CSS Framework - Bootstrap

What is a CSS framework?

- A library of pre-built CSS styles, components, and other elements ready for use
- Can include original fonts and icons
- Pre-built animations, such as sliders, buttons, and transitions
- Classes for easily switching between styles or themes, such as dark and light modes

Examples - CSS preprocessor

- •A CSS preprocessor is a program that lets you generate CSS from the preprocessor's own unique syntax.
- extend the functionality of regular CSS.

- Preprocessors are designed to improve the development and maintenance of web projects, be they small or large web sites, apps, browser plugins, or anything else built using web standards.
- •front-end framework is a conveniently packaged, documented collection of code -- usually CSS, HTML, and Javascript.

- Preprocessors are designed to improve the development and maintenance of web projects, be they small or large web sites, apps, browser plugins, or anything else built using web standards.
- Whereas a front-end framework is a conveniently packaged, documented collection of code -- usually CSS, HTML, and Javascript.

popular CSS preprocessors:

- Sass
- LESS
- Stylus
- PostCSS

MDN Web Docs Glossary

• CSS

Examples: CSS Frameworks

- 1. Bootstrap
- 2. Foundation
 - 3. Pure The lightweight CSS framework.
 - 4. Bulma A free, open-source CSS framework based on Flexbox.
 - 5. Semantic UI

CSS Framework Tools

- Reset style sheets
- Grid structures specifically for responsive web design
- Website typography
- Icon sets in icon fonts or 2D sprite graphic elements
- Styling for buttons, form elements, or tooltips
- Parts of graphical UI such as modal windows (Lightbox), tabs, slideshows, or accordions
- Equalizers to create equivalent height content
- CSS helper classes (hide, left)

Why use Bootstrap

- •It is very easy to use. Anybody having basic knowledge of HTML and CSS can use Bootstrap.
- •It facilitates users to develop a responsive website.
- •It is compatible on most of browsers like Chrome, Firefox, Internet Explorer, Safari and Opera etc.

What is a responsive website

•A website is called responsive website which can automatically adjust itself to look good on all devices, from smart phones to desktops etc.



What is Responsive-Web Design



Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.

- Mobiles
- Tablets
- Desktop
- Big Displays

What is Bootstrap?



Bootstrap is a front-end CSS Framework used to build beautiful responsive User Interfaces.

- 1. Mobile-first design (Responsive grid system).
- 2. Reusable classes to help style our content.
- 3. Inbuild UI elements such as buttons, cards, modals etc.
- 4. Don't need to worry about **browsescompatibility**.
- 5. Much more things

What Bootstrap package contains

- **Scaffolding**: Bootstrap provides a **basic structure** with Grid System, link styles, and background.
- CSS: Bootstrap comes with the feature of global CSS settings, fundamental HTML elements style and an advanced grid system.
- Components: Bootstrap contains a lot of reusable components built to provide iconography, dropdowns, navigation, alerts, pop-overs, and much more.
- JavaScript Plugins: Bootstrap also contains a lot of custom jQuery plugins. You can easily include them all, or one by one.
- Customize: Bootstrap components are customizable and you can customize Bootstrap's components, LESS variables, and jQuery plugins to get your own style.

</> How to use Bootstrap?

Online CDN (Requires Internet)

Offline Usage (Without Internet)

Package Managers (NPM, Yarn etc)



History of Bootstrap



- ✓ Bootstrap, originally named Twitter Blueprint, was developed by Mark
 Otto and Jacob Thornton at Twitter
- ✓ Bootstrap was released as Open Source Project on August 19, 2011 during his time at Twitter Company.
- ✓ Later, it got expanded due to its simplicity design. Now its one of the most used CSS framework out there.



Why we should use bootstrap?

Easy to use:

- Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
- Responsive features:
 - Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
- Mobile-first approach:
 - In Bootstrap, mobile-first styles are part of the core framework
- Browser compatibility:
 - Bootstrap 4 is compatible with all modern browsers (Chrome, Firefox, Internet Explorer 10+, Edge, Safari, and Opera)

<meta charset="utf-8">

- •<meta> tag defines metadata about an HTML document.
- Metadata is data (information) about data.
- •<meta> tags always go inside the <head> element,
- used to specify character set, page description, keywords, author of the document, and viewport settings.
- The metadata does not display on the webpage, but it is used by search engines, browsers and other web services which scan the site or webpage to know about the webpage.
- It tells the browser to use the utf-8 character encoding when translating machine code into human-readable text and vice versa to be displayed in the browser.

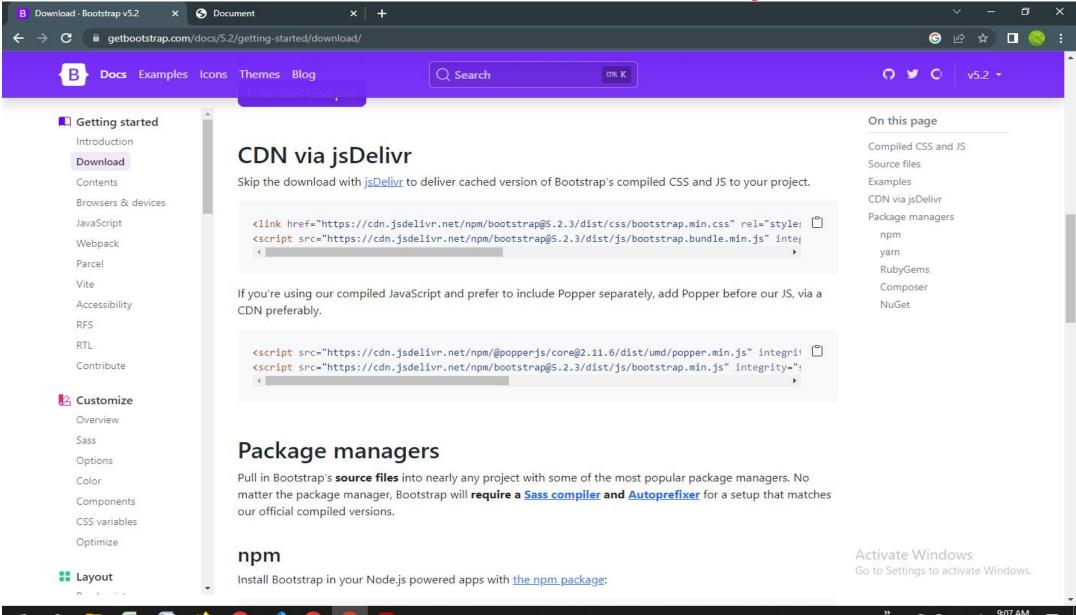
- <meta name="keywords" content="HTML, CSS, JavaScript, Tutorials"> It specifies the list of keyword which is used by search engines.
- <meta name="description" content="Free Online tutorials"> It defines the website description which is useful to provide relevant search performed by search engines.
- <meta name="author" content="thisauthor"> -It specifies the author of the page. It is useful to extract author information by Content management system automatically.
- <meta name="refresh" content="50"> It specifies to provide instruction to the browser to automatically refresh the content after every 50sec (or any given time).
- <meta http-equiv="refresh" content="5; url=https://www.javatpoint.com/html-tags-list"> - In the above example we have set a URL with content so it will automatically redirect to the given page after the provided time.

<meta name="viewport" content="width=device-width,
initial-scale=1.0"> - It specifies the viewport to control the page
dimension and scaling so that our website looks good on all devices. If
this tag is present, it indicates that this page is mobile device
supported.

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8">
  <meta name="keywords" content="HTML, CSS, JavaScript, Tutorials">
  <meta name="description" content="Free Online tutorials">
  <meta name="author" content="thisauthor">
<meta http-equiv="refresh" content="5;
url=https://www.javatpoint.com/html-tags-list">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
<h2>Example of Meta tag</h2>
This example shows the use of meta tag within an HTML document
</body>
</html>
```

https://getbootstrap.com/

1. Download form CDN via jsDelivr











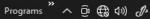


















1. Copy from CDN to with in <head> tag

href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-rbsA2VBKQhggwzxH7pPCaAqO46MgnOM80zW1R WuH61DGLwZJEdK2Kadq2F9CUG65" crossorigin="anonymous">

 <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-kenU1KFdBle4zVF0s0G1M5b4hcpxyD9F7jL+jjXkk+Q2h455rYXK/7HAuoJl+0I4" crossorigin="anonymous"></script>

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
 <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
    <!--Bootstrap-->
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/css/bootstrap.min.css" rel="stylesheet"</pre>
  integrity="sha384-rbsA2VBKQhggwzxH7pPCaAqO46MgnOM80zW1RWuH61DGLwZJEdK2Kada2F9CUG65"
  crossorigin="anonymous">
  </head>
<body>
  Kongu Engineering College 
 <!--Bootstrap JS-->
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/js/bootstrap.bundle.min.js"</pre>
  integrity="sha384-kenU1KFdBle4zVF0s0G1M5b4hcpxyD9F7jL+jjXkk+Q2h455rYXK/7HAuoJl+0I4"
  crossorigin="anonymous"></script>
  <script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.11.6/dist/umd/popper.min.js"</pre>
  integrity="sha384-oBqDVmMz9ATKxlep9tiCxS/Z9fNfEXiDAYTujMAeBAsjFuCZSmKbSSUnQlmh/jp3"
  crossorigin="anonymous"></script>
  <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/js/bootstrap.min.js"</pre>
  integrity="sha384-cuYeSxntonz0PPNIHhBs68uyIAVpIIOZZ5JqeqvYYIcEL727kskC66kF92t6XI2V"
  crossorigin="anonymous"></script>
</body>
```

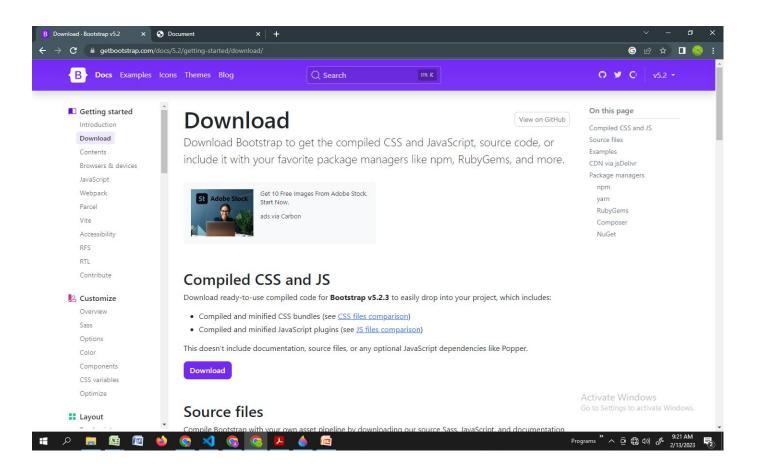
```
Elle Edit Selection Yiew Go Bun Terminal Help
                                                                    index.html - bootstrap - Visual Studio Code
 O index.html X

    index.html > 
    html > 
    body > 
    script

    2 <html lang="en">
            <meta charset="UTF-8">
            <meta name="viewport" content="width=device-width, initial-scale=1.0">
            <title>Bootstrap course in Tamil</title>
            integrity="sha384-9aIt2nRpC12Uk9gS9baDl411NQApFmC26EwAOH8WgZl5MYYxFfc+NcPb1dKGj75k" crossorigin="anonymous">
   10 </head>
            <hi>>Welcome to Bootstrap course</hi>
            Lets start learning bootstrap.
           cscript src="https://code.jquery.com/jquery-3.5.1.slim.min.js" integrity="sha384-DfXdz2htPH0lsSSs5nCTpuj/zy4C+OGpamoFVy38MVBnE+IbbVYUew+OrCXaRkfj"
            crossorigin="anonymous"></script>
   17 <script src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js" integrity="sha384-Q6E9RHvbIyZFJoft
        +2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo* crossorigin**anonymous*></script>
   18 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.0/js/bootstrap.min.js" integrity="sha384-0gVRvuATP1z7JjHLku0U7Xw704+h835Lr
        +6QL9UvYjZE3Ipu6Tp75j78h/kR0JKI* crossorigin="anonymous">
   19 (body>
   20 4/html>
                                                                                                                                   Activate Windows
```

Step 2: offline version

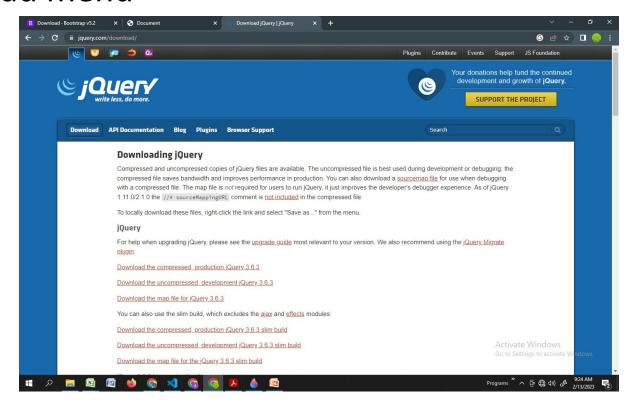
• 1. download compiled CSS and JS and extract in local disk



```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
    <!--Bootstrap offine -->
  <link href="./bootstrap-5.2.3-dist/bootstrap-5.2.3-dist/css/bootstrap.min.css">
  </head>
<body>
   Kongu Engineering College 
  <!--Bootstrap JS-->
    <script src="./bootstrap-5.2.3-dist/bootstrap-5.2.3-dist/js/bootstrap.min.js"></script>
</body>
</html>
```

Step 2 : offline version

- 2. go to https://jquery.com/
- 3.Click download menu

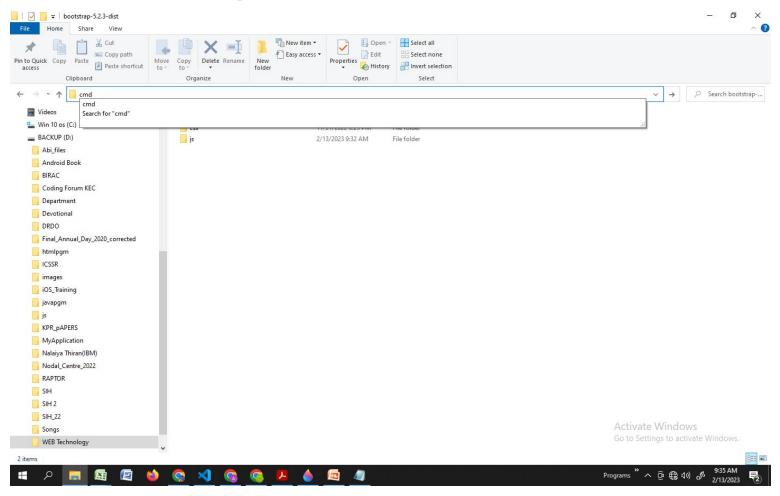


Step 3: Bootstrap depends upon jquery

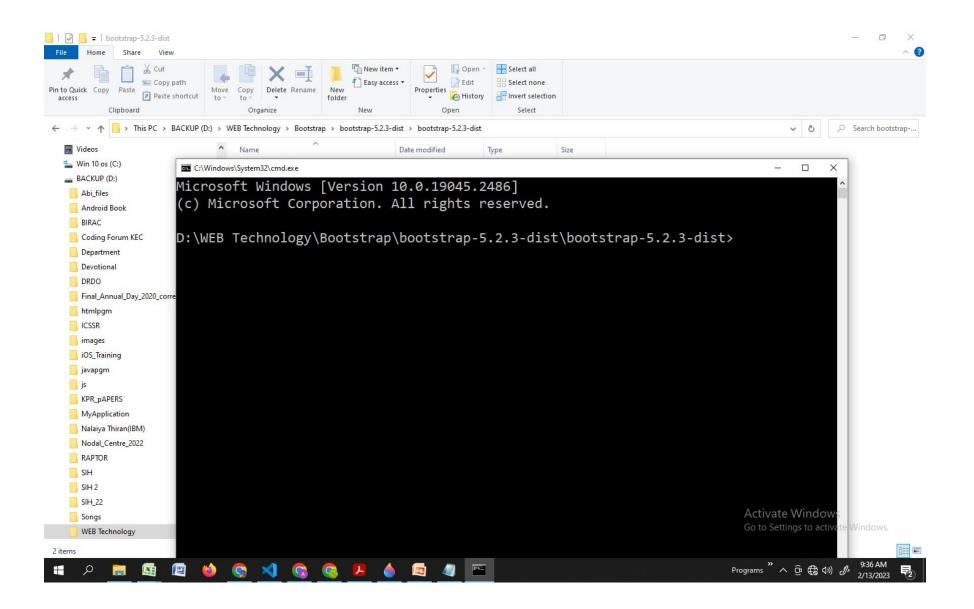
- 1. <u>Download the compressed, production jQuery 3.6.3 from jquery website</u>
- 2.open file copy from opened file
- 3.create new folder inside bootstrap is folder name iquery.min.is
- 4.paste the content and save it

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
    <!--Bootstrap offine -->
  <link href="./bootstrap-5.2.3-dist/bootstrap-5.2.3-dist/css/bootstrap.min.css">
  </head>
<body>
   Kongu Engineering College 
  <!--Bootstrap JS-->
  <script src="./bootstrap-5.2.3-dist/bootstrap-5.2.3-dist/js/jquery.min.js"></script>
  <script src="./bootstrap-5.2.3-dist/bootstrap-5.2.3-dist/js/bootstrap.min.js"></script>
</body>
</html>
```

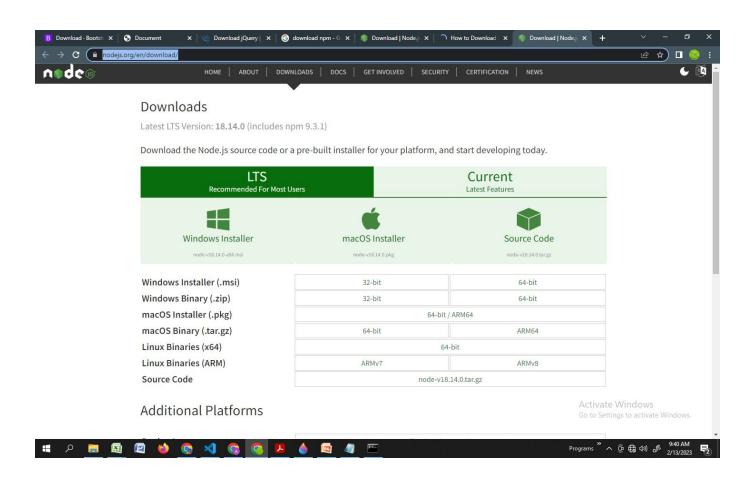
Step 3: Package downloader

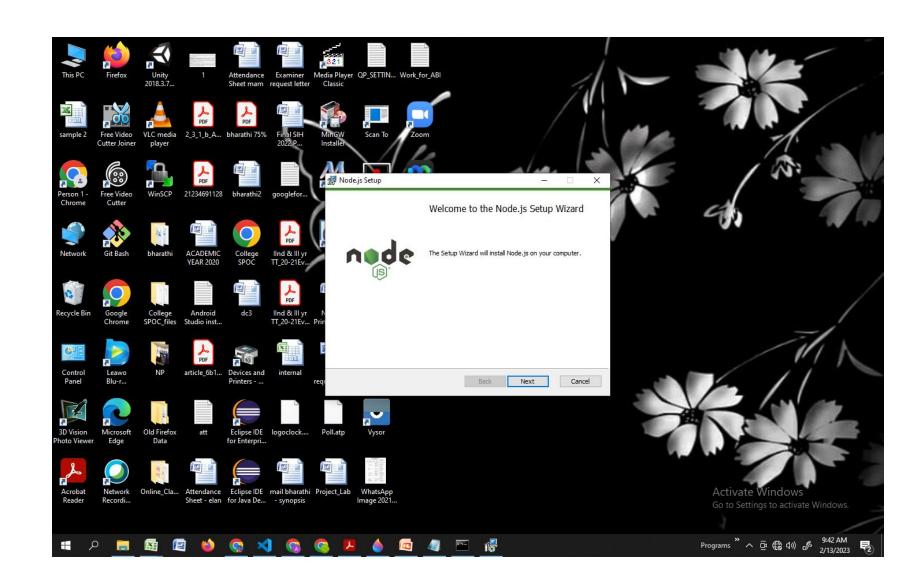


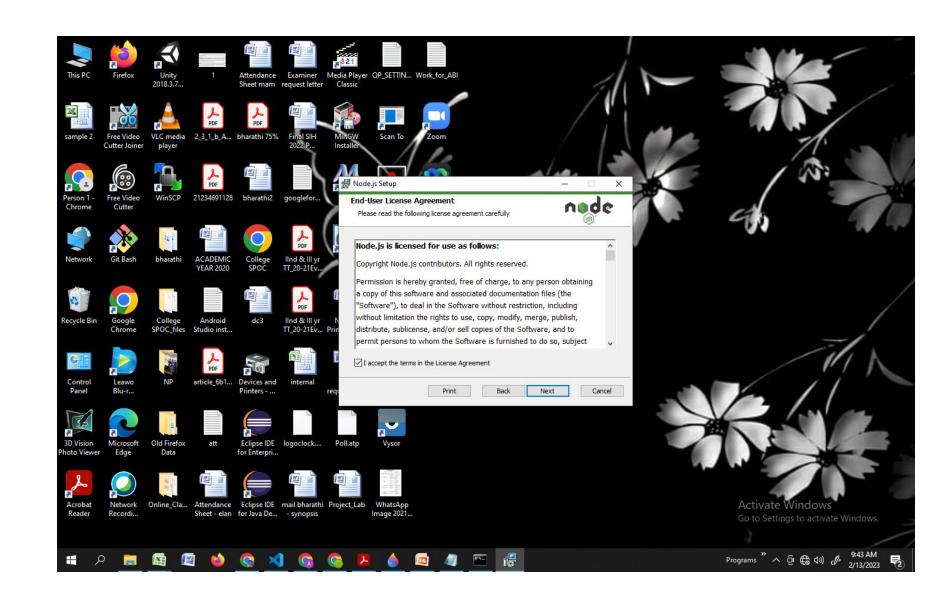
Step 1 : Go to Bootstrap directory – inside address bar type cmd

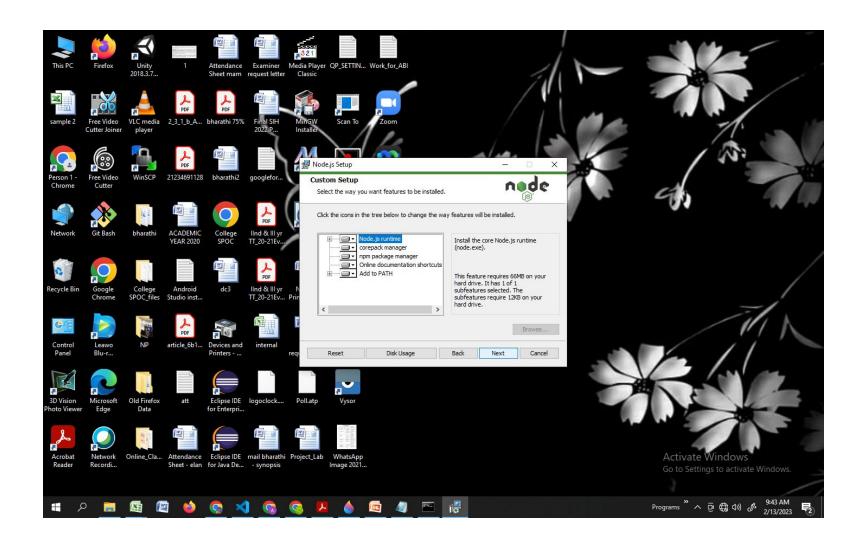


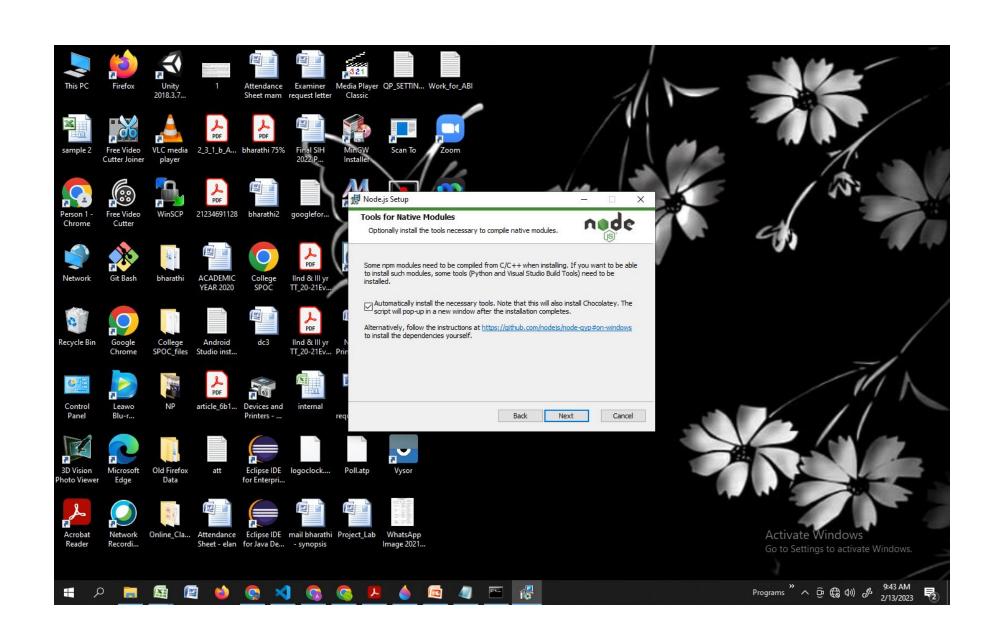
- Step 2 : Npm download-https://nodejs.org/en/download/
- Windows Installer (.msi) 32-bit or 64-bit
- After downloaded –click file

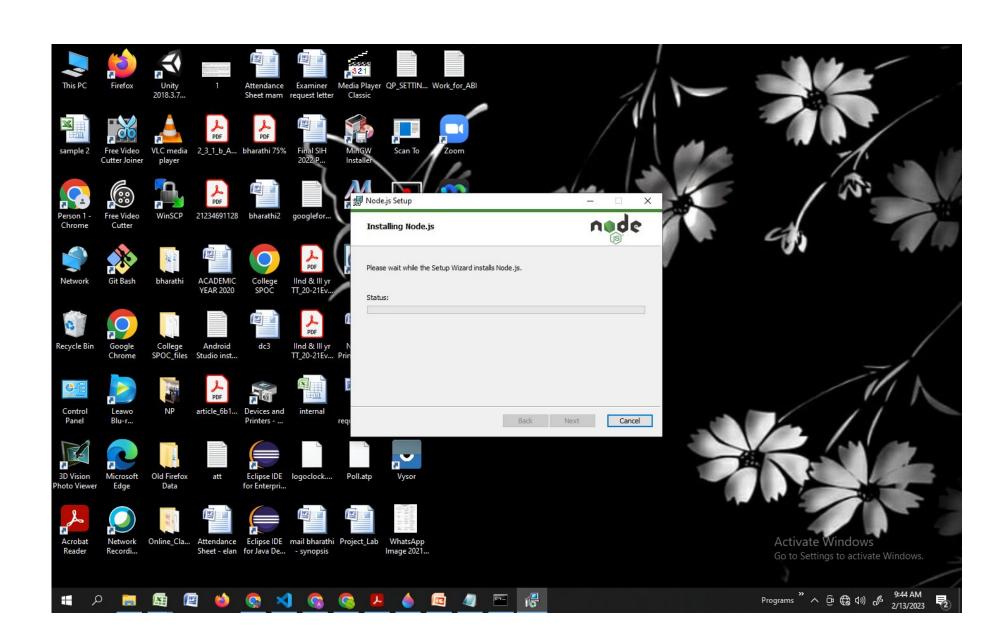


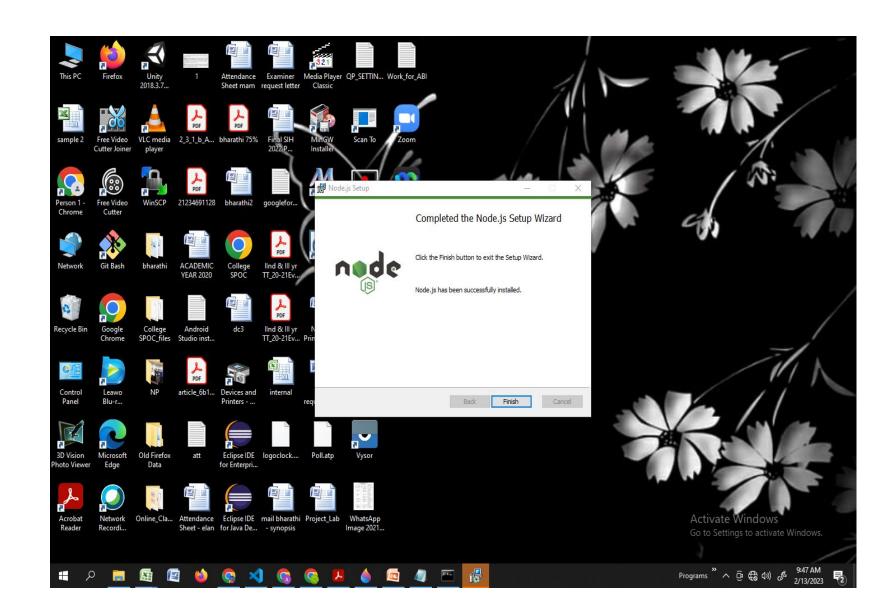












- 0 X Administrator: Windows PowerShell visualstudio-installer package files upgrade completed. Performing other installation steps. The upgrade of visualstudio-installer was successful Software install location not explicitly set, could be in package or default install location if installer. hocolatey-dotnetfx.extension v1.0.1 [Approved] hocolatey-dotnetfx.extension package files upgrade completed. Performing other installation steps. Installed/updated chocolatey-dotnetfx extensions. The upgrade of chocolatey-dotnetfx.extension was successful. Software installed to 'C:\ProgramData\chocolatey\extensions\chocolatey-dotnetfx' otnetfx v4.8.0.20220524 [Approved] dotnetfx package files upgrade completed. Performing other installation steps. Microsoft .NET Framework 4.8 or later is already installed. The upgrade of dotnetfx was successful Software install location not explicitly set, could be in package or default install location if installer. risualstudio2019buildtools package files upgrade completed. Performing other installation steps. Downloading channel manifest from 'https://aka.ms/vs/16/release/channel' Progress: 100% - Completed download of C:\Users\KONGU ENG\AppData\Local\Temp\chocolatey\chocolatey-visualstudio.extension\ChannelManifest_-602 808024.man (131.46 KB) Download of ChannelManifest_-602808024.man (131.46 KB) completed. Downloading catalog manifest from 'https://download.visualstudio.microsoft.com/download/pr/33d686db-3937-4a19-bb3c-be031c5d69bf/5e298fc101ba4d0f418c35227b03f68429b92e1d9 Progress: 100% - Completed download of C:\Users\KONGU ENG\AppData\Local\Temp\chocolatey\chocolatey-visualstudio.extension\Catalog_1137560938.man (11.24 MB). Download of Catalog_1137560938.man (11.24 MB) completed. Downloading channel manifest from 'https://aka.ms/vs/17/release/channel' Progress: 100% - Completed download of C:\Users\KONGU ENG\AppData\Local\Temp\chocolatey\chocolatey-visualstudio.extension\ChannelManifest_5748 06083.man (89.57 KB). Download of ChannelManifest_574806083.man (89.57 KB) completed. Downloading catalog manifest from 'https://download.visualstudio.microsoft.com/download/pr/0502e0d3-64a5-4bb8-b049-6bcbea5ed247/8aaa2e9602b06b33456e0c2cfb4e4f68c4b8e9259 2a75ce9be054e7c9ac6971a/VisualStudio.vsman' Progress: 100% - Completed download of C:\Users\KONGU ENG\AppData\Local\Temp\chocolatey\chocolatey-visualstudio.extension\Catalog_-897185.man (10.74 MB). Download of Catalog_-897185.man (10.74 MB) completed. Downloading Visual Studio Installer from 'https://download.visualstudio.microsoft.com/download/pr/0502e0d3-64a5-4bb8-b049-6bcbea5ed247/6361113dd12e39e28dc419f4056d19a0175b3a2f4 9666308b94f669939e17ed/vs_Setup.exe' Progress: 100% - Completed download of C:\Users\KONGU ENG\AppData\Local\Temp\chocolatev\Visual Studio Installer\16.11.23.0\vs Setup.exe (2.04 Activate Windows Download of vs_Setup.exe (2.04 MB) completed.

P 📑 🔄 🙋 🐞 🧖 🐧 😭 🖊 🌢 🚾 🐠 🖼 🗾

