

## Report of PW No. 1. Structured Approach to Building a Full Stack Web Application

Sub-Group No. .... Date. ....

### Plan of the PW

1. **Objectives redefinition** – 1pt
2. **Creation of diagrams** – 6pts
  - Activity diagram
  - Use case diagram
  - Modeling using class diagrams or a conceptual data model
3. **Creation of the ASP.NET Core MVC web application** – 3pts
  - Initialization of application settings.
  - Creation of models following the diagrams created.

Redefinition of objectives	Creation of diagrams		
	Use case	Activity diagram	Classes
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### Project Presentation: Tanger EcoWatch – Environmental Monitoring Platform for Tanger

“**Tanger EcoWatch**” aims to address the growing needs of local communities in environmental monitoring and management. This web platform will provide powerful tools for collecting, analyzing, and visualizing environmental data while encouraging Tanger citizen engagement and sustainability.

#### Key Features:

1. **Data Collection:** Flexible data collection features to gather information on air and water quality, biodiversity, energy consumption, etc., from IoT sensors and citizen reports.
2. **Analysis and Visualization:**
  - a. Data analysis tools to detect trends, identify risk areas, and assess the impact of environmental policies.
  - b. Interactive dashboards and map visualizations to make data understandable and accessible to citizens.
3. **Citizen Engagement:**
  - a. Citizen engagement features to promote active participation through awareness campaigns, environmental challenges, and discussion forums.
  - b. Communication tools to inform residents about community actions and encourage them to adopt more sustainable behaviors.
4. **Resource Management:**
  - a. Integrated resource management modules to optimize natural resource use, reduce waste, and promote eco-friendly practices.
  - b. Planning tools to help officials develop long-term environmental strategies and track their implementation.

In summary, “**Tanger EcoWatch**” aspires to become the essential tool for communities committed to preserving and enhancing Tanger environment. By combining advanced data collection, intelligent analysis, and citizen engagement, this platform will contribute to creating greener, more resilient, and responsible cities.

## TODO

This Practical Work aims to define the project objectives, to move from the expression of needs to the code of a Web application created using the DOTNET Framework.

### **Part 1: Analysis**

Define the main objectives of the application. You can draw up the system **sequence diagram** for **use cases** that you consider important.

- Situation 1: ... ..

- Situation 2: ... ..

- Situation 3: ... ..



☞ **Part 2: Preliminary and detailed design**

1. Specify the main **actors** in your application. These **actors** can authenticate to have access to the application's functionalities.

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2. Implement a **use case diagram** for you application

3. From the information provided to you above, develop the **class diagram**.