**Build Custom Application on Microsoft Teams (Chat Bots/Personal Tabs/Messaging Extensions)**

* **Using Those languages / frameworks can build custom applications on MS teams**
  + Java Script using React
  + C# or .NET
  + Node.js
  + SPFx
* **Prerequisites**
  + [Visual Studio 2019](https://visualstudio.com/download), **ASP.NET and web development**, or **.NET Core cross-platform development** or
  + Git
  + **Ngrok**
* **First need to create free Teams developer tenant**
  + Click the link and follow the introductions and create new account [Microsoft 365 developer program](https://developer.microsoft.com/microsoft-365/dev-program).
  + Using Teams developer credentials create Azure account. [Create a free account](https://azure.microsoft.com/free/)
* **There is a Two ways to build Teams apps**
  + Download the sample repo and edit it git clone <https://github.com/OfficeDev/Microsoft-Teams-Samples.git> [Hello World with C# - Teams | Microsoft Docs](https://docs.microsoft.com/en-us/microsoftteams/platform/sbs-gs-csharp?tutorial-step=2)
  + Install the Teams Toolkit for Visual Studio [Teams Toolkit - Visual Studio Marketplace](https://marketplace.visualstudio.com/items?itemName=msft-vsteamstoolkit.vsteamstoolkit)
    - [Build apps with the Teams Toolkit and Visual Studio - Teams | Microsoft Docs](https://docs.microsoft.com/en-us/microsoftteams/platform/toolkit/visual-studio-overview)
* **After That You can add your custom controllers, models, data and other files to the application(This Application Works as a normal asp .net web application)**
* **You can Add You UI Components To the Welcome.rozor file(Add HTML components and calling API using C# API methods)**
  + - [Call a web API in an ASP.NET Core Blazor app | Microsoft Docs](https://docs.microsoft.com/en-us/aspnet/core/blazor/call-web-api?view=aspnetcore-6.0&pivots=server)
    - [Call JavaScript functions from .NET methods in ASP.NET Core Blazor | Microsoft Docs](https://docs.microsoft.com/en-us/aspnet/core/blazor/javascript-interoperability/call-javascript-from-dotnet?view=aspnetcore-6.0&viewFallbackFrom=aspnetcore-6.0%5C)
    - [How to use the Fetch API in JavaScript (attacomsian.com)](https://attacomsian.com/blog/javascript-fetch-api#:~:text=The%20Fetch%20API%20is%20a%20promise-based%20JavaScript%20API,feature%20set%20to%20fetch%20resources%20from%20the%20server.)
  + **There is a way, you can call API request using js API Methods…….**
* **After That you can simply run and install the application using Start Debugging(F5).**
* **Some times You need to Give Permission to the installation new Customs applications in the MS 365 Admin Center.**
  + **Admin Center 🡪 Teams 🡪App Permission Center 🡪Global 🡪 Allow install Custom Applicaions**
    - [Dashboard - Microsoft Teams admin center](https://admin.teams.microsoft.com/dashboard)
* **It Automatically Navigate to the Your MS Teams Application and pop-up custom application Add window.**

**Errors Occurred while developing**

* **Permission Errors**

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

* When you trying to install your custom application on Teams, some times it shows those Error messages.
* Then you have to login to the Microsoft 356 admin Center and give permission to the custom apps installation.
* [Microsoft 365 admin center - Home](https://admin.microsoft.com/Adminportal/Home?source=applauncher#/homepage#%2F)
* Follow instruction on this article [Prepare your Microsoft 365 tenant - Teams | Microsoft Docs](https://docs.microsoft.com/en-us/microsoftteams/platform/concepts/build-and-test/prepare-your-o365-tenant#enable-custom-teams-apps-and-turn-on-custom-app-uploading)