

# SCRUM, JSON, and CSV

**TechnoReady In-Mexico.**

2nd Challenge

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# Introduction: The Modern Developer's Toolkit



What we'll cover:



**SCRUM:** An agile framework for teamwork and project management.



**JSON:** A versatile data-interchange format for web applications.



**CSV:** A simple, tabular format for data storage and sharing.



**The Big Picture:** Why are these three concepts so important and how do they work together in real-world projects?

# SCRUM Methodology: A Framework for Agility

**Definition:** An agile framework for managing complex projects and delivering products in an iterative, incremental manner.

**Key Idea:** Instead of one long project plan, SCRUM breaks work into small, manageable cycles called Sprints.

## **Benefits:**

- Flexibility: Easily adapt to changing requirements.
- Collaboration: Fosters close teamwork and communication.
- Transparency: Everyone knows the project's status at all times.



# The Three Pillars of SCRUM

## - Roles:

- Product Owner: Defines and prioritizes the work (the "what").
- Scrum Master: Facilitates the process and removes obstacles (the "how").
- Development Team: Builds the product.

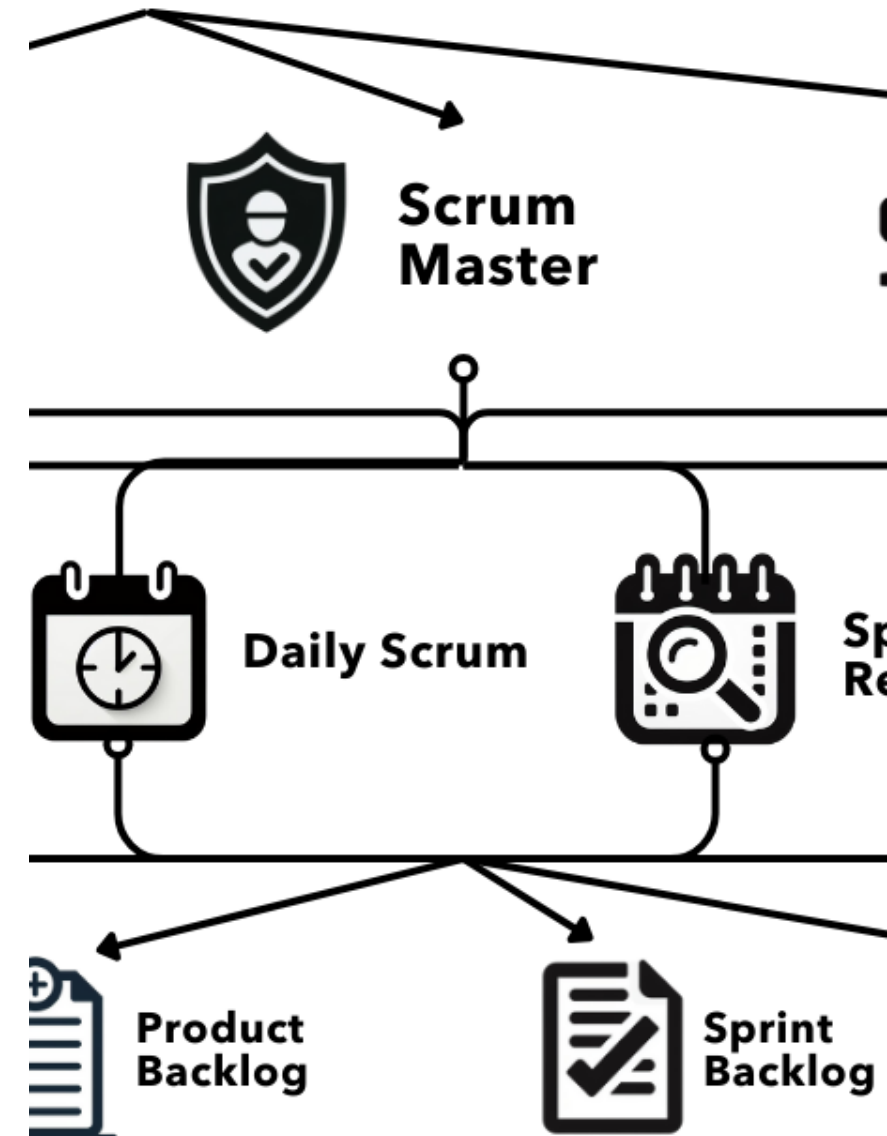
## - Events:

- Sprint Planning: What will be done this Sprint?
- Daily Scrum: A quick daily meeting to sync up.
- Sprint Review: Demonstrate the completed work.
- Sprint Retrospective: What can we improve for the next Sprint?

## - Artifacts:

- Product Backlog: A prioritized list of all features.
- Sprint Backlog: The subset of features for the current Sprint.
- Increment: The potentially shippable product from the Sprint.

# Framework.





# JSON: The Language of Web Data

- **Definition:** JavaScript Object Notation. A lightweight, human-readable format for storing and exchanging data.
- **Characteristics:**
  - Language-independent: Usable with any programming language.
  - Key-Value Pairs: Data is organized in key-value pairs (like a dictionary).
  - Structured: Uses {} for objects and [] for arrays.
- **Common Use Cases:**
  - APIs: The standard format for communication between a client (like a web browser) and a server.
  - Configuration Files: Storing settings for applications.

# Diving Deeper into JSON Syntax

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- Basic Structure:
- Nested Objects and Arrays:

```
{  
  "key": "value",  
  "number": 123,  
  "boolean": true  
}
```

```
{  
  "user": {  
    "name": "Alex",  
    "age": 30  
  },  
  "skills": ["Python", "JavaScript", "HTML"]  
}
```

# CSV: The Spreadsheet of the Web

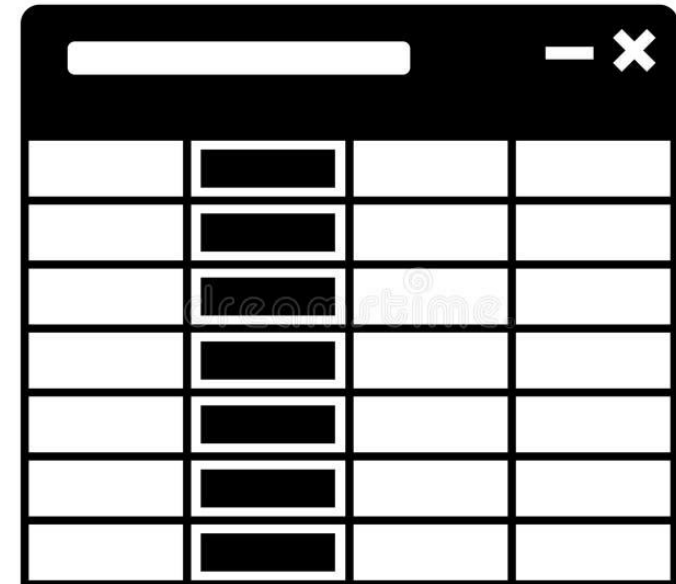
**Definition:** Comma Separated Values. A simple text file format used to store tabular data.

**Characteristics:**

- **Plain Text:** Readable with any text editor.
- **Tabular:** Data is organized in rows and columns.
- **Delimiter:** Values in each row are separated by a delimiter, most commonly a comma (,).

**Common Use Cases:**

- **Data Export/Import:** Easily move data between spreadsheets and databases.
- **Data Archiving:** Storing large datasets in a simple, compact format.



# Understanding CSV Structure

- **Basic Structure:**

Name,Age,City

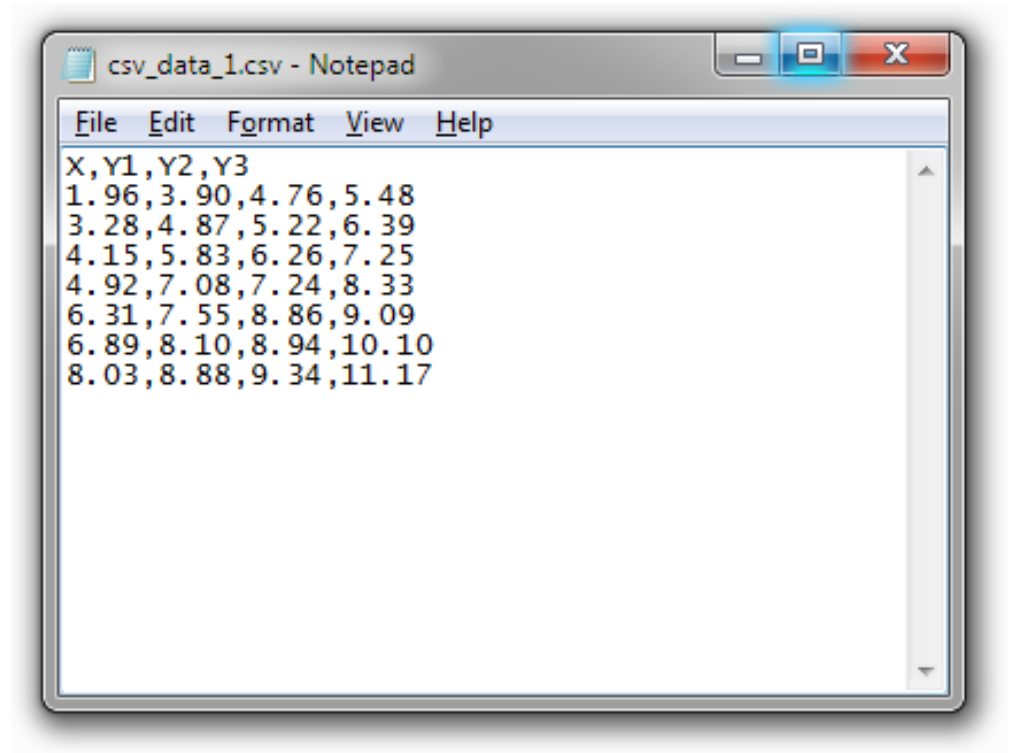
Alice,28,New York

Bob,35,London

- **Handling Commas in Data:**

- If a value contains a comma, it must be enclosed in double quotes.
- Example: "Alex, Jr.",25,"Mexico City"

- **Data Types:** All data is treated as plain text, requiring careful handling when parsing.



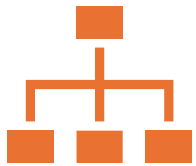


# The Complete Workflow

- **Step 1:** Planning (SCRUM): The team uses SCRUM to plan a new feature, like adding a "User Profile" section.
- **Step 2:** Data Exchange (JSON): The frontend requests a user's data from the backend using an API, which responds with the user's information in JSON format.
- **Step 3:** Data Management (CSV): The analytics team needs to export a list of all users' data for a report. They use a tool to generate a CSV file from the database.



# Summary and Key Takeaways



**SCRUM:** The "how" of project management. It provides the framework for teams to work efficiently.



**JSON:** The "what" of web data. It's the flexible, structured language for modern applications.



**CSV:** The simple, reliable format for data storage and sharing.



**Together, they form a powerful combination:** SCRUM organizes the people, while JSON and CSV handle the data.