

# Introdução às tecnologias Web - ITW

Prática 1 – Formação de grupos & Instalação de software

# Sumário

## Objetivos

- Instalar o Visual Studio

- Criar o Projeto ITW2022

- Adicionar diretórios para as várias aulas

- Criar os ficheiros num diretório



# Aulas práticas

## Como nos organizamos?

As aulas práticas são realizadas em grupo de 2 estudantes.

A organização dos grupos será efetuada na primeira aula e (salvo justificadas alterações) manter-se-á ao longo do semestre.

Os trabalhos e testes de grupo são avaliados apenas num dos computadores e a nota atribuída aos dois elementos do grupo.

A nota do trabalho de grupo pode não ser igual para os dois elementos caso seja notória a falta de empenho de um dos elementos do grupo.

# Editor de texto

Mínimo: Notepad / notepad++ / edit3plus / sublime

Máximo: Microsoft Visual Studio (<https://azureforeducation.microsoft.com/devtools>)

The screenshot shows the Microsoft Azure Education portal. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information (jsp@ua.pt, UNIVERSIDADE DE AVEIRO (UAP...)). The main content area is titled 'Education | Software' and shows a search for 'visual studio'. A red arrow points to the search input field. Below the search bar, there are filters for 'Categoria de produto : Tudo', 'Sistema Operativo : Tudo', 'Tipo de sistema : 64 bits', and 'Idioma do produto : Português de Portugal, Multilingue, Inglês'. The results section shows '9 Itens' and a table of software products. The table has columns for 'Nome', 'Categoria de produto', 'Sistema Operativo', 'Tipo de sistema', and 'Idioma'. The first two rows are highlighted with a red dashed box. The third row is also highlighted with a red dashed box. The fourth row is highlighted with a red dashed box. The fifth row is highlighted with a red dashed box. The sixth row is highlighted with a red dashed box. The seventh row is highlighted with a red dashed box. The eighth row is highlighted with a red dashed box. The ninth row is highlighted with a red dashed box.

Nome ↑↓	Categoria de produto ↑↓	Sistema Operativo ↑↓	Tipo de sistema ↑↓	Idioma ↑↓
Visual Studio Enterprise 2019	Developer Tools	Windows	64 bits	Multilingue
Visual Studio Enterprise Edition 2022	Developer Tools	Windows	64 bits	Multilingue
Agents for Visual Studio 2019 (version 16.0) Test Agent	Developer Tools	Windows	64 bits	Multilingue
Agents for Visual Studio 2019 (version 16.0) Test Contr...	Developer Tools	Windows	64 bits	Multilingue
Remote Tools for Visual Studio 2019 (version 16.0)	Developer Tools	Windows	64 bits	Inglês
Visual Studio 2019 for Mac	Developer Tools	Mac	64 bits	Multilingue
Visual Studio Code	Developer Tools	Windows	64 bits	Multilingue
Visual Studio Community 2019 (version 16.0)	Developer Tools	Windows	64 bits	Multilingue
Visual Studio para Mac	Developer Tools	Mac	64 bits	Multilingue

# Visual Studio – validar a instalação

A versão free do VisualStudio funciona durante três meses. Ao fim desse período experimental de três meses (+/- no final do semestre), só funciona depois de inserir uma chave válida.

Os alunos podem pedir essa chave e devem aplicá-la durante ou logo após a instalação do produto.

Numa edição anterior desta disciplina uma aluna foi para exame e o VisualStudio não funcionou porque não tinha inserido a chave de validação quando instalou o software...

# Visual Studio – pedir a chave do produto

Microsoft Azure

Pesquisar recursos, serviços e documentos (G+)

Home Page > Education

Education | Software

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A saber

GitHub

Precisa de ajuda?

Suporte

Software

Chaves

visual studio

Categoria de produto : Tudo

Sistema Operativo : Tudo

Tipo de sistema : 64 bits

Idioma do produto : Português de Portugal, Multilíngua, Inglês

9 Itens

Nome ↑↓	Categoria de produto ↑↓	Sistema Operativo ↑↓	Tipo de sistema ↑↓
Visual Studio Enterprise 2019	Developer Tools	Windows	64 bits
Visual Studio Enterprise Edition 2022	Developer Tools	Windows	64 bits
Agents for Visual Studio 2019 (version 16.0) Test Agent	Developer Tools	Windows	64 bits
Agents for Visual Studio 2019 (version 16.0) Test Contr...	Developer Tools	Windows	64 bits
Remote Tools for Visual Studio 2019 (version 16.0)	Developer Tools	Windows	64 bits
Visual Studio 2019 for Mac	Developer Tools	Mac	64 bits
Visual Studio Code	Developer Tools	Windows	64 bits
Visual Studio Community 2019 (version 16.0)	Developer Tools	Windows	64 bits
Visual Studio para Mac	Developer Tools	Mac	64 bits

Ajude a melhorar esta página

Software

Education

Visual Studio Enterprise Edition 2022

An integrated, end-to-end solution for developers looking for high productivity and seamless coordination across teams of any size.

Sistema Operativo  
Windows

Idioma do produto  
Multilíngua

Sistema  
64 bits

Ver Chave

Ajude a melhorar esta página

# Visual Studio - copiar a chave do produto

portal.azure.com/?Microsoft\_Azure\_Education\_correlationId=34ca03a0-5a0b-4bcd-b258-d651e5bcfd9c#view/Microsoft\_Azure\_Education/EducationMenuBlade/~/software

Microsoft Azure

Pesquisar recursos, serviços e documentos (G+)

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visual studio

Categoria de produto : Tudo

Sistema Operativo : Tudo

Tipo de sistema : 64 bits

Idioma do produto : Português de Portugal, M

9 Itens


Nome ↑↓	Categoria de produto ↑↓	Sistema Operativo ↑↓	Tipo de sistema ↑↓
<a href="#">Visual Studio Enterprise 2019</a>	Developer Tools	Windows	64 bits
<a href="#">Visual Studio Enterprise Edition 2022</a>	Developer Tools	Windows	64 bits
<a href="#">Agents for Visual Studio 2019 (version 16.0) Test Age...</a>	Developer Tools	Windows	64 bits
<a href="#">Agents for Visual Studio 2019 (version 16.0) Test Con...</a>	Developer Tools	Windows	64 bits
<a href="#">Remote Tools for Visual Studio 2019 (version 16.0)</a>	Developer Tools	Windows	64 bits
<a href="#">Visual Studio 2019 for Mac</a>	Developer Tools	Mac	64 bits
<a href="#">Visual Studio Code</a>	Developer Tools	Windows	64 bits
<a href="#">Visual Studio Community 2019 (version 16.0)</a>	Developer Tools	Windows	64 bits
<a href="#">Visual Studio para Mac</a>	Developer Tools	Mac	64 bits

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Software

Education



Visual Studio Enterprise Edition 2022

An integrated, end-to-end solution for developers looking for high productivity and seamless coordination across teams of any size.

Sistema Operativo  
Windows

Idioma do produto  
Multilingue

Sistema  
64 bits

Chave de produto

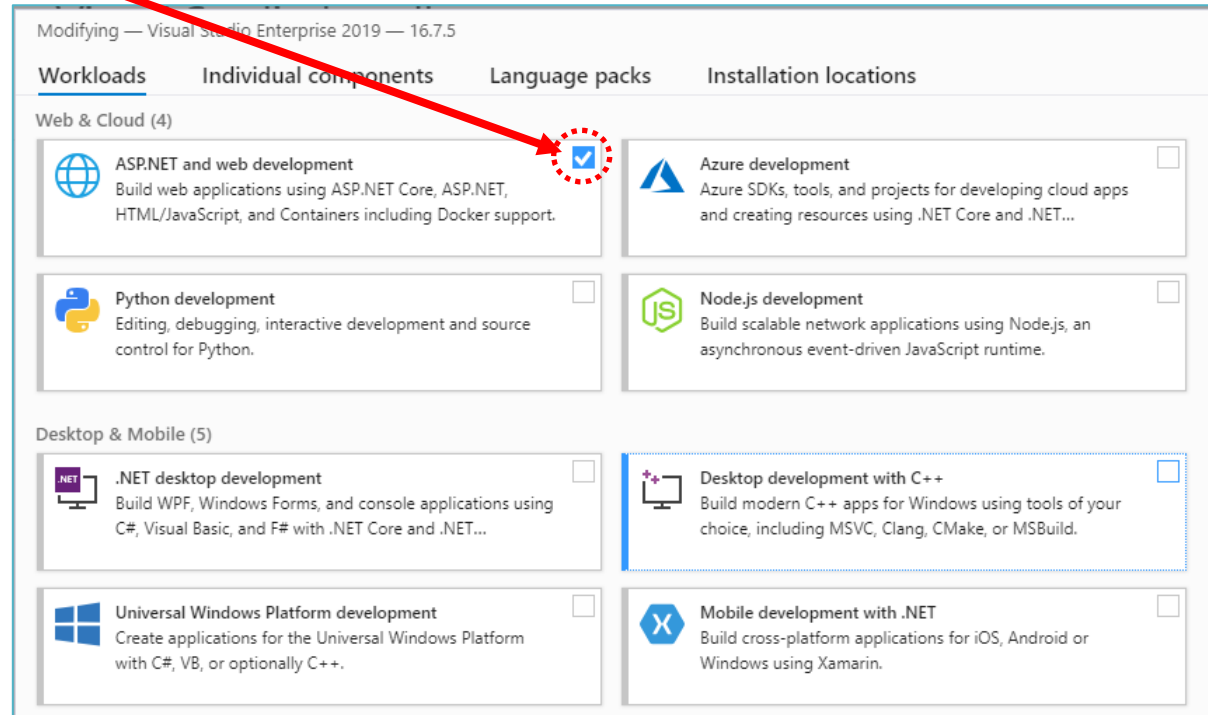
CRPF8

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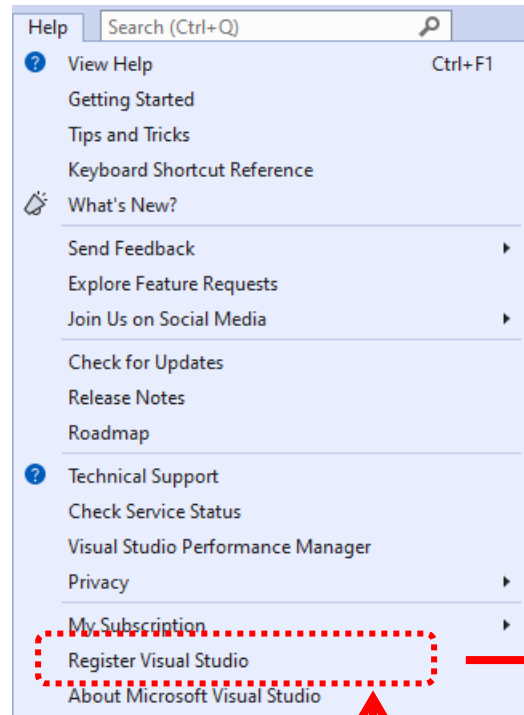
# Que pacotes instalar no Visual Studio?

Não é preciso instalar tudo para ITW...

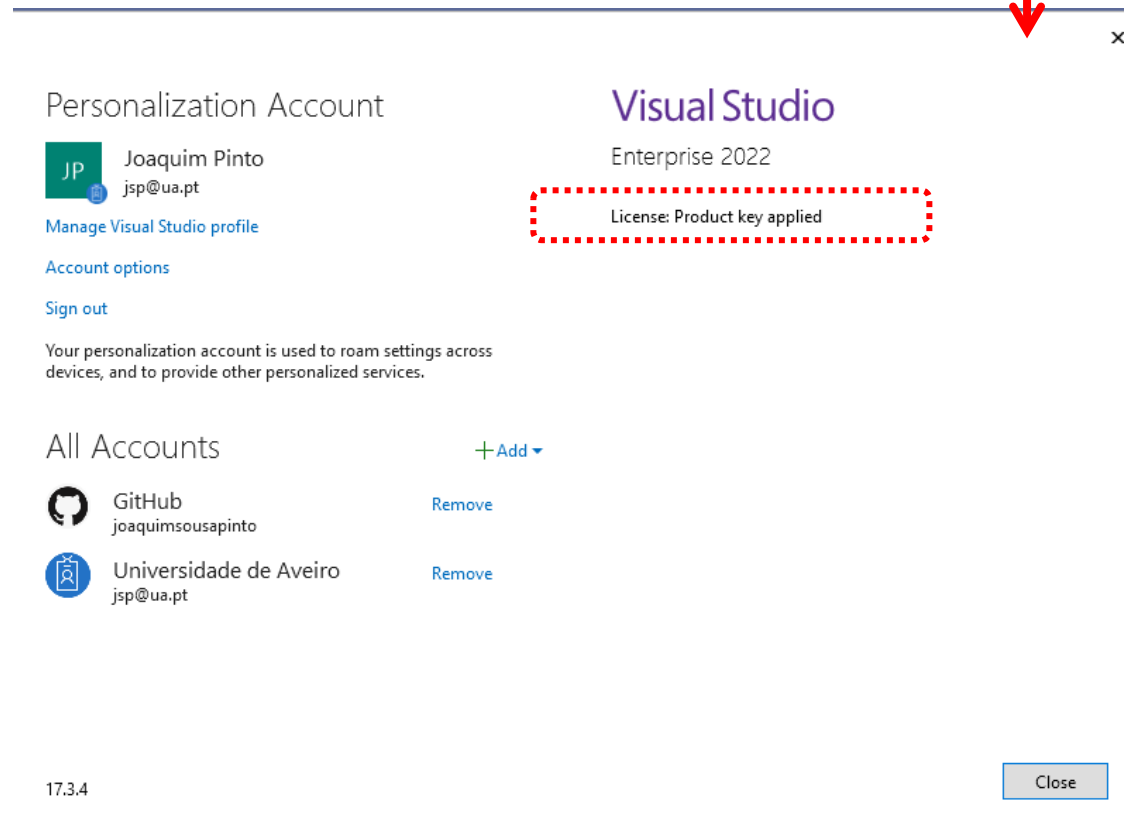




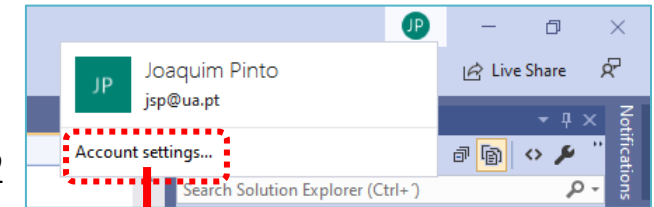
# Como registar Visual Studio?



Opção 1



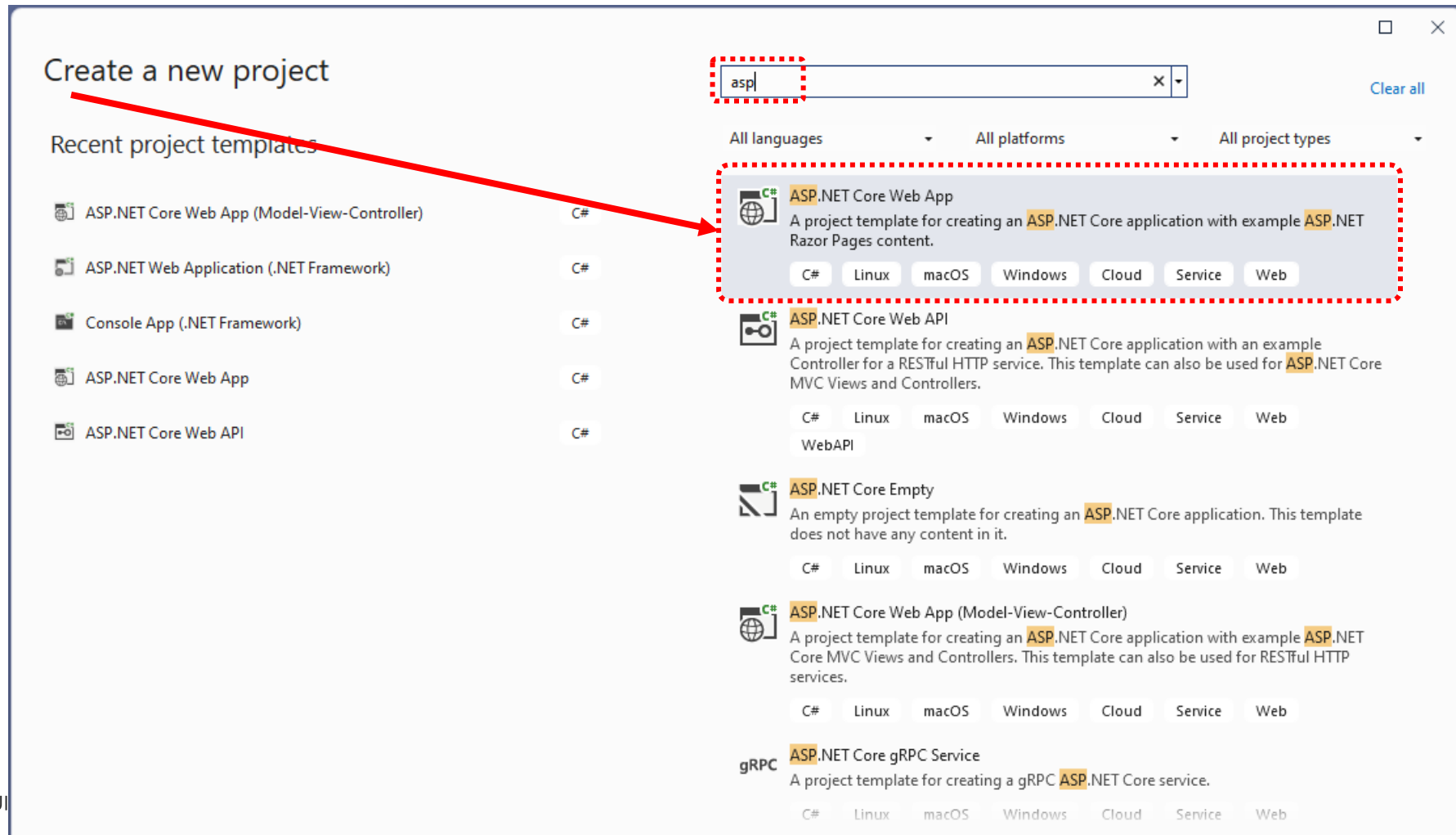
Opção 2



Registar o Visual Studio

# Iniciar um projeto para a UC de ITW (1)

## Seleção do tipo de projeto (template)



# Iniciar um projeto para a UC de ITW (2)

Seleção do nome da solução e do local onde os ficheiros ficarão armazenados

Configure your new project

ASP.NET Core Web App C# Linux macOS Windows Cloud Service Web

Project name

ITW2022

Location

C:\Users\aster\OneDrive - Universidade de Aveiro\Documents\My Code\

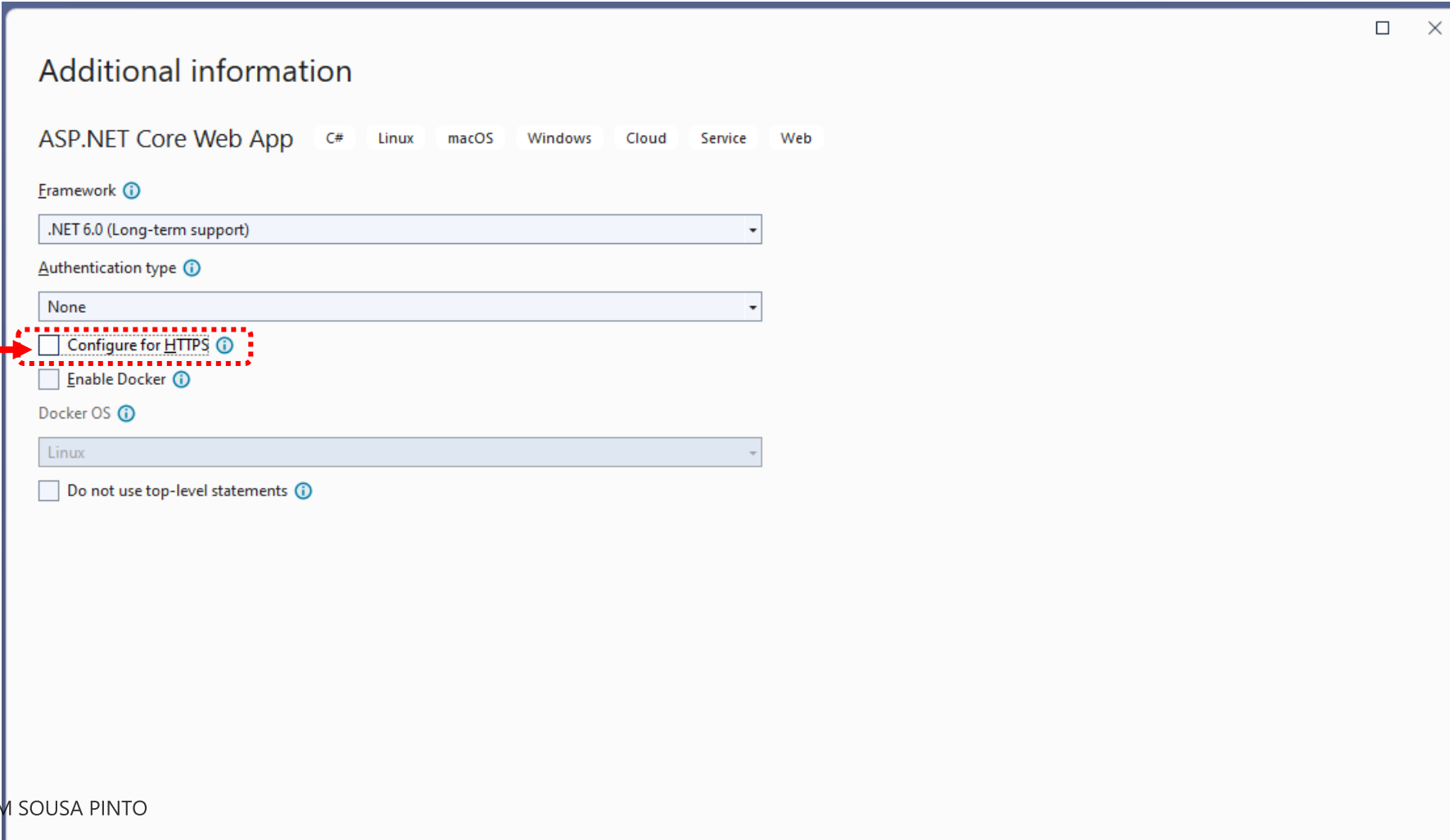
Solution name ⓘ

ITW2022

☒ Place solution and project in the same directory

# Iniciar um projeto para a UC de ITW (3)

## Selecionar a configuração inicial do projeto



Additional information

ASP.NET Core Web App C# Linux macOS Windows Cloud Service Web

Framework ⓘ

.NET 6.0 (Long-term support)

Authentication type ⓘ

None

☒ Configure for HTTPS ⓘ

☐ Enable Docker ⓘ

Docker OS ⓘ

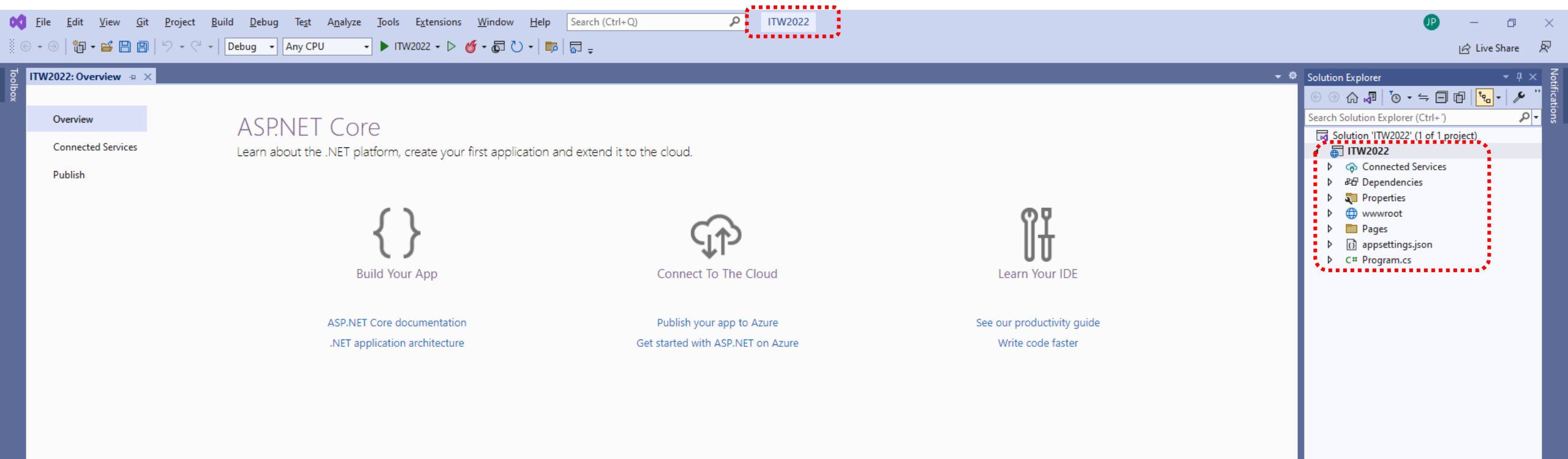
Linux

☐ Do not use top-level statements ⓘ

Retirar o https →

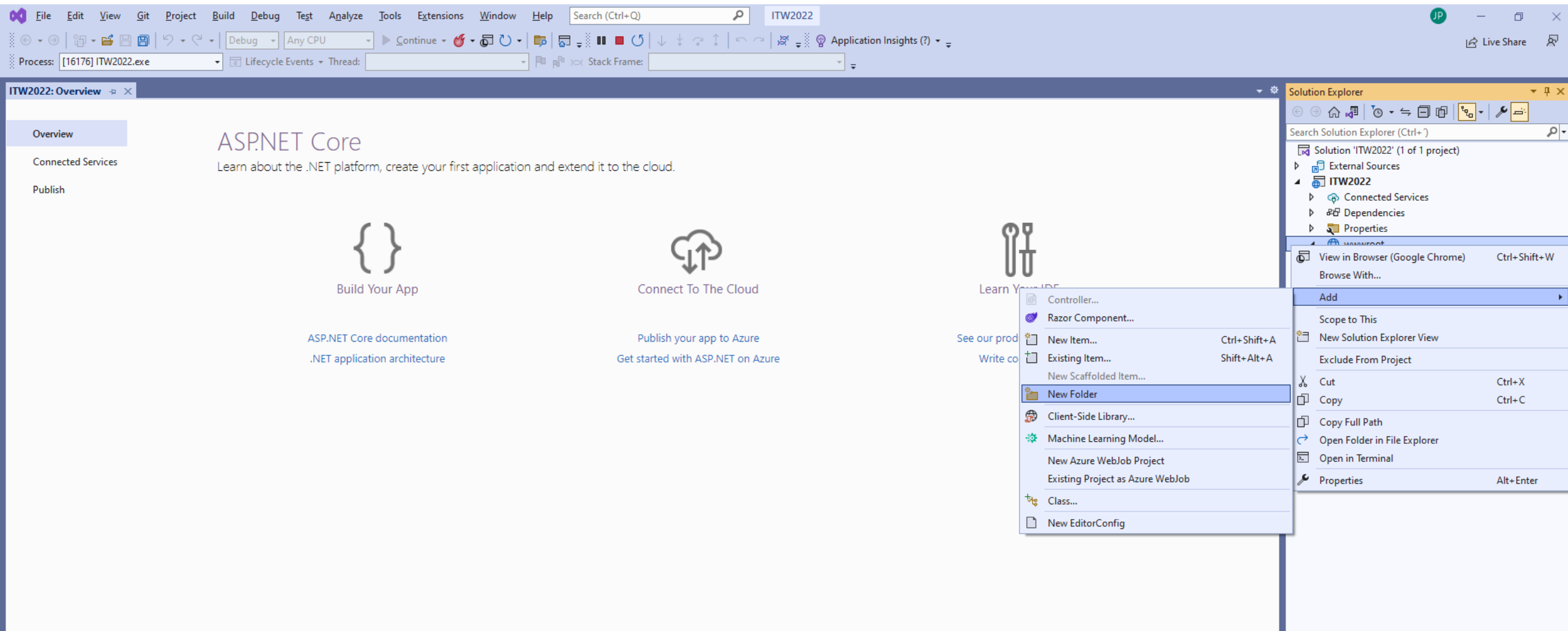
# Iniciar um projeto para a UC de ITW (4)

## O projeto vazio criado...



# Iniciar um projeto para a UC de ITW (5)

## Criar uma pasta para cada aula – e não um projeto para cada aula



The screenshot displays the Visual Studio IDE interface. The main window shows the 'ASP.NET Core Overview' page, which includes links for 'Build Your App', 'Connect To The Cloud', and 'Learn Your IDE'. The 'Solution Explorer' on the right shows a project named 'ITW2022' with sub-items like 'External Sources', 'Connected Services', 'Dependencies', and 'Properties'. A right-click context menu is open over the 'ITW2022' project, listing options such as 'Controller...', 'Razor Component...', 'New Item...', 'Existing Item...', 'New Scaffolded Item...', 'New Folder' (which is highlighted), 'Client-Side Library...', 'Machine Learning Model...', 'New Azure WebJob Project', 'Existing Project as Azure WebJob', 'Class...', and 'New EditorConfig'.

Visual Studio Interface (ASP.NET Core Overview):

- Menu: File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help
- Search: Search (Ctrl+Q)
- Process: [16176] ITW2022.exe
- Lifecycle Events: Thread: [Empty]
- Stack Frame: [Empty]
- Application Insights (?)
- Live Share

ASP.NET Core Overview:

- Overview
- Connected Services
- Publish
- ASP.NET Core
- Learn about the .NET platform, create your first application and extend it to the cloud.
- Build Your App
- ASP.NET Core documentation
- .NET application architecture
- Connect To The Cloud
- Publish your app to Azure
- Get started with ASP.NET on Azure
- Learn Your IDE
- See our prod
- Write co

Solution Explorer:

- Solution 'ITW2022' (1 of 1 project)
- External Sources
- ITW2022
  - Connected Services
  - Dependencies
  - Properties
- View in Browser (Google Chrome) Ctrl+Shift+W
- Browse With...
- Add
- Scope to This
- New Solution Explorer View
- Exclude From Project
- Cut Ctrl+X
- Copy Ctrl+C
- Copy Full Path
- Open Folder in File Explorer
- Open in Terminal
- Properties Alt+Enter

Context Menu (Right-click on ITW2022):

- Controller...
- Razor Component...
- New Item... Ctrl+Shift+A
- Existing Item... Shift+Alt+A
- New Scaffolded Item...
- New Folder**
- Client-Side Library...
- Machine Learning Model...
- New Azure WebJob Project
- Existing Project as Azure WebJob
- Class...
- New EditorConfig

# Iniciar um projeto para a UC de ITW (6)

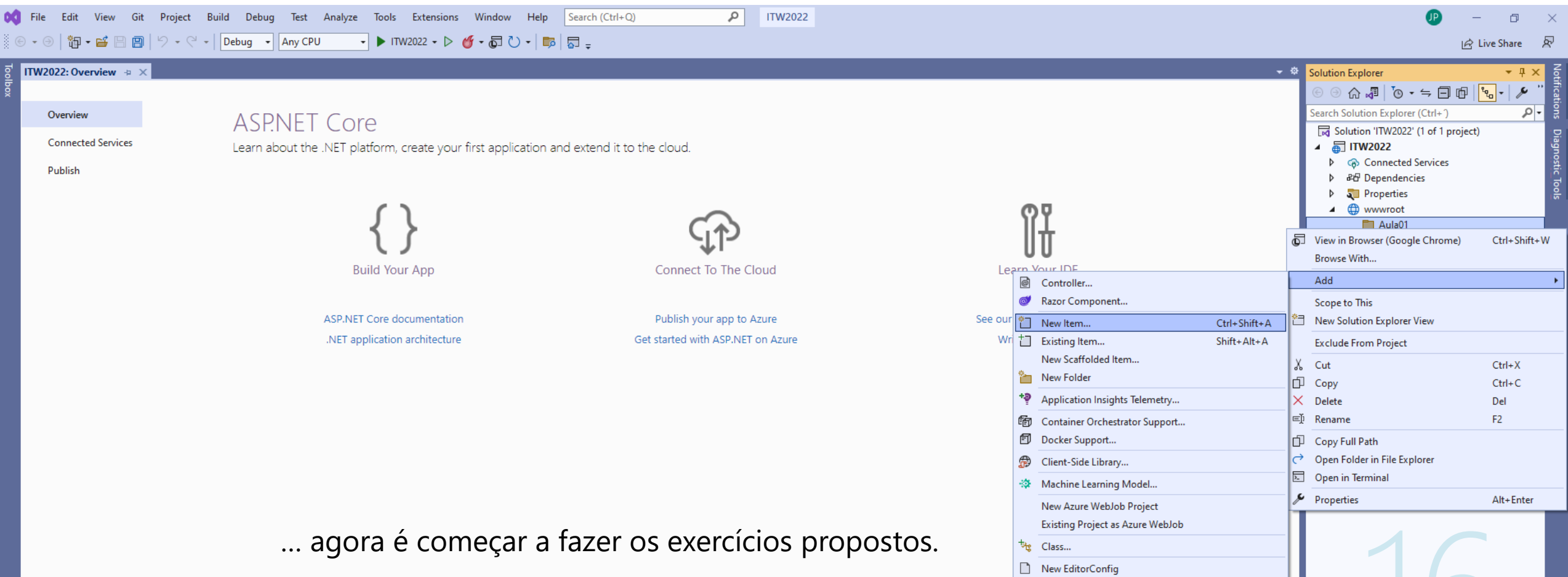
## Criar os ficheiros de cada aula na pasta respetiva

The screenshot displays the Visual Studio IDE interface. The main window shows the 'ASP.NET Core Overview' page, which includes a sidebar with 'Overview', 'Connected Services', and 'Publish'. The main content area features three large cards: 'Build Your App' with a code icon, 'Connect To The Cloud' with a cloud icon, and 'Learn Your IDE' with a wrench icon. Below these cards are links to 'ASP.NET Core documentation', '.NET application architecture', 'Publish your app to Azure', 'Get started with ASP.NET on Azure', 'See our productivity guide', and 'Write code faster'.

On the right side, the 'Solution Explorer' is open, showing the project structure for 'ITW2022'. The project is expanded, revealing a 'wwwroot' folder which contains subfolders 'Aula01' through 'Aula08'. The 'Aula08' folder is highlighted with a red dashed border. Below the 'wwwroot' folder, other files and folders are listed: 'css', 'js', 'lib', 'favicon.ico', 'Pages', 'appsettings.json', and 'Program.cs'.

# Iniciar um projeto para a UC de ITW (7)

## Adicionar ficheiros à pasta da Aula01...



The screenshot shows the Visual Studio 2022 interface. The main window displays the 'ASP.NET Core' overview page. On the right, the 'Solution Explorer' shows a project named 'ITW2022' with a folder 'Aula01' selected. A right-click context menu is open over the 'Aula01' folder, showing options like 'New Item...', 'New Folder', and 'Add'. The 'Add' option is highlighted, and a sub-menu is visible with options like 'Scope to This', 'New Solution Explorer View', and 'Exclude From Project'.

ASP.NET Core

Learn about the .NET platform, create your first application and extend it to the cloud.

Build Your App

ASP.NET Core documentation  
.NET application architecture

Connect To The Cloud

Publish your app to Azure  
Get started with ASP.NET on Azure

Learn Your IDE

See our

Write

Controller...

Razor Component...

New Item... Ctrl+Shift+A

Existing Item... Shift+Alt+A

New Scaffolded Item...

New Folder

Application Insights Telemetry...

Container Orchestrator Support...

Docker Support...

Client-Side Library...

Machine Learning Model...

New Azure WebJob Project

Existing Project as Azure WebJob

Class...

New EditorConfig

Solution Explorer

Search Solution Explorer (Ctrl+ )

Solution 'ITW2022' (1 of 1 project)

ITW2022

Connected Services

Dependencies

Properties

wwwroot

Aula01

View in Browser (Google Chrome) Ctrl+Shift+W

Browse With...

Add

Scope to This

New Solution Explorer View

Exclude From Project

Cut Ctrl+X

Copy Ctrl+C

Delete Del

Rename F2

Copy Full Path

Open Folder in File Explorer

Open in Terminal

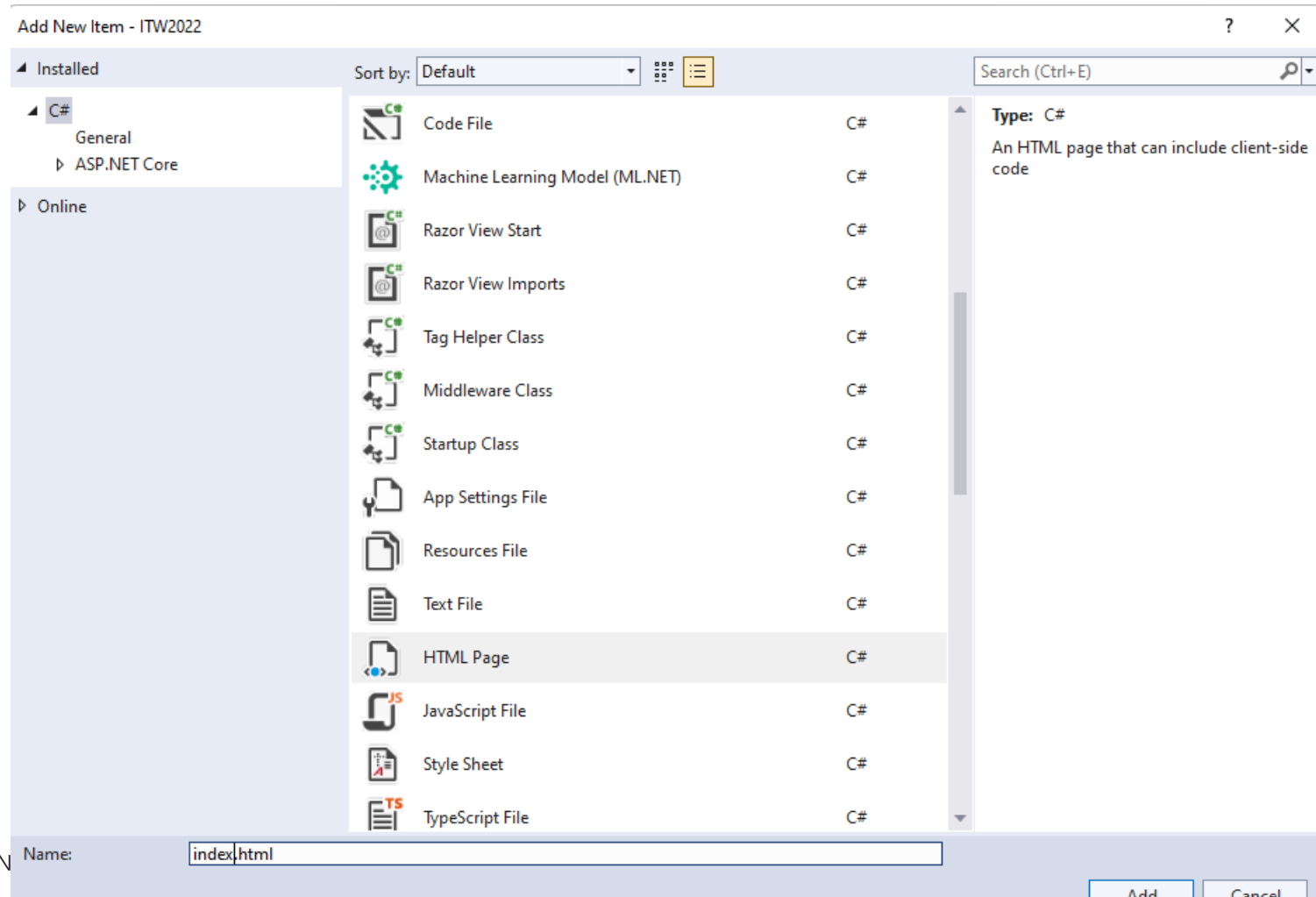
Properties Alt+Enter

... agora é começar a fazer os exercícios propostos.



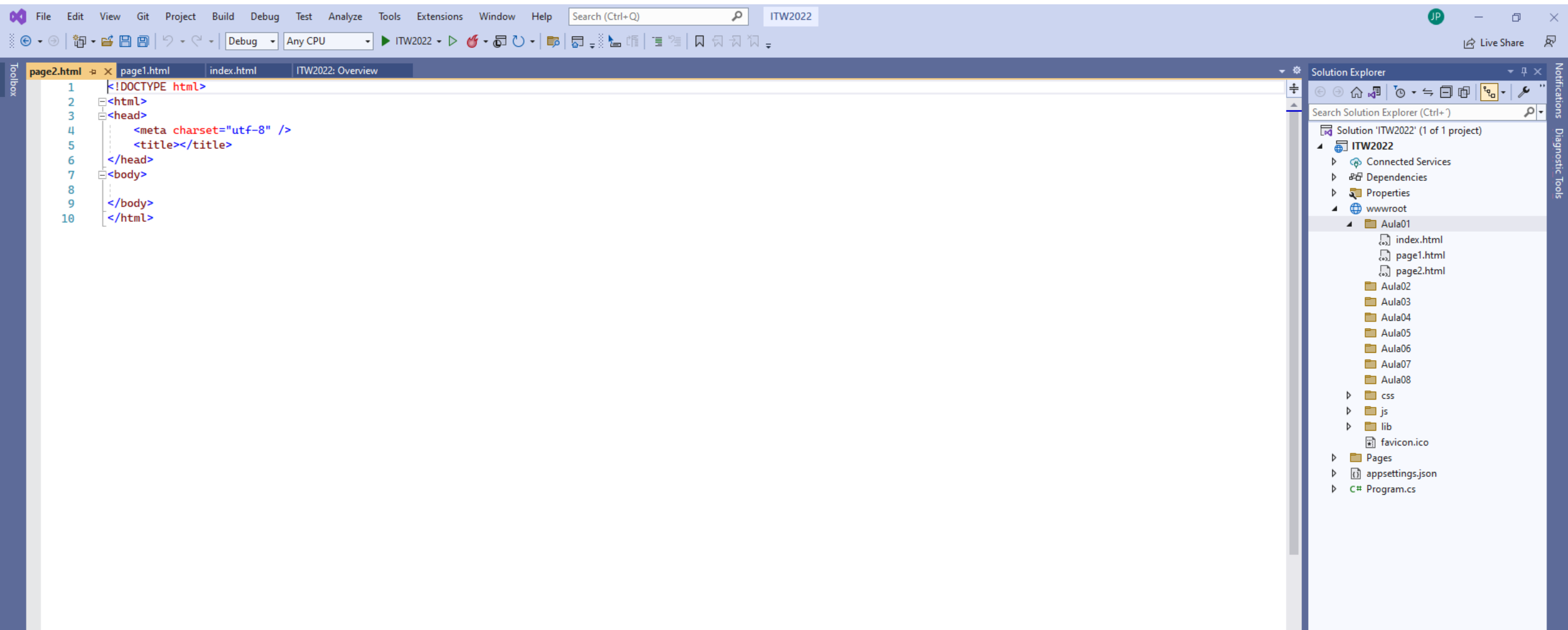
# Iniciar um projeto para a UC de ITW (8)

## Escolher o tipo de ficheiro e o nome ...



# Iniciar um projeto para a UC de ITW (8)

## Setup completo...



# Outros produtos importantes

Windows 10 / Windows11

# Windows 10 / Windows11

Microsoft Azure

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19 Itens

Nome ↑↓

Categoria de produto ↑↓

Sistema Operativo ↑↓

Tipo de sistema ↑↓

Idioma ↑↓

Windows 11 Education, version 22H2	Operating System	Windows	64 bits	Inglês
Windows 11 Education, version 22H2	Operating System	Windows	64 bits	Português de Portugal
Windows 11 Education N, version 22H2	Operating System	Windows	64 bits	Inglês
Windows 11 Education N, version 22H2	Operating System	Windows	64 bits	Português de Portugal
Windows 10 Education N, version 21H2 - DVD	Operating System	Windows	64 bits	Inglês
Windows 10 Education N, version 21H2 - DVD	Operating System	Windows	64 bits	Português de Portugal
Windows 10 Education, version 21H2 - DVD	Operating System	Windows	64 bits	Inglês
Windows 10 Education, version 21H2 - DVD	Operating System	Windows	64 bits	Português de Portugal

## Windows 10 versions:

- Windows 10 - It has everything that Microsoft offers for a windows OS.
- Windows 10N - The N version of Windows comes without a media player baked into the system.
- Windows 10KN - This version removes Windows' media playing capabilities.

# Decarregando, por exemplo, o Windows 11

Microsoft Azure

Pesquisar recursos, serviços e documentos (G+/I)

jsp@ua.pt

UNIVERSIDADE DE AVEIRO (UAP...)

Home Page > Education

Education | Software

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Funções

Software

A saber

Precisa de ajuda?

Suporte

« windows 1

Categoria de produto : Tudo

Sistema Operativo : Tudo

Tipo de sistema : 64 bits

Idioma do produto : Português de Portugal, M

19 Itens

Nome ↑↓	Categoria de produto ↑↓	Sistema Operativo ↑↓	Tipo de sistema ↑↓
Windows 11 Education, version 22H2	Operating System	Windows	64 bits
Windows 11 Education, version 22H2	Operating System	Windows	64 bits
Windows 11 Education N, version 22H2	Operating System	Windows	64 bits
Windows 11 Education N, version 22H2	Operating System	Windows	64 bits
Windows 10 Education N, version 21H2 - DVD	Operating System	Windows	64 bits
Windows 10 Education N, version 21H2 - DVD	Operating System	Windows	64 bits
Windows 10 Education, version 21H2 - DVD	Operating System	Windows	64 bits
Windows 10 Education, version 21H2 - DVD	Operating System	Windows	64 bits
Windows 10, version 2004 or 20H2 Language Packs ...	Operating System	Windows	64 bits
Windows 10, version 2004 or 20H2 1C Local Experie...	Operating System	Windows	64 bits
Windows 10, version 2004 or 20H2 5C Local Experie...	Operating System	Windows	64 bits
Windows 10, version 2004 or later 06C 2022 LXP ISO	Operating System	Windows	64 bits
Windows 10, version 2004 or 20H2 7C Local Experie...	Operating System	Windows	64 bits
Windows 10, version 2004 or 20H2 8C Local Experie...	Operating System	Windows	64 bits
Windows 10, version 2004 or 20H2 9C Local Experie...	Operating System	Windows	64 bits
Windows 10, version 2004 or 20H2 10C Local Experie...	Operating System	Windows	64 bits
Windows 10, version 2004 or 20H2 11C Local Experie...	Operating System	Windows	64 bits
Windows 10, version 2004 or 20H2 2C Local Experie...	Operating System	Windows	64 bits
Windows 10, version 2004 or later 04C 2022 LXP ISO	Operating System	Windows	64 bits

Give feedback

Software

Education

Windows 11 Education, version 22H2

Windows 11 Education builds on Windows 11 Enterprise and provides enterprise-grade manageability and security for schools. Windows 11 Education is effectively a variant of Windows 11 Enterprise that provides education-specific default settings. Not all devices running Windows 10 are eligible to receive a Windows 11 upgrade. See the Windows 11 device specifications (<https://www.microsoft.com/windows/windows-11-specifications>) for upgrade requirements and supported features. Certain features require additional hardware. WARNING: Installing Windows 11 media on a PC that does not meet the Windows 11 minimum system requirements is not recommended and may result in compatibility issues. If you proceed with installing Windows 11 on a PC that does not meet the requirements, that PC will no longer be supported and won't be entitled to receive updates. Damages to the PC due to lack of compatibility aren't covered under the manufacturer warranty.

Sistema Operativo

Windows

Idioma do produto

Inglês

Sistema

64 bits

Ligação útil

[Windows 11 System Requirements](#)

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