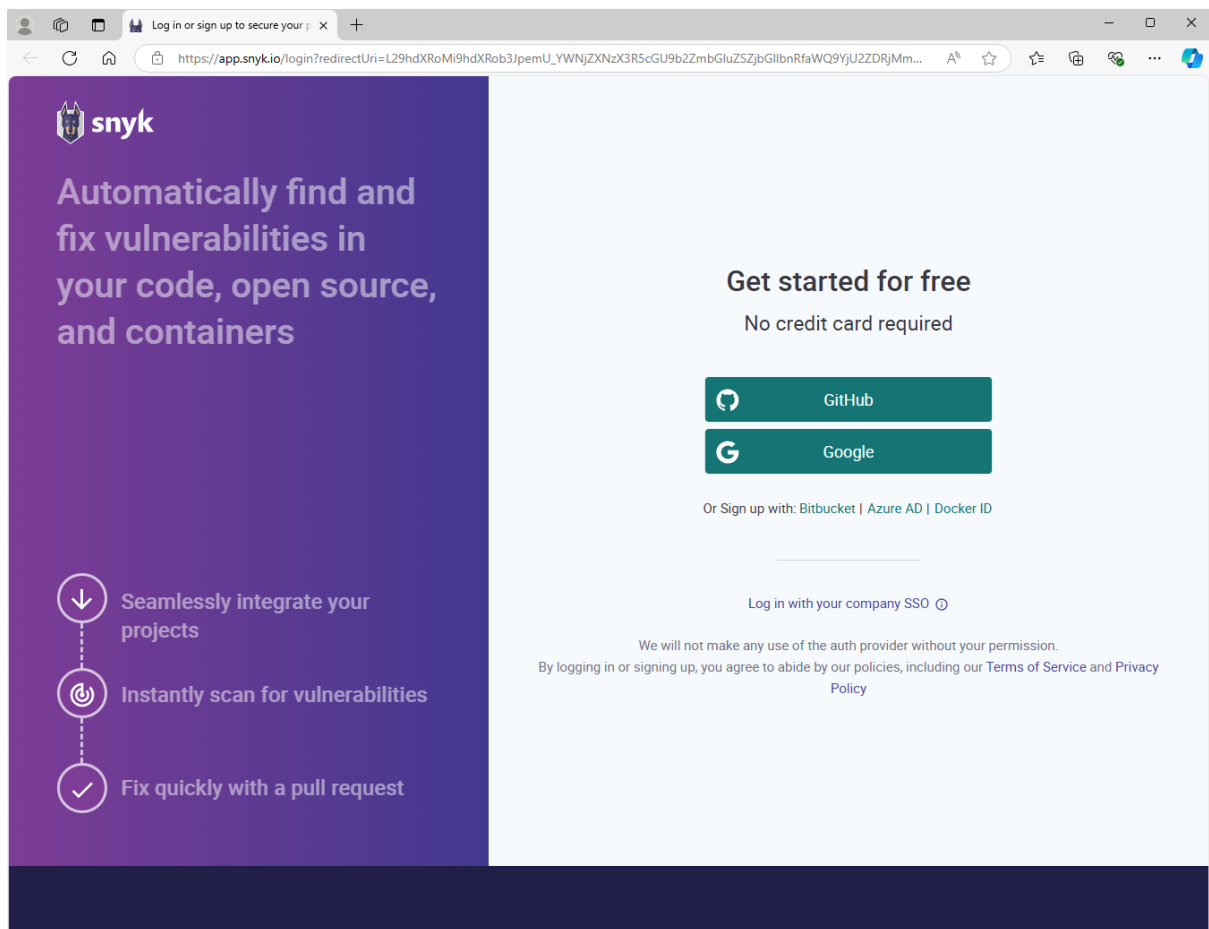
12 packages are looking for funding
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npm notice Changelog: https://github.com/npm/cli/releases/tag/v10.8.3
npm notice To update run: npm install -g npm@10.8.3
npm notice

C:\Users\xuanp>snyk auth

Now redirecting you to our auth page, go ahead and log in,
and once the auth is complete, return to this prompt and you'll
be ready to start using snyk.

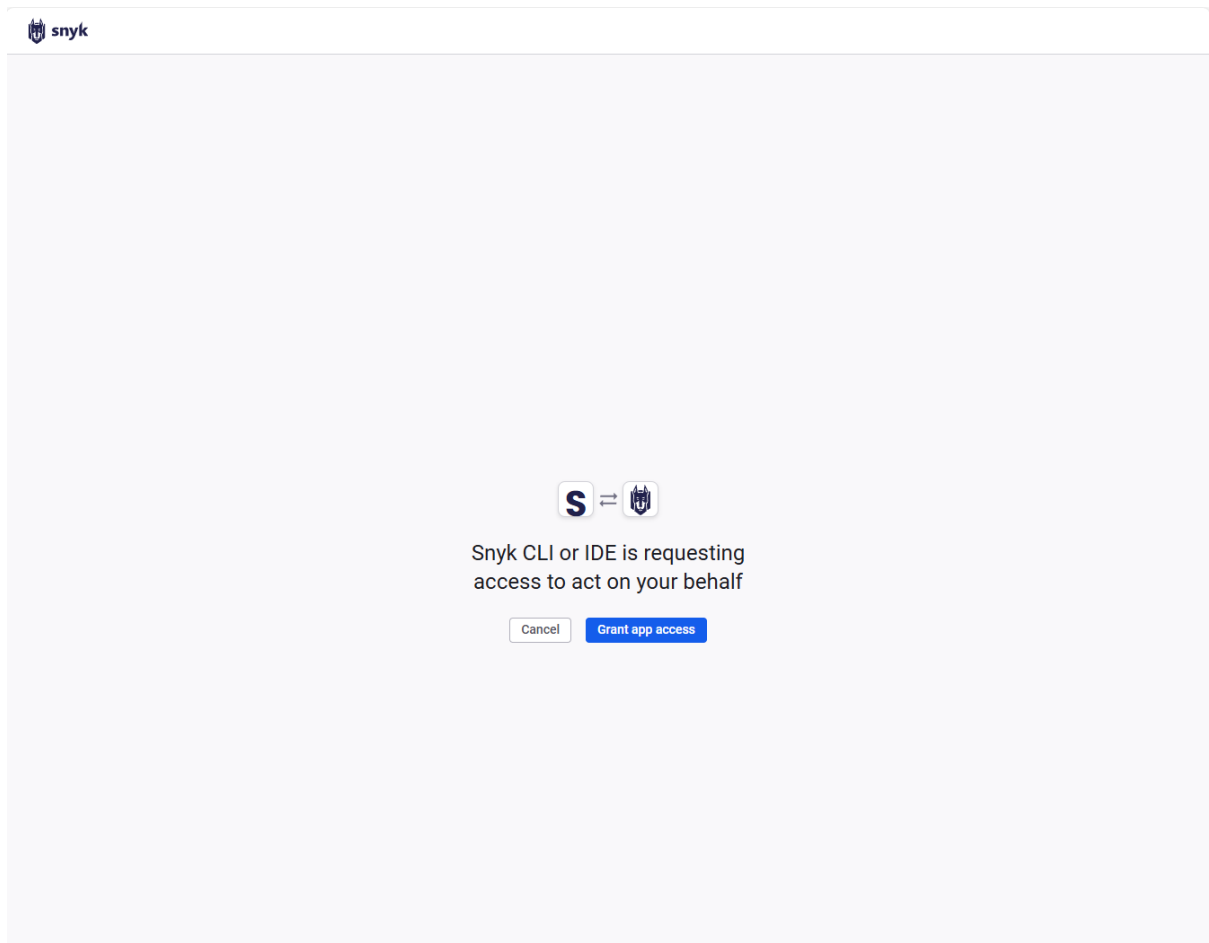
If you can't wait use this url:
https://app.snyk.io/oauth2/authorize?access\_type=offline&client\_id=b56d4c2e-b9e1-4d27-8773-ad47eafb0956&code\_challenge=R\_QqbHwqf6TftgN0S1brcrE1TBwNE5jr7CG-aXeGEo&code\_challenge\_method=S256&redirect\_uri=http%3A%2F%2F127.0.0.1%3A8080%2Fautho-ization-code%2Fcallback&response\_type=code&scope=offline\_access&state=EcPsB0ruMap6~hJ&version=2021-08-11~experimental
```

It will bring up a webpage that gets you to connect your Snyk account to your CLI

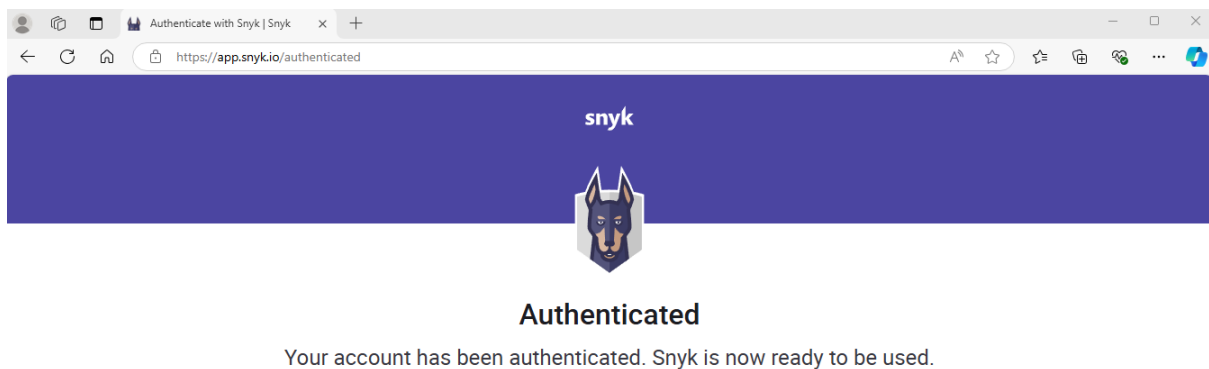


If you don't have an account just follow through the steps of creating one, I already have one so I'm going to use that.

If this window pops up, simply click 'Grant app access'

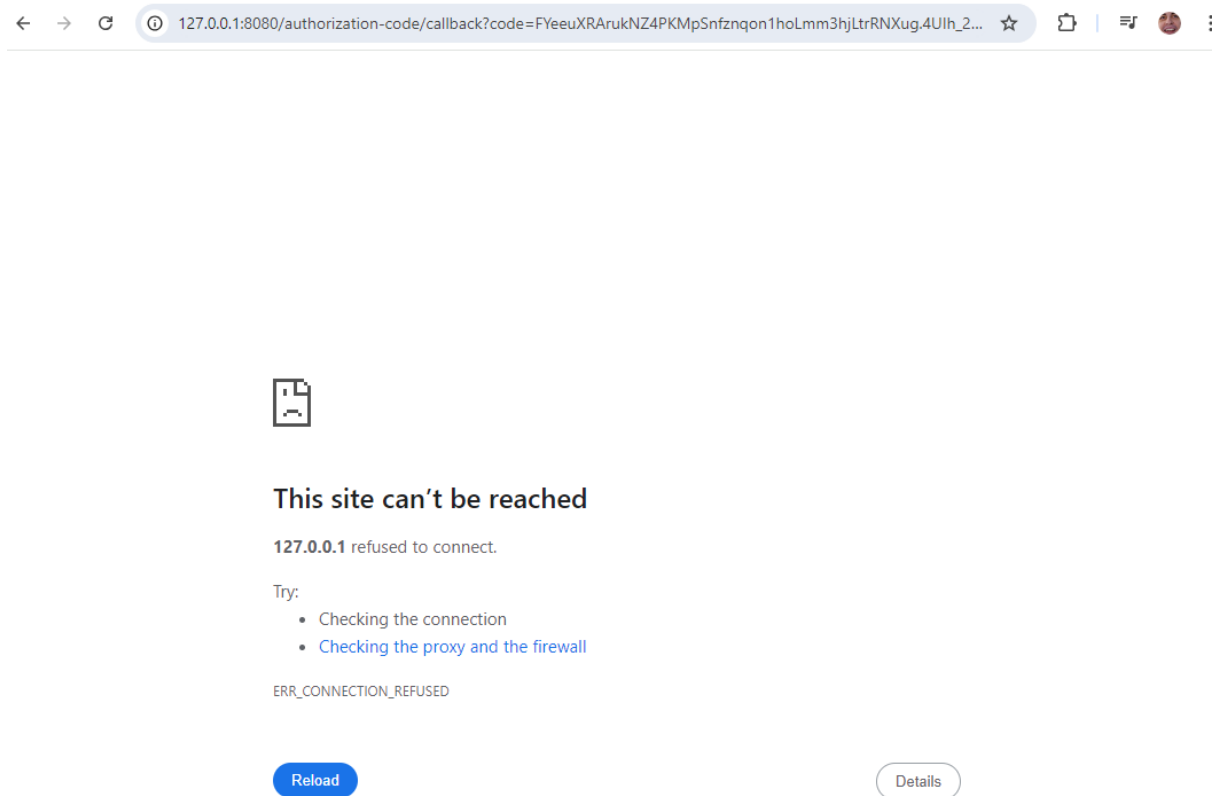


You should now see this window after granting access.



What happens if the authentication window fails?

If you failed to authenticate your machine for Snyk CLI through the method above, you will receive a window similar to this:



In this case, type in the command prompt:

snyk auth --auth-type=token

It will redirect you to their authentication page, and you simply press 'Grant app access'


```
C:\Users\xuanp>snyc auth --auth-type=token
```

Now redirecting you to our auth page, go ahead and log in,
and once the auth is complete, return to this prompt and you'll
be ready to start using snyk.

If you can't wait use this url:

https://app.snyk.io/login?token=095f4387-3174-425e-a37e-9694bd33391b&utm_medium=cli&utm_source=cli&utm_campaign=cli&utm_campaign_content=1.1293.1&os=windows_nt&docker=false

Your account has been authenticated. Snyk is now ready to be used.

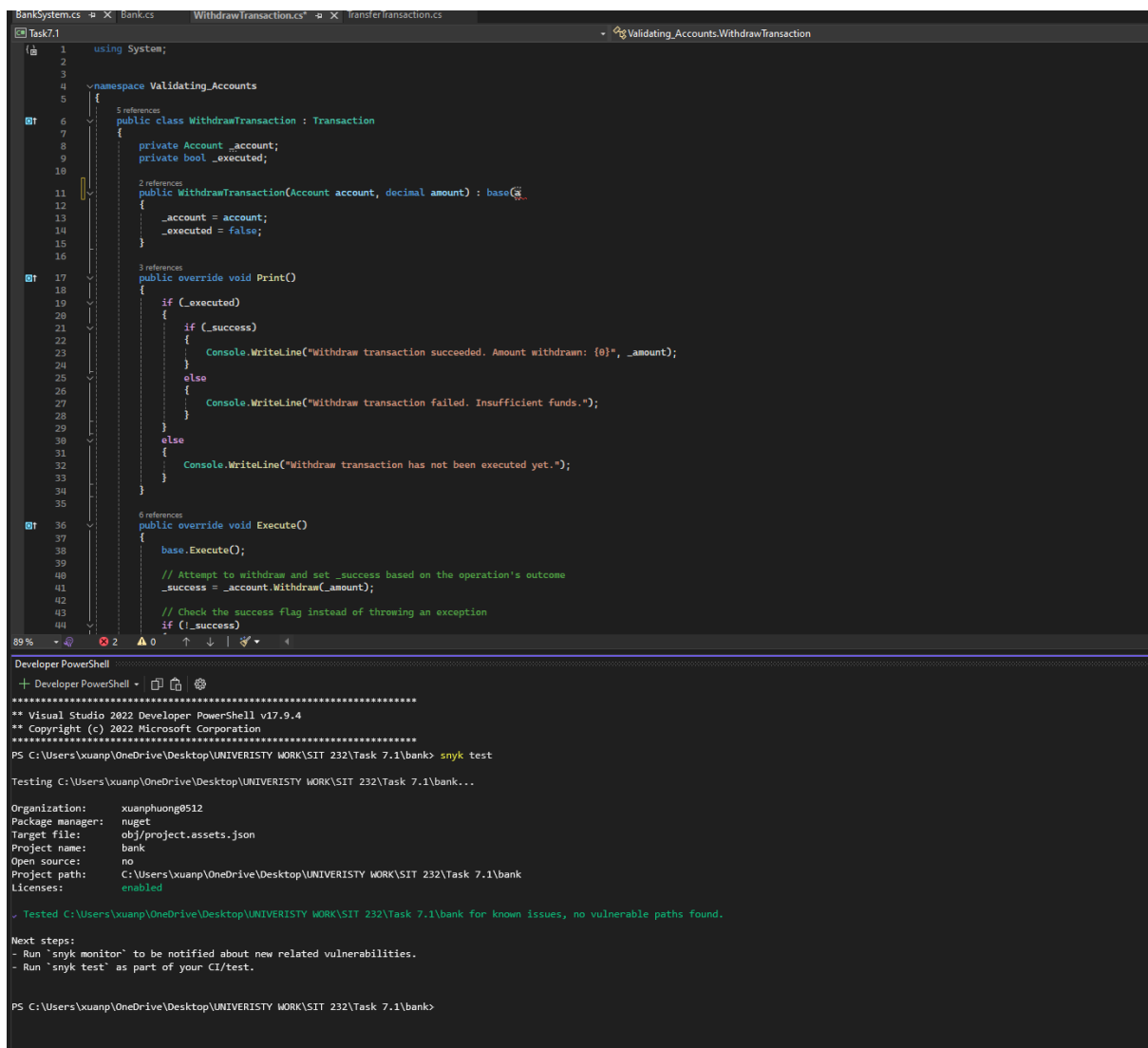
```
C:\Users\xuanp>
```

How to use Snyk in your project

Here I have a project of mine that I open up but you can do this in any of your projects

Now in your project, open the terminal and type in

snyk test



```
BankSystem.cs  X Bank.cs  WithdrawTransaction.cs  X TransferTransaction.cs
Task7.1
1 using System;
2
3
4
5 namespace Validating_Accounts
6 {
7     5 references
8     public class WithdrawTransaction : Transaction
9     {
10         private Account _account;
11         private bool _executed;
12
13         2 references
14         public WithdrawTransaction(Account account, decimal amount) : base()
15         {
16             _account = account;
17             _executed = false;
18         }
19
20         3 references
21         public override void Print()
22         {
23             if (_executed)
24             {
25                 if (_success)
26                 {
27                     Console.WriteLine("Withdraw transaction succeeded. Amount withdrawn: {0}", _amount);
28                 }
29                 else
30                 {
31                     Console.WriteLine("Withdraw transaction failed. Insufficient funds.");
32                 }
33             }
34             else
35             {
36                 Console.WriteLine("Withdraw transaction has not been executed yet.");
37             }
38         }
39
40         6 references
41         public override void Execute()
42         {
43             base.Execute();
44             // Attempt to withdraw and set _success based on the operation's outcome
45             _success = _account.Withdraw(_amount);
46             // Check the success flag instead of throwing an exception
47             if (!_success)
48             {
49
50             }
51         }
52     }
53 }
```

```
Developer PowerShell
+ Developer PowerShell +
** Visual Studio 2022 Developer PowerShell v17.9.4
** Copyright (c) 2022 Microsoft Corporation
PS C:\Users\xuanp\OneDrive\Desktop\UNIVERSITY WORK\SIT 232\Task 7.1\bank> snyk test

Testing C:\Users\xuanp\OneDrive\Desktop\UNIVERSITY WORK\SIT 232\Task 7.1\bank...

Organization:   xuanphuong0512
Package manager:  nuget
Target file:     obj/project.assets.json
Project name:    bank
Open source:     no
Project path:    C:\Users\xuanp\OneDrive\Desktop\UNIVERSITY WORK\SIT 232\Task 7.1\bank
Licenses:        enabled

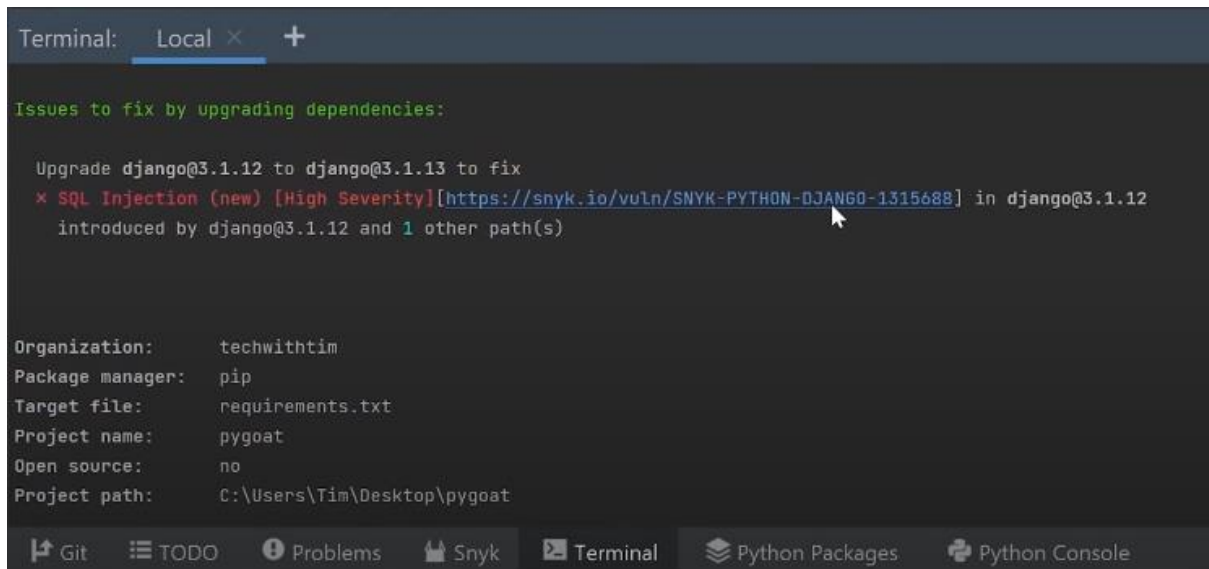
✓ Tested C:\Users\xuanp\OneDrive\Desktop\UNIVERSITY WORK\SIT 232\Task 7.1\bank for known issues, no vulnerable paths found.

Next steps:
- Run 'snyk monitor' to be notified about new related vulnerabilities.
- Run 'snyk test' as part of your CI/test.

PS C:\Users\xuanp\OneDrive\Desktop\UNIVERSITY WORK\SIT 232\Task 7.1\bank>
```

It will run through your project and find any vulnerabilities, in my case, I have no vulnerabilities

However, if your project does have a vulnerability then it would show something like this:



```
Terminal: Local x +

Issues to fix by upgrading dependencies:

Upgrade django@3.1.12 to django@3.1.13 to fix
x SQL Injection (new) [High Severity][https://snyk.io/vuln/SNYK-PYTHON-DJANGO-1315688] in django@3.1.12
  introduced by django@3.1.12 and 1 other path(s)

Organization:    techwithtim
Package manager: pip
Target file:     requirements.txt
Project name:    pygoat
Open source:     no
Project path:    C:\Users\Tim\Desktop\pygoat

Git  TODO  Problems  Snyk  Terminal  Python Packages  Python Console
```

Source: <https://www.youtube.com/watch?v=1N6VBHMoPsw&t=60s>

Then you follow the instructions that its given

For a full installation and detailed guide/uses, I recommend watching this video, it shows every step from installation to advanced commands.

Video link: <https://www.youtube.com/watch?v=1N6VBHMoPsw&t=60s>