

Seminar

S1

Software Engineering

Computer Science School
DSIC – UPV

Chapter 2.

The software Process. Methodologies

**Introduction to Azure
DevOps. Tool Support for Agile
Software Development**

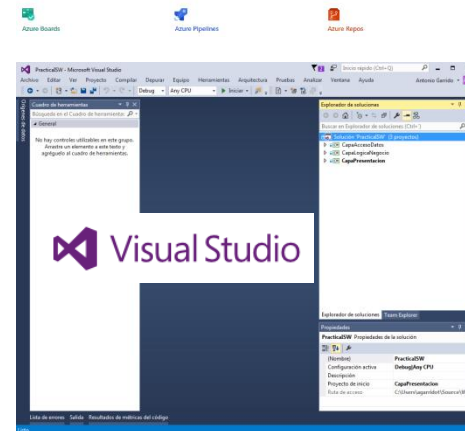
Goals

- Apply agile methodology to software development using DevOps (cloud collaboration tool for development teams) and Microsoft Visual Studio

Part 1. Project management with Azure DevOps



Utilice todos los servicios de DevOps o elija solo lo que necesita para complementar sus flujos de trabajo actuales



Part 2. Visual Studio Project development (Seminar 2)

Part 1. Project Management (Web)

- Elaborate a project plan applying an agile methodology using DevOps

Steps:

- ✓ Creating an Azure DevOps Organization
- ✓ Creating a new project
- ✓ Adding members to the team
- ✓ Work management

✓ Creating a DevOps account

- Check the two factor authentication is activated in the UPV intranet
- Create a student Azure account:

[Azure for Students – Free Account Credit | Microsoft Azure](#)

The screenshot shows the 'Build in the cloud free with Azure for Students' banner. Below the banner, there is a progress bar with a green 'Start free' button and a '1' in a circle, followed by a 'Get eligibility' button. Below the progress bar, there are two white boxes with black text: 'Start with \$100 Azure credit' and 'No credit card required'.

Build in the cloud free with Azure for Students

Use your university or school email to sign up and renew each year you're a student

Start free 1 Get eligibility

Start with \$100 Azure credit

No credit card required

✓ Creating a DevOps account

After login to Azure visit the Home page:

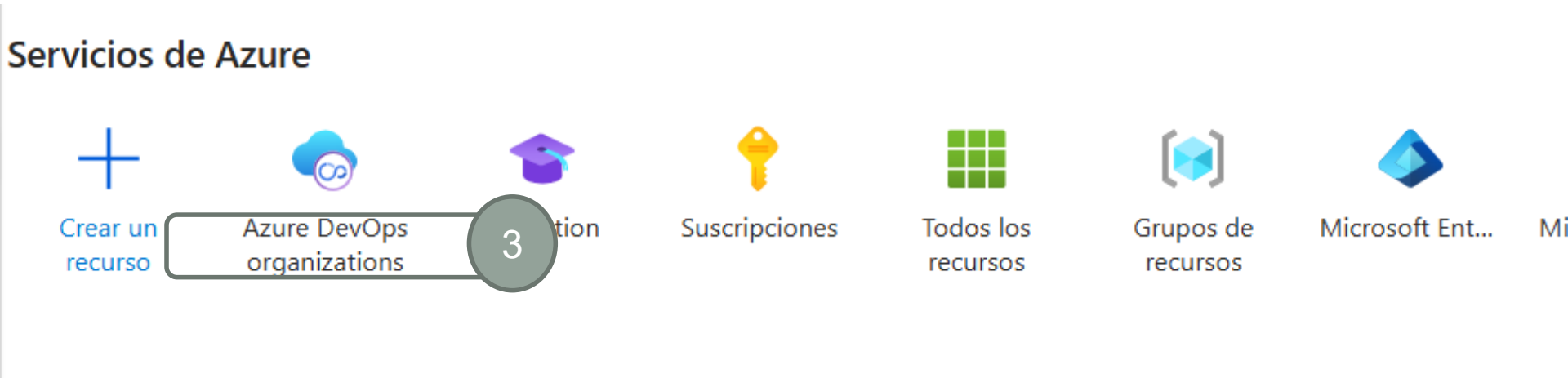
The screenshot shows the Microsoft Azure Education portal. The top navigation bar is blue with the 'Microsoft Azure' logo and a search bar. A red circle highlights the number '2' in the navigation bar. Below the navigation bar, the 'Education | Información general' section is visible. The main content area is divided into three columns:

- Información general** (General Information): Includes a sidebar with 'Recursos de aprendizaje' (Learning Resources) and a main section titled 'Detalles de la oferta para estudiantes' (Student Offer Details). The offer details show 'Créditos disponibles' (Credits available) as '100 US\$ de 100 US\$' and 'Días hasta que expire el crédito' (Days until credit expires) as '233' (Expiring on 08/05/2026).
- Soluciones populares** (Popular Solutions): Includes links to 'Implementación de un contenedor de Docker' (Docker container implementation), 'Cree su primera aplicación node.js' (Create your first node.js application), 'Cree y entrene un modelo de Machine Learning' (Create and train a Machine Learning model), and 'Compile e implemente su primero sitio web' (Compile and implement your first website).
- Servicios gratuitos** (Free Services): Includes links to 'Azure Virtual Machines: Windows' (Use 750 hours of access to machines), 'Azure Blob Storage' (Obtain 5 GB of storage), 'Computer Vision' (Receive 5000 transactions of IA for processing), and 'Azure App Service' (Create up to 10 applications).

At the bottom of the 'Detalles de la oferta para estudiantes' section, there is a link 'Ver detalles del costo' (View cost details).

✓ Creating a DevOps account

Explore the Azure DevOps organizations:



✓ Creating a DevOps account

Explore the Azure DevOps organizations:

Azure DevOps

Plan smarter, collaborate better, and ship faster with a set of modern dev services

[My Azure DevOps Organizations](#)

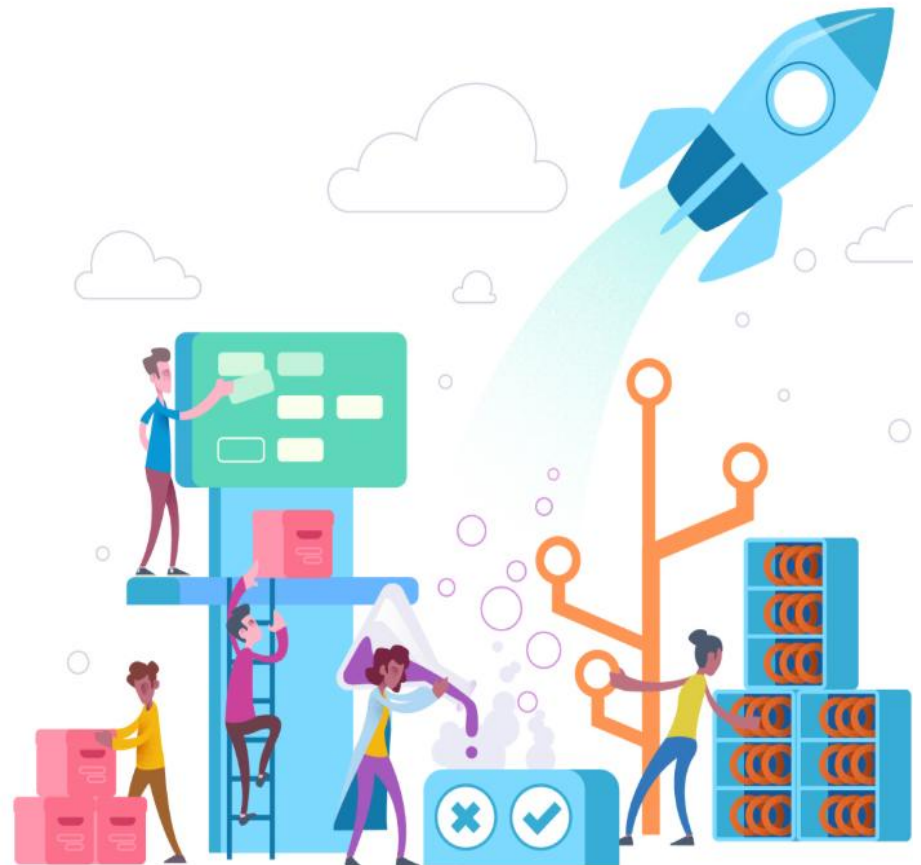
4

[Get started using Azure DevOps](#)

[Billing management for Azure DevOps](#)

[Enviar comentarios](#)

[Cuéntenos su experiencia con Azure DevOps page](#)



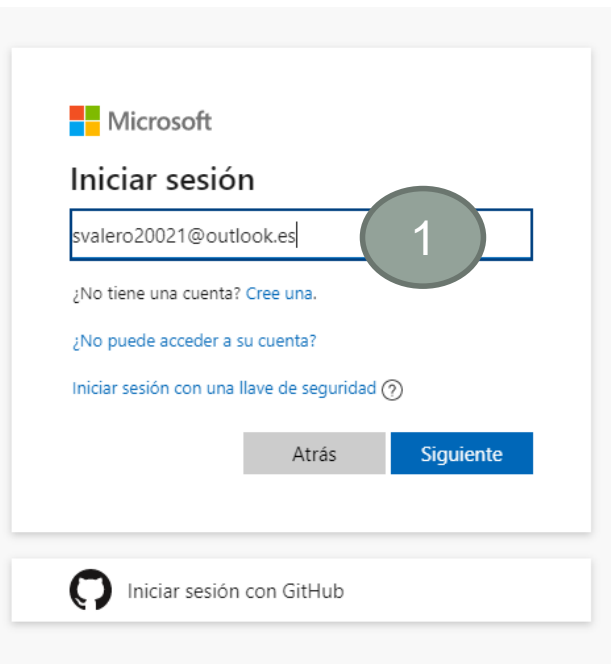
Creating a DevOps Organization (alt)

1. Log in with a upv.edu account

- Be aware that you belong to an organization and all members in the team will be forced to use a upv.edu account. Otherwise the system does not work properly

2. An organization is created with your user name by default.

- An organization is a team developing software projects in ISW



Microsoft

Iniciar sesión


svalero20021@outlook.es

¿No tiene una cuenta? [Cree una.](#)

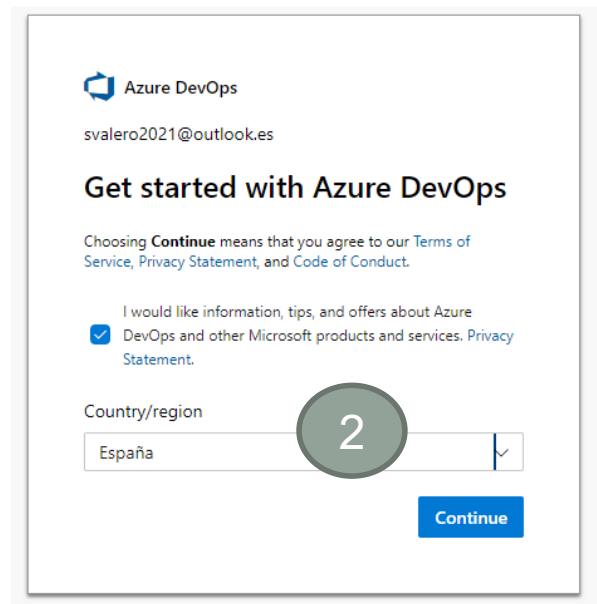
¿No puede acceder a su cuenta?

[Iniciar sesión con una llave de seguridad](#)

Atrás **Siguiente**

 Iniciar sesión con GitHub

A circular callout with the number 1 is positioned over the email input field.



Azure DevOps

svalero2021@outlook.es

Get started with Azure DevOps

Choosing **Continue** means that you agree to our [Terms of Service](#), [Privacy Statement](#), and [Code of Conduct](#).

☒ I would like information, tips, and offers about Azure DevOps and other Microsoft products and services. [Privacy Statement](#).

Country/region

España

Continue

A circular callout with the number 2 is positioned over the country/region dropdown menu.



Azure DevOps

svalero2021@outlook.es

Taking you to your Azure DevOps organization...

A circular callout with the number 3 is positioned over the loading spinner.

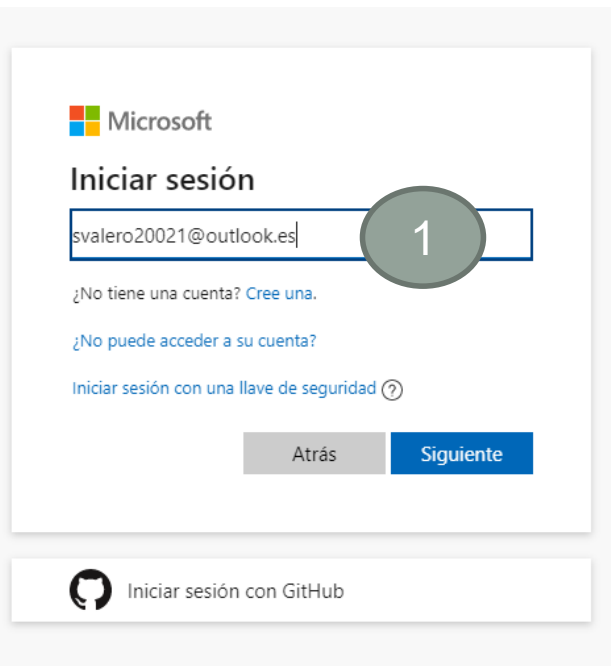
Creating a DevOps Organization

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- Be aware that you belong to an organization and all members in the team will be forced to use a upv.edu account. Otherwise the system does not work properly

2. An organization is created with your user name by default.

- An organization is a team developing software projects in ISW



Microsoft


Iniciar sesión

¿No tiene una cuenta? [Cree una.](#)

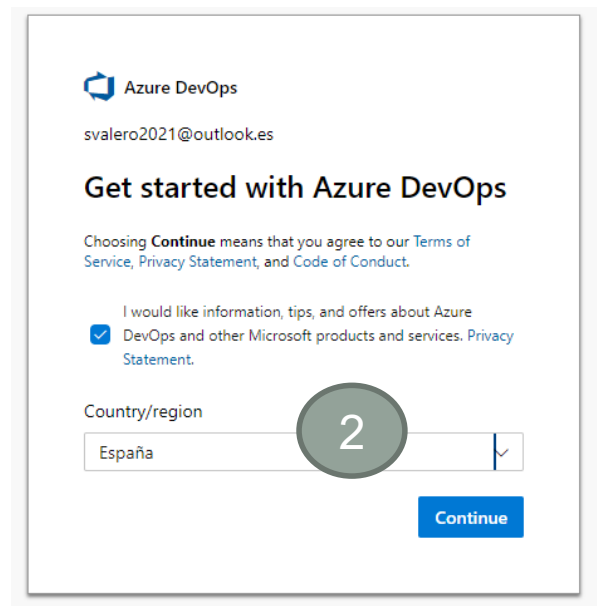
¿No puede acceder a su cuenta?

[Iniciar sesión con una llave de seguridad](#)

[Atrás](#) [Siguiente](#)

 Iniciar sesión con GitHub

A circular callout with the number 1 is positioned over the email input field.



Azure DevOps

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Get started with Azure DevOps

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☒ I would like information, tips, and offers about Azure DevOps and other Microsoft products and services. [Privacy Statement.](#)

Country/region

[Continue](#)

A circular callout with the number 2 is positioned over the country/region dropdown menu.



Azure DevOps

svalero2021@outlook.es

Taking you to your Azure DevOps organization...

[Continue](#)

A circular callout with the number 3 is positioned over the bottom right corner of the screen.

Modifying a DevOps Organization Name

- We are going to **change the default organization name**, with another team name

The screenshot displays the Azure DevOps web interface. On the left sidebar, the 'Organization settings' option is highlighted with a callout bubble containing the number '1'. The main content area shows a notification about a networking configuration test, a 'Create a project to get started' section with a form for project name and visibility, and a cartoon illustration of a person building blocks with a dog.

Azure DevOps

svalero2021

New organization

Organization settings

1

Azure DevOps will test a new networking configuration for two hours between September 9, 2020 and Sep 15, 2020. While most of the features will continue to work during this period, a small number of features may be impacted. We apologize for the inconvenience and thank you.

Create a project to get started

Project name *

Visibility

Public

Anyone on the internet can view the project. Certain features like TFVC are not supported.

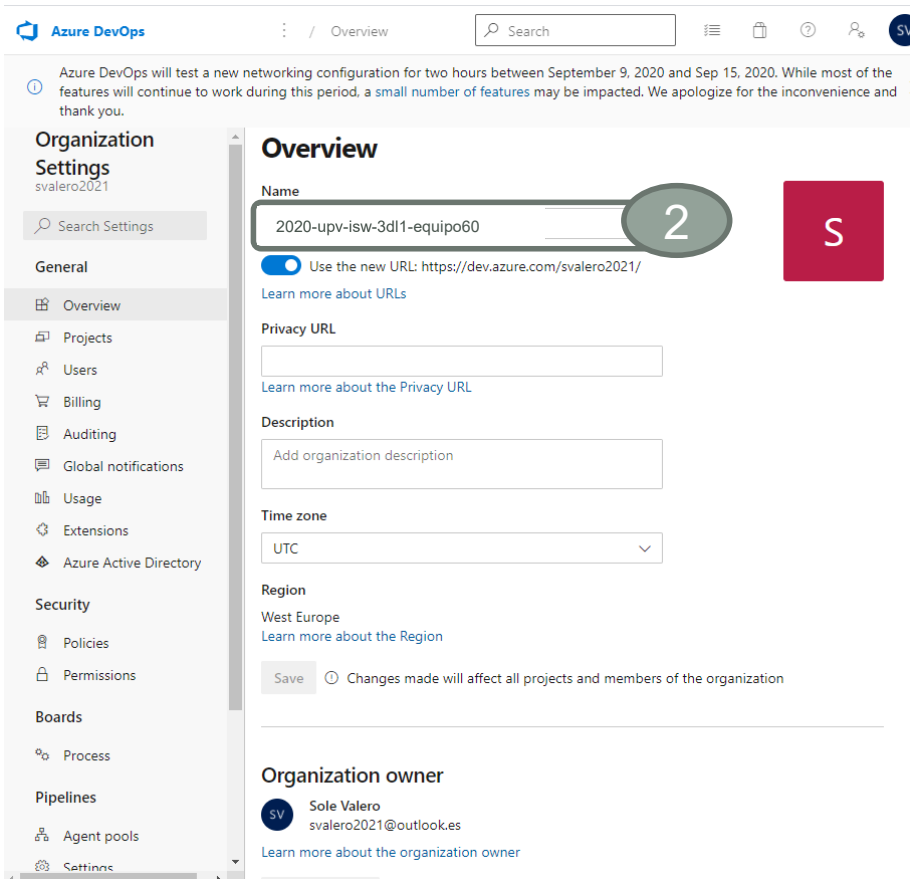
Private

Only people you give access to will be able to view this project.

+ Create project

Modifying a DevOps Organization Name

- The name of our team will be a combination that includes the course name and the laboratory group name in which you are enrolled. E.g.: 2025-upv-isw-3el1-team01 (each lab team has a different number see excel sheet)



Azure DevOps

Overview

Search

Azure DevOps will test a new networking configuration for two hours between September 9, 2020 and Sep 15, 2020. While most of the features will continue to work during this period, a small number of features may be impacted. We apologize for the inconvenience and thank you.

Organization Settings
svalero2021

Search Settings

General

Overview

Projects

Users

Billing

Auditing

Global notifications

Usage

Extensions

Azure Active Directory

Security

Policies

Permissions

Boards

Process

Pipelines

Agent pools

Settings

Overview

Name

2020-upv-isw-3dl1-equip060

2

Use the new URL: <https://dev.azure.com/svalero2021/>

Learn more about URLs

Privacy URL

Learn more about the Privacy URL

Description

Add organization description

Time zone

UTC

Region

West Europe

Learn more about the Region

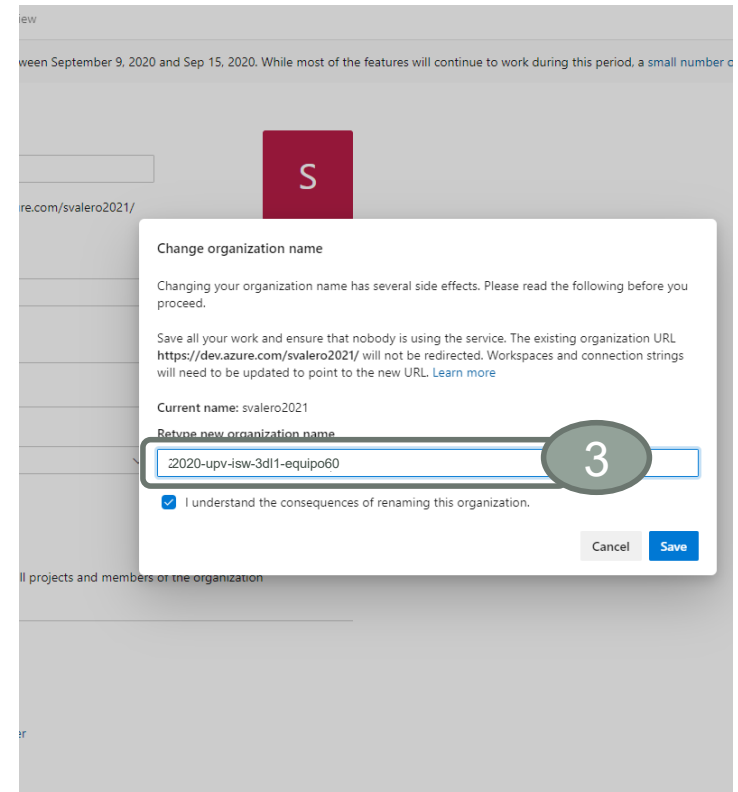
Save

Changes made will affect all projects and members of the organization

Organization owner

Sole Valero
svalero2021@outlook.es

Learn more about the organization owner



Change organization name

Changing your organization name has several side effects. Please read the following before you proceed.

Save all your work and ensure that nobody is using the service. The existing organization URL <https://dev.azure.com/svalero2021/> will not be redirected. Workspaces and connection strings will need to be updated to point to the new URL. [Learn more](#)

Current name: svalero2021

Retype new organization name

2020-upv-isw-3dl1-equip060

3

☒ I understand the consequences of renaming this organization.

Cancel Save

Modifying a DevOps Organization

- At this point an organization server on the cloud is available for our organization:
<https://dev.azure.com/2025-upv-isw-3el1-team01/>

Azure DevOps 2021-upv-isw-3dl1-equip060 / Settings / Overview

Azure DevOps will test a new networking configuration for two hours between September 9, 2020 and Sep 15, 2020. While most of the featur

Organization Settings

2020-upv-isw-3dl1-equip060

Search Settings

General

- Overview
- Projects
- Users
- Billing
- Auditing
- Global notifications
- Usage
- Extensions
- Azure Active Directory

Security

- Policies
- Permissions

Boards

- Process

Pipelines

- Agent pools
- Settings
- Deployment pools

Overview

Name

2020-upv-isw-3dl1-equip060

☒ Use the new URL: <https://dev.azure.com/2020-upv-isw-3dl1-equip060/>

[Learn more about URLs](#)

Privacy URL

[Learn more about the Privacy URL](#)

Description

Time zone

UTC


Region

West Europe

[Learn more about the Region](#)

ⓘ Changes made will affect all projects and members of the organization

Organization owner

 Sole Valero
svalero2021@outlook.es

[Learn more about the organization owner](#)

Creating a new project

Azure DevOps

Settings / Projects

Azure DevOps will test a new networking configuration for two hours between September 9, 2020 and Sep 15, 2020. While most of the features will continue to work during this period, a small number of features may be impacted. We apologize for the inconvenience and thank you.

Organization Settings
2020-upv-isw-3dl1-equip060

Search Settings

General

- Overview
- Projects** (1)
- Users
- Billing
- Auditing
- Global notifications
- Usage
- Extensions
- Azure Active Directory

Security

- Policies

Projects

Filter projects

Total 0

+ New project (2)

<input type="checkbox"/>	Name ↑	Description	Last...	Pro...	Visi...
--------------------------	--------	-------------	---------	--------	---------

- a) We create a new project
- b) Insert a name and define visibility (private)
- c) Unfold advanced features
- d) Select git for control versioning and Agile as methodology
- e) Confirm the creation of the project

Creating a new project

The screenshot shows a 'Create new project' dialog box with the following elements and annotations:

- Project name ***: A text input field containing 'projectoISW'. A green checkmark is visible to the right. A circle with the number '1' is placed over the input field.
- Description**: An empty text area.
- Visibility**: Two options are shown:
 - Public**: Represented by a globe icon. Description: 'Anyone on the internet can view the project. Certain features like TFVC are not supported.'
 - Private**: Represented by a lock icon. Description: 'Only people you give access to will be able to view this project.' A circle with the number '2' is placed over this option, and a line connects it to the 'Advanced' button.
- Advanced**: A button at the bottom right, preceded by a circle with the number '3'.

- a) We create a new project
- b) Insert a name and define visibility (private)
- c) Unfold advanced features
- d) Select git for control versioning and Agile as methodology
- e) Confirm the creation of the project

Creating a new project

Create new project

Project name *

projectolSW

Description

Visibility

Public

Anyone on the internet can view the project. Certain features like TFVC are not supported.

Private

Only people you give access to will be able to view this project.

Advanced

Version control ②

Git 1

Work item process ③

Agile 2

Cancel Create 3

- We create a new project
- Insert a name and define visibility (private)
- Unfold advanced features
- Select git for control versioning and Agile as methodology
- Confirm the creation of the project

Azure DevOps

/ Settings / Projects

Search

Azure DevOps will test a new networking configuration for two hours between September 9, 2020 and Sep 15, 2020. While most of the features will continue to work during this period, a small number of features may be impacted. We apologize for the inconvenience and thank you.

Organization Settings

2021-upl-sw-3dl1-equip060

Search Settings

General

Overview

Projects

Users

Billing

Auditing

Projects

Filter projects

Total 1

+ New project

	Name ↑	Description	Last Updated	Process	Visibility
<input type="checkbox"/>	projectolSW	4	8/9/2020	Agile	Private

Project View

The screenshot displays the Azure DevOps web interface. At the top, the header shows 'Azure DevOps' with a search bar and navigation icons. A notification banner at the top states: 'Azure DevOps will test a new networking configuration for two hours between September 9, 2020 and Sep 15, 2020. While most of the features will continue to work during this period, a small number of features may be impacted. We apologize for the inconvenience and thank you.'

The left sidebar contains the 'Organization Settings' menu for '2020-upv-isw-3dl1-equip60'. The 'Projects' tab is selected. The main content area shows a list of projects with the following data:

Total	1					
		Name ↑	Description	Last Updated	Process	Visibility
		<input type="checkbox"/> P	proyectoISW	8/9/2020	Agile	Private

A '+ New project' button is located in the top right of the projects list.

Below the main interface, a second screenshot shows the '2021-upv-isw-3dl1-equip60' organization view. The left sidebar shows 'New organization'. The main content area displays the organization name and a '+ New project' button. Below this, there are tabs for 'Projects', 'My work items', and 'My pull requests'. The 'Projects' tab is active, showing a project card for 'proyectoISW' with a green 'P' icon and a '2' in a circle. A 'Filter projects' button is also visible.

Project Main View

The screenshot displays the Azure DevOps interface for a project named 'SoftwareProject01'. The interface is divided into several sections:

- Navigation Panel (Left):** A vertical sidebar containing links to various project components: Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. At the bottom is a 'Project settings' link with a gear icon.
- Projects List (Top Left):** A small header area showing the project name 'SoftwareProject01' with a plus icon to add more projects.
- Project Header (Top):** Displays the project name 'SoftwareProject01' and its status as 'Private'. An 'Invite' button with a plus icon is visible, used for adding members.
- Main Content Area:** Features a large illustration of a person working on a laptop with a dog nearby. Below the illustration, it says 'Welcome to the project!' and 'What service would you like to start with?'. On the right side of this area, there is a 'Project stats' section with a graph icon and a message: 'No stats are available at this moment. Setup a service to see project activity.'

Red arrows point from text labels to specific UI elements: 'Projects List' points to the top left header; 'Adding Members to Project' points to the 'Invite' button; 'Navigation Panel' points to the left sidebar; and 'Project settings' points to the gear icon at the bottom left.

Repository Configuration

The screenshot displays the Azure DevOps web interface for a project named 'proyectoISW'. The left-hand navigation pane is highlighted with a red circle and the number '1' around the 'Repos' option. The main content area shows several options for repository management:

- Clone to your computer:** This section includes buttons for 'HTTPS' and 'SSH', a text input field containing the repository URL, and a 'Generate Git Credentials' button. Below this is a link for troubleshooting authentication issues.
- Push an existing repository from command line:** This section has 'HTTPS' and 'SSH' buttons, followed by a text area containing a git command to add a remote origin.
- Import a repository:** This section features an 'Import' button.
- Initialize & master branch with a README or gitignore:** This section includes a checkbox for 'Add a README' (checked), a dropdown menu for 'Add a .gitignore' (set to 'VisualStudio'), and an 'Initialize' button. This entire section is highlighted with a red circle and the number '2'. The 'Initialize' button itself is highlighted with a red circle and the number '3'.

At the bottom of the left navigation pane is the 'Project settings' link.

We initialize the git repository to adequately work with Visual Studio:

1. Select *Repos*
2. Select VisualStudio in the *Add a .gitignore section*
3. Select *Initialize*

Repository Configuration

- A .gitignore and README.md files are created by default.

The screenshot displays the Azure DevOps web interface for a repository named 'proyectoISW'. The left sidebar contains navigation links: Overview, Boards, Repos (selected), Files, Commits, Pushes, Branches, Tags, Pull requests, Pipelines, Test Plans, and Artifacts. The main content area shows the repository's file structure with '.gitignore' and 'MI README.md' listed. The '.gitignore' file is selected, and its contents are displayed in a code editor. The code editor shows a list of files and directories to be ignored, including Visual Studio temporary files, build results, and user-specific files. The interface also includes a search bar at the top and a notification banner about a networking configuration test.

```
1 ## Ignore Visual Studio temporary files, build results, and
2 ## files generated by popular Visual Studio add-ons.
3 ##
4 ## Get latest from https://github.com/github/gitignore/blob/master/VisualS
5
6 # User-specific files
7 *.suo
8 *.user
9 *.useroscach
10 *.sln.docstates
11
12 # User-specific files (MonoDevelop/Xamarin Studio)
13 *.userprefs
14
15 # Build results
16 [Dd]ebug/
17 [Dd]ebugPublic/
18 [Rr]elease/
19 [Rr]eleases/
20 x64/
21 x86/
22 bld/
23 [Bb]in/
24 [Oo]bj/
25 [Ll]og/
26
27 # Visual Studio 2015/2017 cache/options directory
28 .vs/
29 # Uncomment if you have tasks that create the project's static files in ww
30 #wwwroot/
31
32 # Visual Studio 2017 auto generated files
33 Generated\ Files/
34
35 # MSTest test Results
36 [Tt]est[Rr]esult*/
37 [Bb]uild[Ll]og.*
```

✓ Adding members to the team

Azure DevOps

2018-upv-isw-3E1-team01 / SoftwareProject01 / Overview / Summary

SoftwareProject01

Private Invite

Add Users to SoftwareProject01

Add users or groups *

Search users

Add to team(s) *

SoftwareProject01 Team

Add Cancel

Up to 5 team members may be added to your Project (free basic configuration)

Enter their sign-in addresses or display names, one at a time or all at the same time. Each team member gets an invitation email

NOTE: the email address must be associated to a upv.edu account

Adding Members to the team

- Make sure all members have Basic access Level

What's new

Sprint 191 release notes

We've added support for environment variables in Linux scale set agents. Check out the release notes for details.

Organization settings

Export users

General

Overview

Projects

Users

Billing

Auditing

Global notifications

Usage

Extensions

Azure Active Directory



Security

Filter users

Access Level AAD User Type

Total 2

Summary Add users

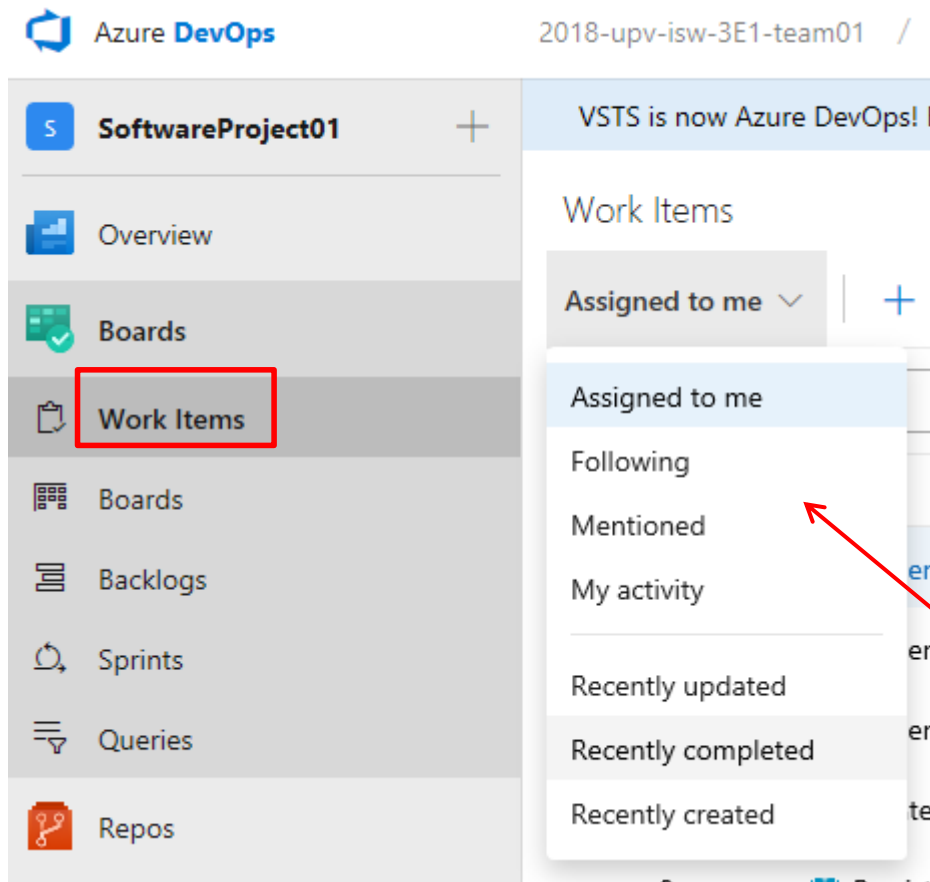
<input type="checkbox"/>	Name ↑	Access Level	Date Added	Last Accessed
<input type="checkbox"/>	 Francisco Javier Jaén Martínez fjaen@upv.edu.es	Basic	2/9/2021	13/9/2021
<input type="checkbox"/>	 JORGE MONTANER MARCO jormonm5@upv.edu.es	Stakeholder	13/9/2021	Never

Change access level

Manage user

Resend invite

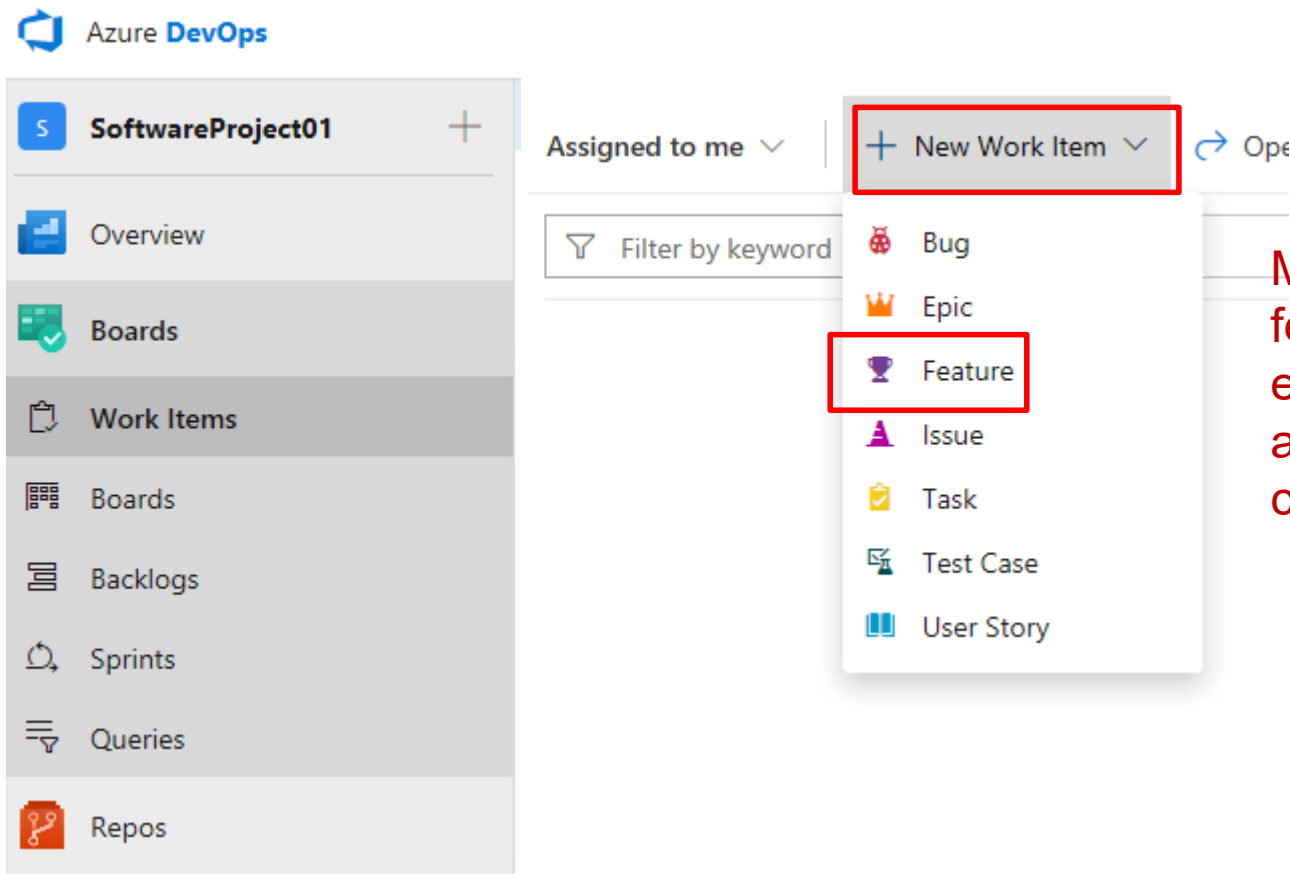
✓ Work Management (Work Items)



List of work items filtered by different criteria

Creating Work Items

Being an Agile methodology we have *sprints*, *features*, *user stories*, *tasks* (inside user stories), etc.





Many developers consider features and user stories equivalent but a feature can also be considered a collection of user stories


Creating Work Items

FEATURE 1

1 Renting Vehicle Functionality

 Javier Jaén

 0 comments [Add tag](#)

 Save

 Follow

  ...

State  Active Area 2018-upv-isw-3E1-teacher01
Reason  Implementation started Iteration 2018-upv-isw-3E1-teacher01\Iteration 1

Updated by iswteacher2018 2 hours ago

[Details](#)




 (3)



Description

B *I* U       

Discussion

 *Add a comment. Use # to link a work item, ! to link a pull request, or @ to mention a person.*

Planning

Priority

2

Risk

Effort

Business Value

Time Criticality

Start Date

Target Date

Development




[+ Add link](#)


Development hasn't started on this item.
[Create a new branch](#)




Related Work

[+ Add link](#) ▾

Child (3)

  2 Display Available Vehicles
Updated an hour ago,  Active

  4 New Rental
Updated 2 hours ago,  Active

  3 View Vehicle Features
Updated an hour ago,  New

✓ Work Management (Boards)

Items can also be created on the board directly

Selection of Type of Board
There are boards to display features or stories

Drag & Drop items to change status Active<->Resolved<-> Closed

Your board consists of a list of work items. You use work items to share information, assign work to team members, track dependencies, organize work, etc.

Work Management (Boards)

User Stories can be added to a Feature directly on the board

The screenshot displays the Azure DevOps interface for a project named 'SoftwareProject01'. The left sidebar shows the navigation menu with 'Boards' selected. The main area shows the 'Features backlog' board with columns: New, Active (1/5), Resolved (0/5), and Closed. A feature item 'Renting Vehicle Functionality' by 'Javier Jaén' is highlighted in the 'Active' column. A context menu is open over this feature, showing the option '+ Add User Story' which is highlighted by a red arrow. The menu also lists three tasks: 'View Vehicle Features', 'New Rental', and 'Display Available Vehicles'. A red box highlights the 'Features' dropdown menu in the top right corner of the board.

Work Management (Backlogs)

Backlogs can be used to assign work items to Iterations using Drag and Drop

The screenshot displays the Azure DevOps interface for a project named 'SoftwareProject01'. The left sidebar shows the navigation menu with 'Backlogs' highlighted. The main area shows the '2018-upv-isw-3E1-teacher01 Team' backlog. A table lists work items, including three user stories and three tasks. A red arrow indicates the 'Display Available Vehicles' user story being dragged towards the 'Iterations list' on the right. The 'Iterations list' shows 'Iteration 1' as the 'Current' iteration, with a planned effort of 3. A red box highlights the 'Stories' dropdown in the top right corner of the main area.

Order	Work Item Type	Title
1	User Story	View Vehicle Features
2	User Story	New Rental
3	User Story	Display Available Vehicles
	Task	Create DB Connection
	Task	Access Vehicles Table
	Task	Display Available Vehicles UI

Planning
Drag and drop work items to include them in a sprint.

Backlog 2018-upv-isw-3E1-teacher01

Iteration 1 **Current**
Planned Effort: -
3 3

Iteration 2
No work scheduled yet

Iterations list

Work Management (Sprints)

Tasks can be added to User stories directly

The screenshot displays the Azure DevOps interface for a project named 'SoftwareProject01'. The left sidebar shows navigation options: Overview, Boards, Work Items, Boards, Backlogs, Sprints (highlighted with a red box), Queries, and Repos. The main area shows the 'Sprints' view for the team '2018-upv-isw-3E1-teacher01'. The board is organized into three columns: 'New', 'Active', and 'Closed'. A red arrow points from the text 'Tasks can be added to User stories directly' to a user story 'View Vehicle Features' in the 'New' column. This user story has a green plus icon, indicating that tasks can be added directly to it. Other user stories include 'New Rental' (Active) and 'Display Available Vehicles' (Active). The 'Active' column contains tasks like 'Access Vehicles Table' and 'Display Available Vehicles UI'. The 'Closed' column contains the task 'Create DB Connection'.

Sprints show the progress of tasks within a given sprint

✓ Work management. Workflow progression

As work progresses, team members can update the state and reassign it as needed until they are completed (closed)

The screenshot displays the Azure DevOps interface for a Sprints board. The left sidebar shows the navigation menu with options like Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. The main area shows the '2018-upv-isw-3E1-teacher01 Team' Sprints board. The board is organized into columns: New, Active, and Closed. The 'New' column contains two work items: 'View Vehicle Features' and 'New Rental', both assigned to 'Javier Jaén'. The 'Active' column contains one work item: 'Display Available Vehicles UI', also assigned to 'Javier Jaén'. The 'Closed' column contains two work items: 'Create DB Connection' and 'Access Vehicles Table', both assigned to 'Javier Jaén'. A dropdown menu is visible over the 'Builds' option in the sidebar.

Azure DevOps

iswteacher2018 / 2018-upv-isw-3E1-teacher01 / Work / Sprints

SoftwareProject01

2018-upv-isw-3E1-teacher01 Team

Taskboard Backlog Capacity + New Work Item

No iteration dates Set dates

Iteration 1

Collapse all

New Active Closed

View Vehicle Features
Javier Jaén
State New

New Rental
Javier Jaén
State Active

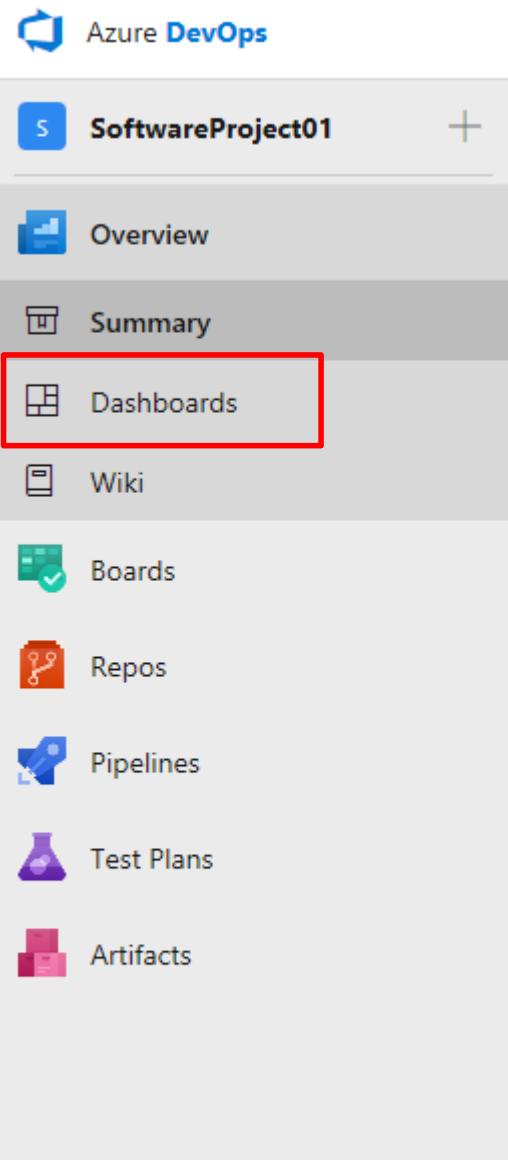
Builds Releases* Library Task groups Deployment groups

Display Available Vehicles UI
Javier Jaén

Create DB Connection
Javier Jaén

Access Vehicles Table
Javier Jaén

✓ Dashboards



This dashboard doesn't have widgets just yet!

Add one or more widgets to gain visibility into your team's progress.

[Add a widget](#)

You can configure your own personalized dashboard by adding widgets with the reporting information you are interested in

✓ Dashboards

Add, edit, move or resize your widgets

Done Editing

Add Widget



Chart for Test Plans

Create charts for test case authoring and test case execution status for test plans and test suites



Chart for Work Items

Visualize work items like bugs, user stories, and features using shared work item queries.



Code Tile

Displays the number of recent changes in

Don't see a widget? Explore the [Extension Gallery](#)

Add

Project Settings

- Permissions, notifications, repositories, etc. may be configured

The screenshot shows the Azure DevOps interface for a project named 'project1SW'. The left sidebar contains navigation links: Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. The main content area displays the 'Summary' view, which includes a notification about a networking configuration test, a 'Private' status indicator, and an 'Invite' button. Below this, there's a section 'About this project' with a description and an 'Add Project Description' button. The 'Project stats' section shows metrics for Boards (2 work items created, 0 completed) and Repos (0 pull requests opened, 1 commit by 1 author). The 'Members' section shows 1 member. A large grey arrow points from the 'Project settings' link in the bottom left to the 'Project Settings' sidebar on the right.

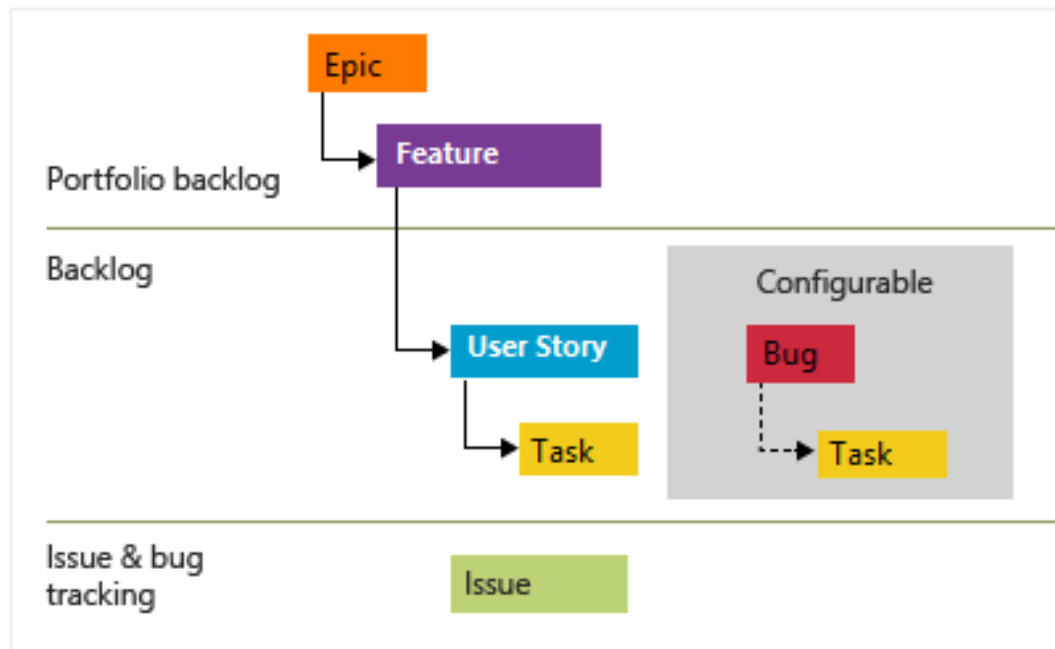
1 Project settings

Project Settings
General
Overview
Teams
Permissions
Notifications
Service hooks
Dashboards
Boards
Project configuration
Team configuration
GitHub connections
Pipelines
Agent pools
Parallel jobs
Settings
Test management
Release retention
Service connections
XAML build services
Repos
Repositories
Test
Retention

Task (Team Leader)

- Create an Azure DevOps organization (your lab organization name in the registration excel file, e.g. **2025-upv-isw-3el1-team01**)
- Add a private, git, Scrum project named **ManteHos** (see slides 9-11)
- Add all lab team members and myself (fjaen@upv.edu.es) as members with “Basic” access level (to change Access level go to **Organization settings >Users**, see slide 17)
- **DO NOT** forget to perform the code repository configuration step (see slide 14)

Work Items Types



Epics, Features

- An epic represents a business initiative to be accomplished
 - Increase customer engagement
 - Improve and simplify the user experience
 - Implement new architecture to improve performance
 - Engineer the application to support future growth
 - Support integration with external services
 - Support mobile apps
- A feature typically represents a shippable component of software.
 - Add view options to the new work hub
 - Add mobile shopping cart
 - Support text alerts
 - Refresh the web portal with new look and feel

• Task: Define Sprints & Work Items

The screenshot displays the 'ManteHos Team' backlog interface. At the top, there's a header with the team name, a star icon, and a 'New Work Item' button. Below the header, the 'Backlog' tab is selected. The main area shows a table of work items with columns for Order, Work Item Type, Title, State, and Effort. The items are grouped into three main categories: Session Management, Incidence Management, and Work Order Management. Each category has a 'Feature' item and several 'Product Backlog' items, which are further detailed with specific tasks and their states (New, To Do).

Order	Work Item Type	Title	State	Effort
1	Feature	Session Management	New	
	Product Backlog	Log In	New	
	Task	Implement Login UI	To Do	
	Task	Implement Login Business Logic	To Do	
	Task	Implement Login Persistence	To Do	
	Product Backlog	Log Out	New	
2	Feature	Incidence Management	New	
	Product Backlog	Report Incidence	New	
	Product Backlog	Review Incidence	New	
3	Feature	Work Order Management	New	
	Product Backlog	Assign Work Orders	New	
	Product Backlog	Check Work Order and Needed Parts	New	
	Product Backlog	Close Work Order	New	

Task: Define Sprints & Work Items

The screenshot displays the Jira interface. On the left is a sidebar with navigation options: Boards, Work items, Boards, Backlogs (selected), Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. At the bottom of the sidebar is 'Project settings'. The main area is titled 'Backlog' and contains a table of work items.

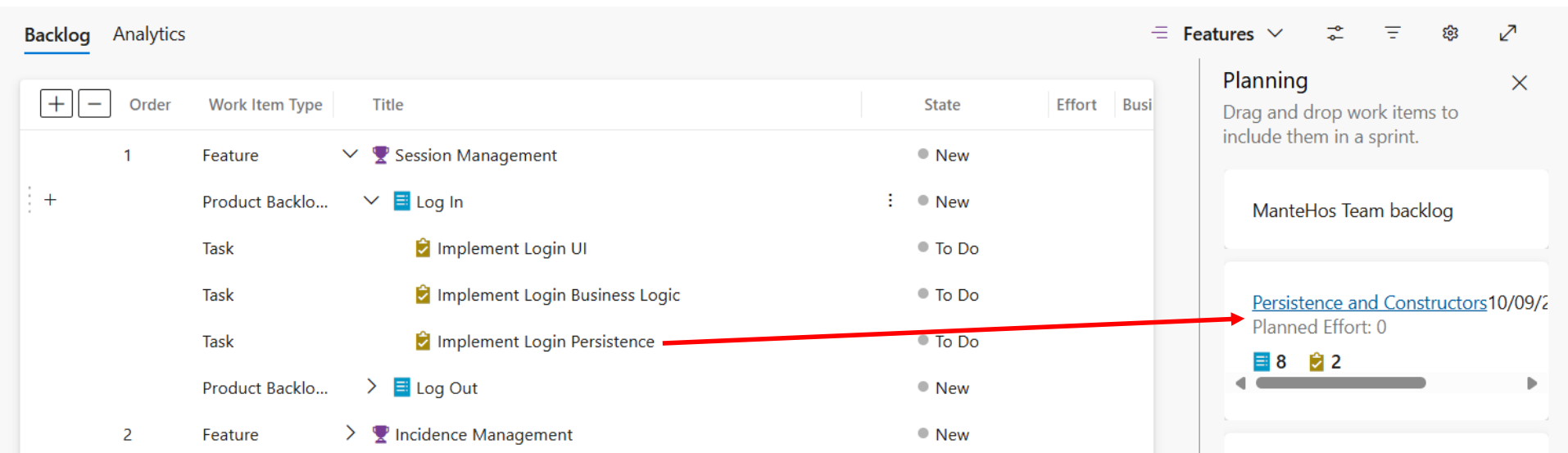
Order	Work Item Type	Title	State	Effort	Busi
1	Feature	> Session Management	New		
2	Feature	> Incidence Management	New		
3	Feature	> Work Order Management	New		
4	Feature	> Parts Management	New		

On the right side, a sidebar is visible with a red box highlighting the 'ManteHos Team backlog' section. This section includes three items:

- [Persistence and Constructors](#) 10/09/2025
Planned Effort: 0
8 tasks, 2 sub-tasks
- [Business Logic](#) 24/09/2025 - 08/10/2025
Planned Effort: 0 11 working days
2 tasks, 2 sub-tasks
- [UI](#) 08/10/2025 - 22/10/2025
Planned Effort: 0 11 working days
2 tasks, 2 sub-tasks

At the bottom of the red box is a '+ New Sprint' button.

Task: Define Sprints & Work Items



The screenshot displays the Jira Backlog interface. On the left, a table lists work items with columns for Order, Work Item Type, Title, State, Effort, and Business. A red arrow points from the task 'Implement Login Persistence' in the backlog to the 'Persistence and Constructors' item in the Planning panel on the right. The Planning panel includes a 'ManteHos Team backlog' section and a 'Persistence and Constructors' item with a planned effort of 0. Below this, a progress bar shows 8 tasks and 2 completed tasks.

Order	Work Item Type	Title	State	Effort	Business
1	Feature	Session Management	New		
	Product Backlog	Log In	New		
	Task	Implement Login UI	To Do		
	Task	Implement Login Business Logic	To Do		
	Task	Implement Login Persistence	To Do		
	Product Backlog	Log Out	New		
2	Feature	Incidence Management	New		

Planning

Drag and drop work items to include them in a sprint.

ManteHos Team backlog

[Persistence and Constructors](#) 10/09/2020
Planned Effort: 0

8 2

To assign a task to a sprint drag and drop the task in the corresponding sprint

Optional Tasks

- Read the DevOps documentation
 - <https://docs.microsoft.com/en-us/azure/devops/index?view=vsts>
 - <https://docs.microsoft.com/en-us/azure/devops/user-guide/index?view=vsts>

Additional Resources

- Visual Studio Walkthroughs (English)
[https://msdn.microsoft.com/es-es/library/szatc41e\(v=vs.110\).aspx](https://msdn.microsoft.com/es-es/library/szatc41e(v=vs.110).aspx)

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- [Introduction to Azure DevOps.](#)
Donovan Brown. Microsoft Visual Studio



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- [Plan Your work with Azure Boards.](#)
Ali Tai. Microsoft Visual Studio



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- [Manage and store your code in Azure Repos.](#) Edward Thomson.
Microsoft Visual Studio

