Information Engineering fo Digital Medicine - A.Y. 2025-2026

Task Automation Application

Medical Software Engineering
Pre-Game Presentation

Group 6		
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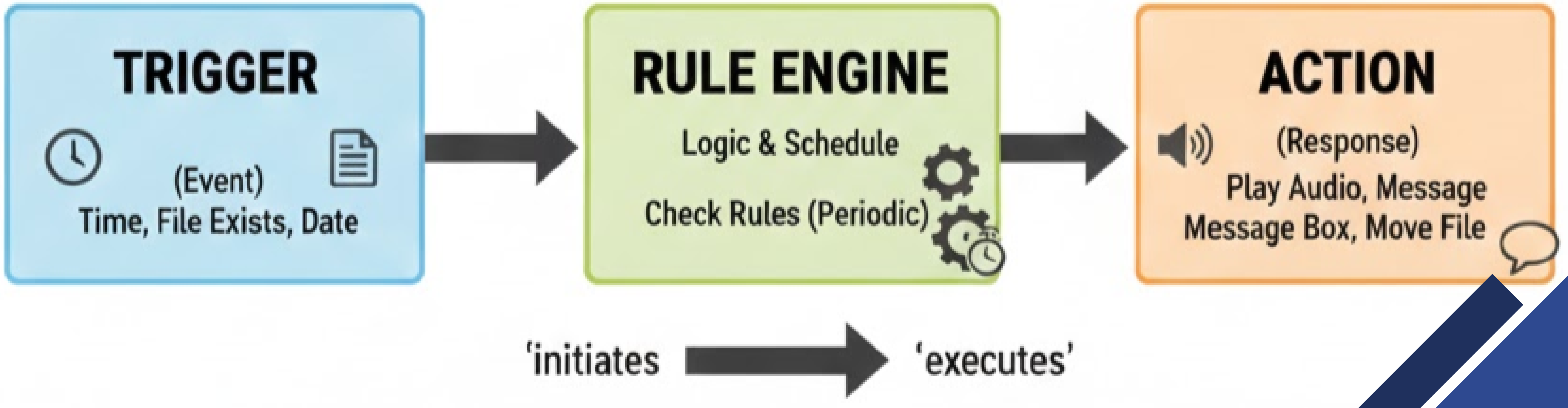
1. Project Vision
2. Tools
3. Setup
4. DoD
5. MVC
6. Prod Backlog
7. Sprint 1
8. Tasks

Project Vision and Goal

- **Goal:** Develop a single-user desktop application for task automation (similar to IFTTT).
- **Key Feature:** Users can define custom rules.
- **Core Logic:**



Tools & Development Environment

- **Language:** Java (JDK 17)
- **GUI Framework:** JavaFX + Scene Builder
- **IDE:** NetBeans 17
- **Testing:** JUnit 4
- **Process Management:** Trello (Scrum Board) & GitHub (Version Control) .

Project Setup & Repository Status

Trello

We have fully configured our Scrum Board, populating the Product Backlog with 22 User Stories based on the project Epics. . 🔗 Link to Board

GitHub

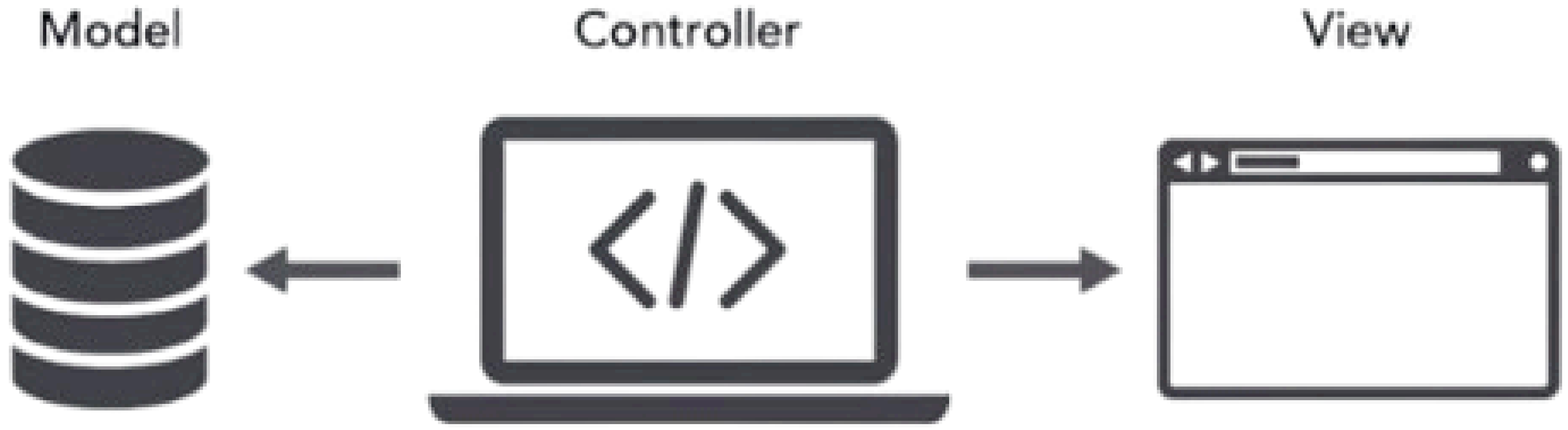
The repository has been initialized . All team members have been granted collaborator access to ensure code commits starting from Day 1. 🔗 Link to Repo

Definition of Done (DoD)

- UNIT TEST PASSED:
  written, executed and passed
- CODE QUALITY:
  compiles with no errors
- CLEAN INTEGRATION:
  with the existing codebase
- CODE REVIEW:
  revision by all team members
- FUNCTIONALITY:
  acceptance criteria respected
- TESTING:
  JUnit tests’ positive outcome
- INTEGRATION:
  data is saved and integrated
- DOCUMENTATION & PROCESS
- COLLABORATION:
  code pushed to GitHub

Software Architecture

- **Architectural Pattern:** Model-View-Controller (MVC) Selected to ensure a clear separation of concerns by subdividing the logic into three distinct, highly cohesive elements.



Product Backlog Overview

- **Total Stories:** 22 User Stories defined.
- **Priority 1 (Core):** Basic Operations (Definition of a Rule, Time Trigger, Audio/Message Action) & Persistence.
- **Priority 2 (Management):** File and Date Triggers, Edit, Delete, Enable/Disable Rules.
- **Priority 3 (Advanced):** Composite Actions (AND/OR/NOT logic), Counters.

Sprint 1 Planning

- **Selected User Stories:**

US01 - Rule Creation

US02 - Rule Engine

US03 - Time Triggers

US04 - Audio Action

US05 - Mex Action

US06 - Adding rules

US07 - Delete Rules

US08 - Rule State

- **Project Velocity Initial Estimate**: 20 Story Points

Sprint 1 Tasks Division

Sabatino Ester	Pecoraro Sara	Della Corte Alessio	Siddiqa Ayesha
2.1 - Create a RuleEngine class	**2.3** - Create the main loop that iterates through the list of rules.	**1.5** - Creation of the GUI that consent to select a Trigger and an Action.	**1.1** - Create an Action Interface
2.2 - Implement a background thread	**2.4** - Implement the logic to execute the Action if the Trigger is true.	**3.1** - Define The TimeTrigger Class.	**1.2** - Create a Trigger Interface
4.1 - Define PlayAudioAction class	**3.3** - Integrate the TimeTrigger into the rule creation flow	**3.2** - Validate the time input (ensure the user cannot insert invalid formats, empty fields, etc.)	**1.3** - Create a Rule Class
4.2 - Integrate AudioAction into the rule creation workflow so the user can select it as the action for a rule.	**4.5** - Write unit tests for AudioAction	**3.4** - Write integration tests for rule firing when the time is reached.	**1.4** - Implement the logic that executes the action when the trigger is fired.
4.3 - Handle errors during playback	**5.3** - Validate the input message	**5.1** - Define a MessageAction class.	**4.4** - Connect AudioAction to the Rule Engine, ensuring the file is played when the associated rule is triggered.
6.1 - Create a AddRules method.	**5.4** - Integrate MessageAction into the rule creation flow	**5.2** - Add a text input field in the rule creation UI to let the user type the message.	**7.1** - Create a DeleteRule method.
		8.1 - Define the automatization of the rule states.	

Thank you

for the attention