

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**

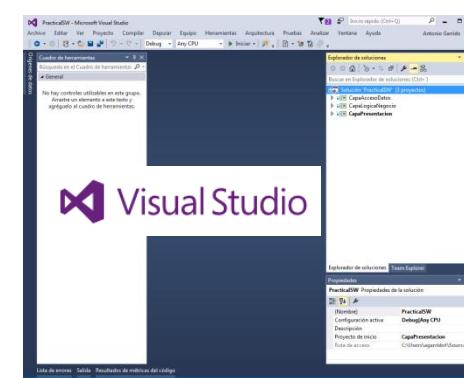
Goals

- 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



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 Microsoft Azure for Students landing page. At the top, it says "Build in the cloud free with Azure for Students" and "Use your university or school email to sign up and renew each year you're a student". Below this is a large "Start free" button with a circular overlay containing the number "1". To the right of the button is a link "Check out eligibility". Below the main header, there are two boxes: one on the left saying "Start with \$100 Azure credit" and one on the right saying "No credit card required".

✓ Creating a DevOps account

After login to Azure visit the Home page:

The screenshot shows the Microsoft Azure Home page with a blue header bar. A large circular overlay with the number '2' is positioned over the header. The main content area is titled 'Education | Información general'. On the left, there's a sidebar with a 'Información general' section containing links for 'Recursos de aprendizaje', 'Roles', 'Software', 'Aprendizaje', 'Plantillas', and 'GitHub'. Below this is a link for '¿Necesita ayuda?'. The main content area has tabs 'Empezar' and 'Información general', with 'Información general' being the active tab. It displays 'Detalles de la oferta para estudiantes' with 'Créditos disponibles' (100 US\$ de 100 US\$) and 'Días hasta que expire el crédito' (233, Expira el 08/05/2026). It also lists 'Soluciones populares' like 'Implementación de un contenedor de Docker', 'Cree su primera aplicación node.js', 'Cree y entrene un modelo de Machine Learning', and 'Compile e implemente su primero sitio web'. There are also sections for 'Servicios gratuitos' like 'Azure Virtual Machines: Windows', 'Azure Blob Storage', 'Computer Vision', and 'Azure App Service', each with a brief description and a 'Explorar todo' button.

✓ Creating a DevOps account

Explore the Azure DevOps organizations:

Servicios de Azure



✓ 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](#)

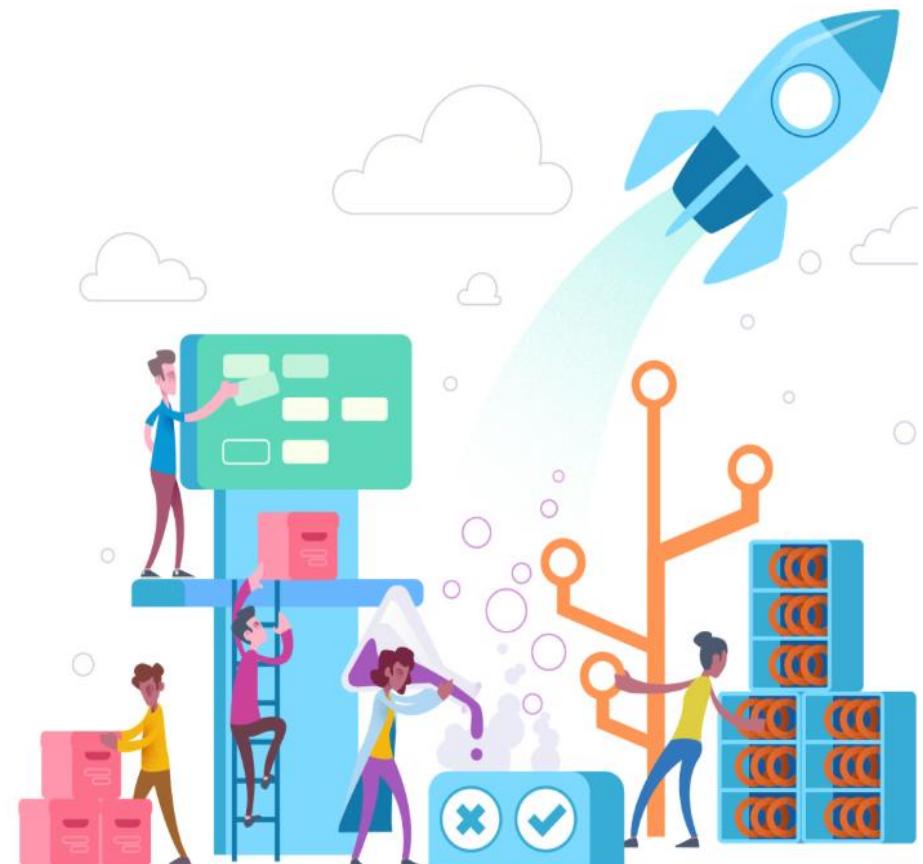
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[Get started using Azure DevOps](#)

[Billing management for Azure DevOps](#)

[Enviar comentarios](#)

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



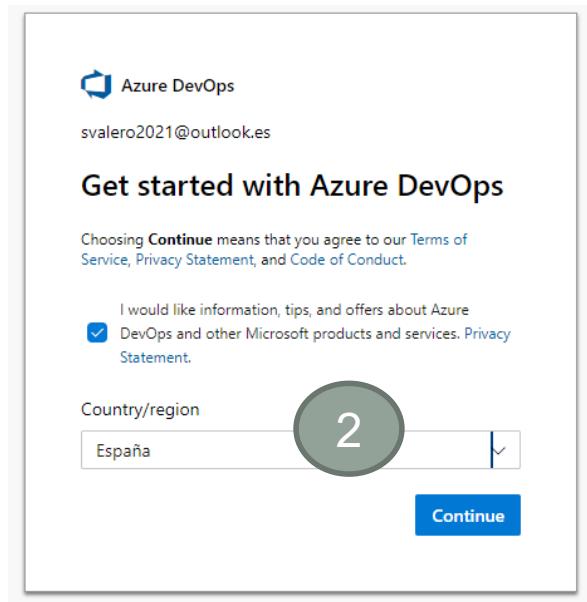
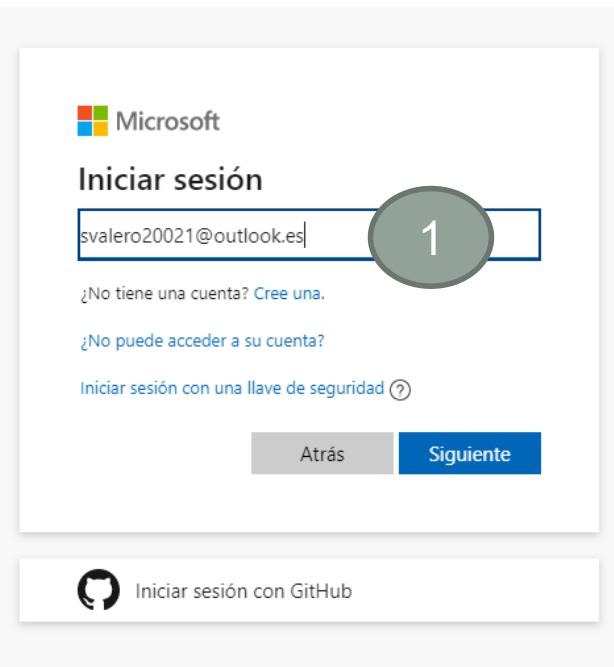
Creating a DevOps Organization (alt)

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



Creating a DevOps Organization

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

The image consists of three side-by-side screenshots illustrating the Azure DevOps sign-in and setup process:

- Screenshot 1: Microsoft Sign-in Page**

This screenshot shows the Microsoft sign-in page. A user has entered their email address, "svalero20021@outlook.es". A large gray circle with the number "1" is overlaid on the input field area. Below the input field, there are links for "Cree una" (Create a) and "No puede acceder a su cuenta?" (Can't access your account?). At the bottom are "Atrás" (Back) and "Siguiente" (Next) buttons.
- Screenshot 2: Azure DevOps Get started with Azure DevOps Page**

This screenshot shows the "Get started with Azure DevOps" page. It displays the user's email, "svalero20021@outlook.es", and the title "Get started with Azure DevOps". It includes a note about agreeing to Terms of Service, Privacy Statement, and Code of Conduct. A checkbox is checked, indicating interest in Azure DevOps and other Microsoft products. A dropdown menu for "Country/region" shows "España". A large gray circle with the number "2" is overlaid on the "Continue" button at the bottom right.
- Screenshot 3: Azure DevOps Organization Setup Page**

This screenshot shows the "Taking you to your Azure DevOps organization..." page. It displays the user's email again and the title. A large gray circle with the number "3" is overlaid on the top right corner of the page.

Modifying a DevOps Organization Name

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

The screenshot shows the Azure DevOps organization settings page. At the top left is the user profile icon and the name "svalero2021". A search bar is at the top right. Below the header, there is a message about a networking test: "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." On the left, there is a sidebar with "New organization" and "Organization settings" (which is highlighted with a green circle containing the number "1"). The main area features a cartoon illustration of a person sitting on the ground with a dog, surrounded by clouds, working on a stack of colorful cubes. To the right, there is a section titled "Create a project to get started" with fields for "Project name *", "Visibility" (with options for "Public" and "Private" selected), and a "Create project" button.

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

Organization Settings svalero2021

Name: 2020-upv-isw-3dl1-equipo60 (2)

Use the new URL: https://dev.azure.com/svalero2021/ (S)

Privacy URL

Description

Time zone: UTC

Region: West Europe

Save (Changes made will affect all projects and members of the organization)

Organization owner: Sole Valero (SV) svalero2021@outlook.es

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

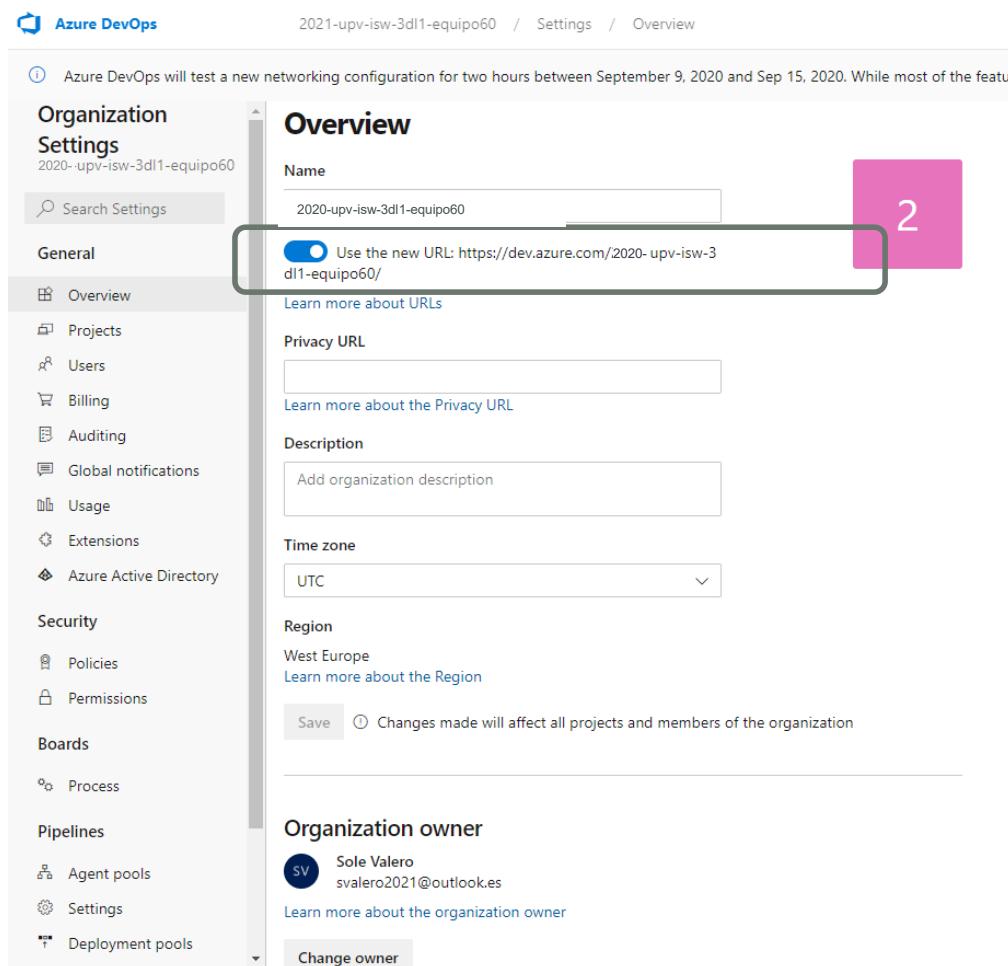
Type new organization name: 2020-upv-isw-3dl1-equipo60 (3)

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-equipo60 / Settings / Overview

Organization Settings
2020-upv-isw-3dl1-equipo60

Search Settings

General

- Overview (selected)
- 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-equipo60

Use the new URL: <https://dev.azure.com/2020-upv-isw-3dl1-equipo60/>

Privacy URL: [empty field]

Description: Add organization description

Time zone: UTC

Region: West Europe

Save: Changes made will affect all projects and members of the organization

Organization owner: Sole Valero (svalero2021@outlook.es)

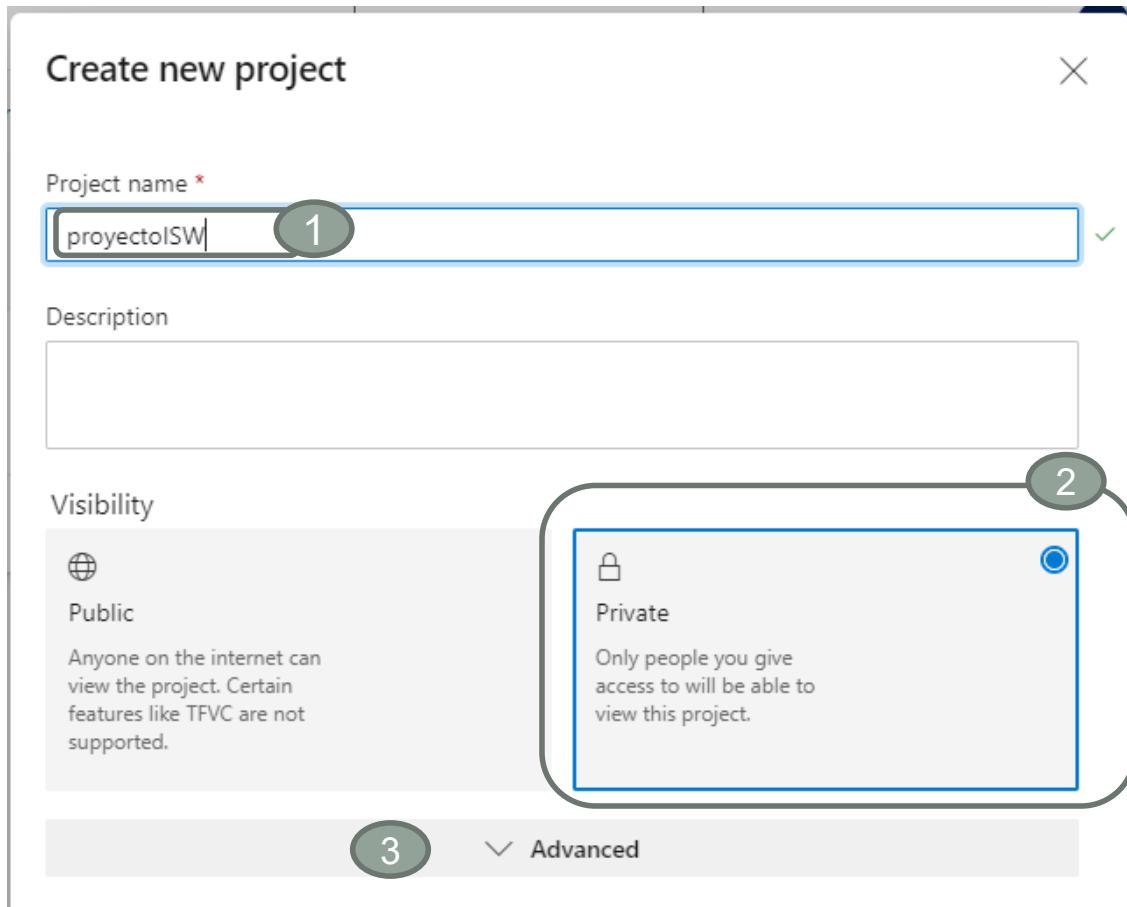
Change owner

Creating a new project

The screenshot shows the Azure DevOps interface. On the left, a sidebar menu is open under 'Organization Settings' for the user '2020-upv-isw-3dl1-equipo60'. The 'Projects' option is highlighted with a green circle containing the number '1'. The main content area is titled 'Projects' and shows a table with one row. The table has columns for 'Name ↑', 'Description', 'Last...', 'Pro...', and 'Visi...'. A button labeled '+ New project' is highlighted with a green circle containing the number '2'. At the top of the page, there is a message about a networking configuration test scheduled between September 9, 2020, and Sep 15, 2020.

- 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



- 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 *

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

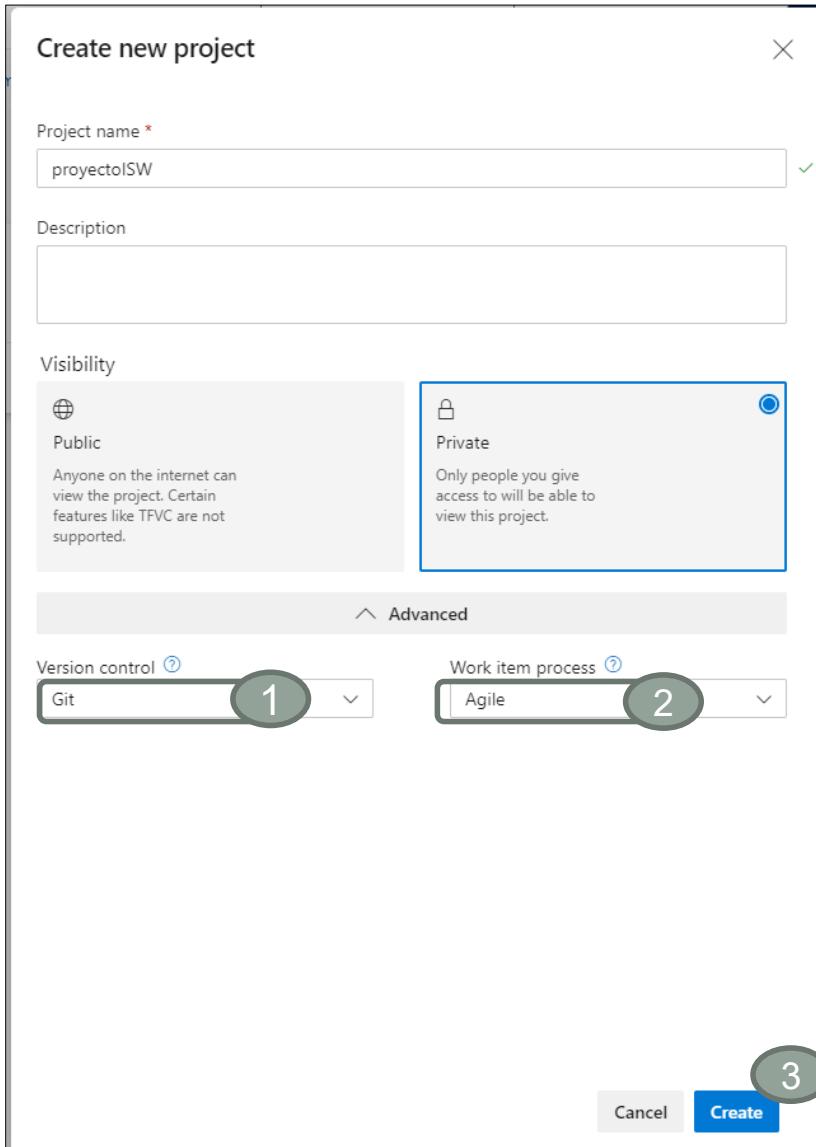
Version control ②

Git 1

Work item process ②

Agile 2

Cancel Create 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

Azure DevOps

Organization Settings 2021-upv-isw-3d1-equipo60

General

Overview

Projects 4

Billing

Auditing

Search Settings

Filter projects

+ New project

Name	Description	Last Updated	Process	Visibility
proyectoISW		8/9/2020	Agile	Private

Project View

The image shows two separate instances of the Azure DevOps Project View interface.

Instance 1 (Top):

- Organization:** 2020-upv-isw-3dl1-equipo60
- Projects:** One project named "proyectoISW" is listed.
- Details for "proyectoISW":**

Name	Description	Last Updated	Process	Visibility
proyectoISW		8/9/2020	Agile	Private
- Header:** Shows "Azure DevOps" logo, navigation bar ("Settings / Projects"), search bar, and a message about networking testing from September 9 to Sep 15, 2020.

Instance 2 (Bottom):

- Organization:** 2021-upv-isw-3dl1-equipo60
- Projects:** One project named "proyectoISW" is listed.
- Details for "proyectoISW":**

Name	Description	Last Updated	Process	Visibility
proyectoISW		8/9/2020	Agile	Private
- Header:** Shows "Azure DevOps" logo, navigation bar ("Settings / Projects"), search bar, and the same networking test message.

Project Main View

The screenshot shows the main view of a project in Azure DevOps. On the left is a navigation panel with various project management tools: Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. The 'Summary' tab is currently selected. At the top, there's a breadcrumb navigation: 2018-upv-isw-3E1-team01 / SoftwareProject01 / Overview / Summary. The main content area features a large 'SoftwareProject01' title with a blue square icon, a cartoon illustration of a person working at a desk with a dog, and a 'Welcome to the project!' message. Below this are tabs for 'Work', 'Code', and 'Build and release'. A red arrow labeled 'Projects List' points to the 'Azure DevOps' logo in the top-left corner. Another red arrow labeled 'Navigation Panel' points to the sidebar menu. A third red arrow labeled 'Project settings' points to the 'Project settings' link at the bottom-left of the page. A red arrow labeled 'Adding Members to Project' points to the 'Invite' button in the top-right corner of the main content area. The 'Project stats' section on the right indicates 'No stats are available at this moment'.

Projects List

Adding Members to Project

Navigation Panel

Project stats

Welcome to the project!

No stats are available at this moment
Setup a service to see project activity.

Project settings

Repository Configuration

The screenshot shows the Azure DevOps interface for managing repositories. On the left, a sidebar lists various project management and development tools: Overview, Boards, Repos (selected), Files, Commits, Pushes, Branches, Tags, Pull requests, Pipelines, Test Plans, and Artifacts. A green circle with the number 1 highlights the 'Repos' icon.

The main content area displays a repository named 'proyectoISW'. At the top, there's a message about a temporary networking test scheduled between September 9, 2020, and September 15, 2020. Below the message, a section titled 'Clone to your computer' provides cloning options via HTTPS or SSH, with the HTTPS link being copied to the clipboard. It also includes a 'Generate Git Credentials' button and a troubleshooting note for authentication issues.

Further down, a 'Push an existing repository from command line' section shows a command-line interface with the copied HTTPS URL. Finally, an 'Import a repository' section contains an 'Import' button.

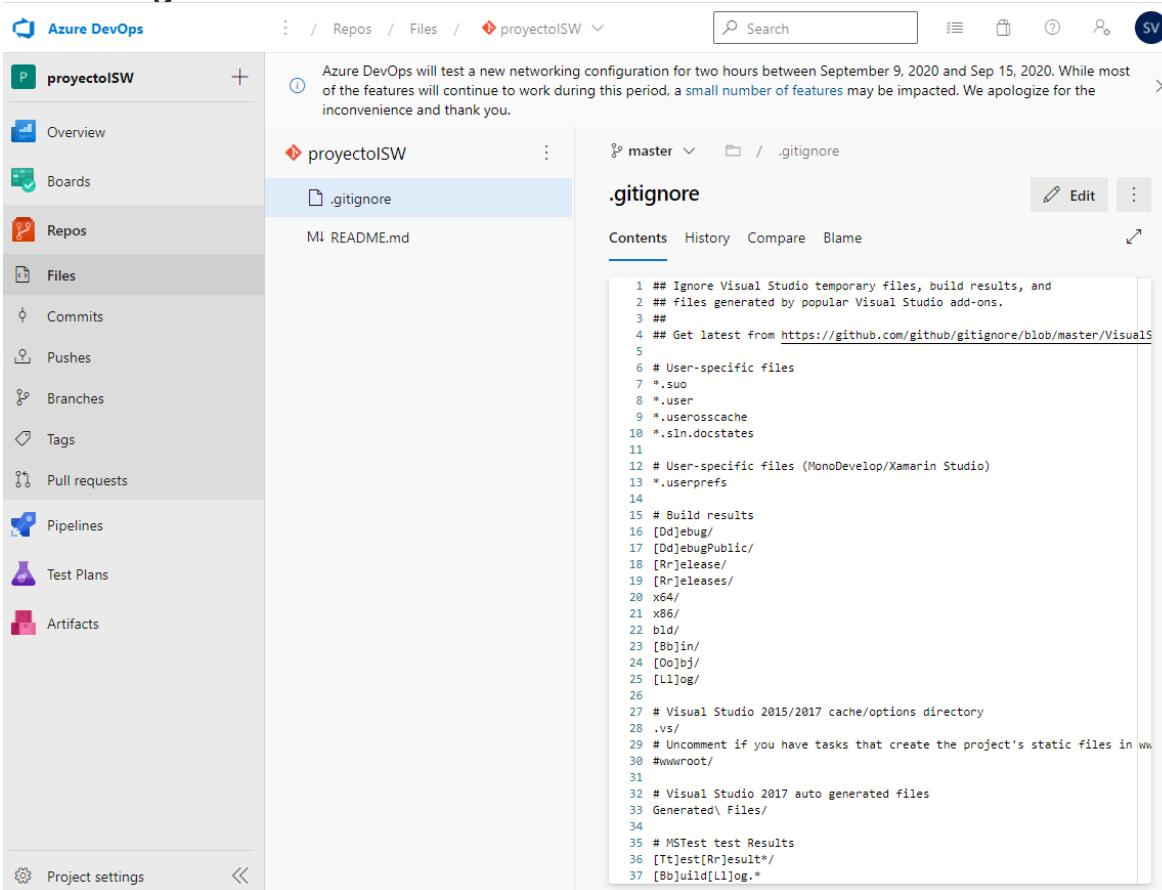
At the bottom, a 'Initialize' section allows for initializing the master branch with a README or .gitignore file. A checkbox labeled 'Add a README' is checked, and a dropdown menu shows 'Add a .gitignore: VisualStudio'. A green circle with the number 2 highlights the 'Add a .gitignore' dropdown, and another green circle with the number 3 highlights the 'Initialize' button.

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 shows the Azure DevOps interface for a repository named "proyectoISW". The left sidebar has "Files" selected. The main area shows a message about a networking test, then a list of files: ".gitignore" (selected), "README.md", and "MI". The ".gitignore" file is open in the editor, displaying the following content:

```
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/VisualStudio
5
6 # User-specific files
7 *.suo
8 *.user
9 *.userosscache
10 *.sln.docstates
11
12 # User-specific files (MonoDevelop/Xamarin Studio)
13 *.userprefs
14
15 # Build results
16 [D]ebug/
17 [D]ebugPublic/
18 [R]elease/
19 [R]eleases/
20 x86/
21 x86/
22 bld/
23 [B]bin/
24 [O]obj/
25 [L]ilog/
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 wwwroot
30 #wwwroot/
31
32 # Visual Studio 2017 auto generated files
33 Generated_Files/
34
35 # MSTest test Results
36 [T]est[R]esult/*
37 [B]uild[L]og.*
```

✓ Adding members to the team

Azure DevOps interface showing the 'SoftwareProject01' overview. The 'Invite' button in the top right corner of the main header area is highlighted with a red box.

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

Add Users to SoftwareProject01

Add users or groups *

Search users

Add to team(s) *

SoftwareProject01 Team

Add Cancel

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.

The screenshot shows the Microsoft Teams Organization settings interface. On the left, a sidebar lists various settings categories: General, Overview, Projects, Users (which is selected and highlighted with a red box), Billing, Auditing, Global notifications, Usage, Extensions, Azure Active Directory, and Security. The main area displays a list of users with the following details:

Name	Access Level	Date Added	Last Accessed
Francisco Javier Jaén Martínez fjaen@upv.edu.es	Basic	2/9/2021	13/9/2021
JORGE MONTANER MARCO jormonm5@upv.edu.es	Stakeholder	13/9/2021	Never

On the right side of the user list, there are buttons for "Summary" and "Add users". Below the user list, there are three additional buttons: "Change access level", "Manage user", and "Resend invite". A red box highlights the "Organization settings" button in the sidebar, the "Users" category in the sidebar, and the "Stakeholder" access level for the second user in the list.

✓ Work Management (Work Items)

The screenshot shows the Azure DevOps interface for the project 'SoftwareProject01'. The left sidebar lists various project management sections: Overview, Boards, Work Items (which is selected and highlighted with a red box), Backlogs, Sprints, Queries, and Repos. The main area displays a message 'VSTS is now Azure DevOps! I' and a 'Work Items' section. A dropdown menu is open under 'Assigned to me', showing options: Assigned to me (selected and highlighted with a blue background), Following, Mentioned, My activity, Recently updated, Recently completed, and Recently created. A red arrow points from the text 'List of work items filtered by different criteria' to the 'Assigned to me' dropdown.

VSTS is now Azure DevOps! I

Work Items

Assigned to me

- Assigned to me
- Following
- Mentioned
- My activity
- Recently updated
- Recently completed
- Recently created

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.

The screenshot shows the Azure DevOps interface for a project named "SoftwareProject01". The left sidebar includes links for Overview, Boards, Work Items (which is selected and highlighted in grey), Boards, Backlogs, Sprints, Queries, and Repos. The main area has a dropdown menu set to "Assigned to me" and a "New Work Item" button highlighted with a red box. A secondary dropdown menu lists work item types: Bug, Epic, Feature (also highlighted with a red box), Issue, Task, Test Case, and User Story.

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 Save Follow

0 comments Add tag

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

Description

Planning

Development

Discussion

Related Work

✓ 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

Azure DevOps

SoftwareProject01

Overview

Boards

Work Items

Boards

Backlogs

Sprints

Queries

Repos

Stories backlog

New

Active

2/5

Resolved

0/5

Closed

Stories

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 shows the Azure DevOps interface for a project named "SoftwareProject01". On the left, the navigation bar includes options like Overview, Boards, Work Items, Boards, Backlogs, Sprints, Queries, and Repos. The "Boards" section is currently selected. In the center, there's a "Features backlog" board with columns for New, Active (1/5), Resolved (0/5), and Closed. A red arrow points from the text above to a blue button labeled "+ Add User Story" located on a card titled "Renting Vehicle Functionality" assigned to "Javier Jaén". A red box highlights the "Features" dropdown menu at the top right of the board area.

Work Management (Backlogs)

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

The screenshot shows the Azure DevOps interface for managing work items. On the left, the navigation bar highlights 'Backlogs'. The main area displays a backlog of work items for the '2018-upv-isw-3E1-teacher01 Team'. A red arrow points from the 'Backlog' section towards the 'Iterations list' on the right. Another red box highlights the 'Stories' button in the top right corner of the backlog area. The 'Iterations list' on the right shows 'Iteration 1' (Current) and 'Iteration 2'. 'Iteration 1' has a planned effort of 3, indicated by a blue bar and a yellow bar. The 'Iterations list' is labeled 'Iterations list' at the bottom.

Backlog

Order	Work Item Type	Title
1	User Story	View Vehicle Features
2	User Story	New Rental
3	User Story	Display Available Vehicles

Iterations list

Iterations 1 Current
Planned Effort: -
3 3

Iterations 2
No work scheduled yet

Work Management (Sprints)

Tasks can be added to User stories directly

The screenshot shows the Azure DevOps interface for the 'SoftwareProject01' project. On the left, the navigation bar includes 'Overview', 'Boards', 'Work Items', 'Boards', 'Backlogs', 'Sprints' (which is highlighted with a red box), and 'Queries'. Below these are 'Repos'. The main area is the 'Taskboard' for the '2018-upv-isw-3E1-teacher01 Team'. The board has columns for 'New', 'Active', and 'Closed'. In the 'New' column, there are three user stories: 'View Vehicle Features' (Javier Jaén, State: New), 'New Rental' (Javier Jaén, State: Active), and 'Display Available Vehicles' (Javier Jaén, State: Active). A red arrow points from the text 'Tasks can be added to User stories directly' down to the 'View Vehicle Features' card. The 'Active' and 'Closed' columns currently have no items.

Sprints show the progress of tasks within a given sprint

✓ Work management. Workflow progression

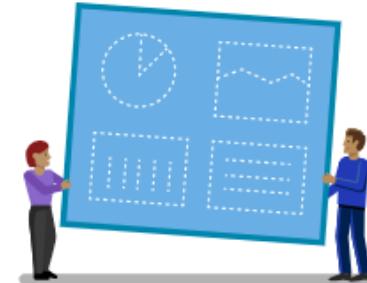
As work progresses, team members can update the state and reassign it as needed until they are completed (closed)

The screenshot shows the Azure DevOps interface for the project "SoftwareProject01". The left sidebar includes links for Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. The main area displays a Taskboard for the "2018-upv-isw-3E1-teacher01 Team". The Taskboard has three columns: New, Active, and Closed. In the New column, there are two items: "View Vehicle Features" (State: New) and "New Rental" (State: Active). In the Active column, there is one item: "Display Available Vehicles UI" (State: Active). In the Closed column, there are two items: "Create DB Connection" and "Access Vehicles Table", both assigned to Javier Jaén.

New	Active	Closed
<ul style="list-style-type: none">View Vehicle Features Javier Jaén State: NewNew Rental Javier Jaén State: Active	<ul style="list-style-type: none">Display Available Vehicles UI Javier Jaén State: Active	<ul style="list-style-type: none">Create DB Connection Javier JaénAccess Vehicles Table Javier Jaén

✓ Dashboards

A screenshot of the Azure DevOps interface for the project "SoftwareProject01". The top navigation bar shows the Azure DevOps logo and the project name. Below it is a horizontal menu bar with icons for Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. The "Dashboards" item is highlighted with a red box. To the right of the menu, there is a large blue rectangular area containing four dashed-line placeholder boxes for widgets, with a pie chart and a line graph visible in the background. At the bottom of this area, there is a blue button labeled "Add a widget".



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

Search widgets



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 project settings interface for the 'proyectoISW' project. On the left, there's a sidebar with various project management options like Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. A large green button labeled '1' is at the bottom left. At the top right, there's a navigation bar with 'Search', 'Overview', 'Summary', 'Project settings' (which is highlighted), 'Members', and a user icon. A message banner at the top right informs users about a networking test between September 9 and Sep 15, 2020.

Project Settings

- General**
- Overview** (highlighted)
- 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

About this project

Help others to get on board! Describe your project and make it easier for other people to understand it.

Project stats

Last 7 days

Category	Value
Boards	2 Work items created
Boards	0 Work items completed
Repos	0 Pull requests opened
Repos	1 Commits by 1 authors

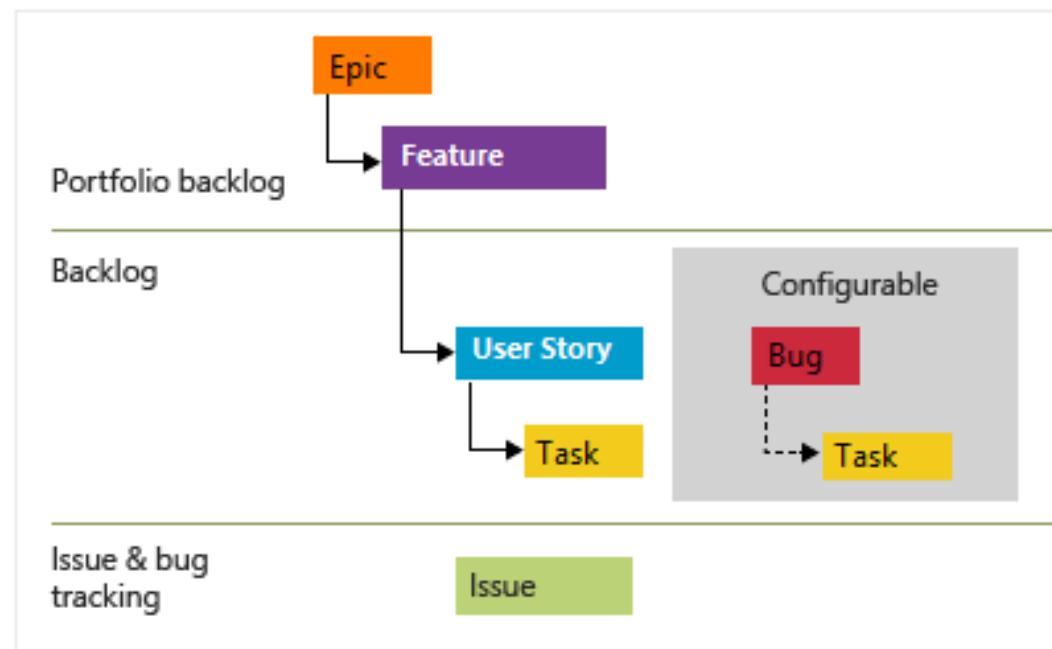
Members 1

SV

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 shows a backlog view for the 'ManteHos Team' project. The backlog is organized into three main features: Session Management, Incidence Management, and Work Order Management. Each feature has associated tasks under it.

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

Task: Define Sprints & Work Items

The screenshot shows the Microsoft Azure DevOps Boards interface. On the left, a sidebar menu includes options like Boards, Work items, Boards, Backlogs (selected), Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main area displays a 'Backlog' view with columns for Order, Work Item Type, Title, State, Effort, and Business Value. Four work items are listed:

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

To the right, a sidebar titled 'ManteHos Team backlog' lists three sprint backlog items:

- Persistence and Constructors** (Planned Effort: 0) - 10/09/2025 - 10/10/2025, 8 tasks, 2 bugs
- Business Logic** (Planned Effort: 0) - 24/09/2025 - 08/10/2025, 2 tasks, 2 bugs
- UI** (Planned Effort: 0) - 08/10/2025 - 22/10/2025, 2 tasks, 2 bugs

A red box highlights the 'New Sprint' button at the bottom right of the sidebar.

Task: Define Sprints & Work Items

The screenshot shows a backlog management interface with the following details:

Order	Work Item Type	Title	State
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
2	Product Backlog	Log Out	New
	Feature	Incidence Management	New

A red arrow points from the "Implement Login Persistence" task in the backlog to the "Persistence and Constructors" section in the planning pane. The planning pane also shows a progress bar and a planned effort of 0.

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



-
- Manage and store your code in Azure Repos. Edward Thomson.

Microsoft Visual Studio

