



CODECLASSY

Integrated, Fully Featured, Reliable EMS



I. Problem Statement

We've successfully identified an **EdTech market niche**, where institutes lack **easy-to-software** to "integrate" with **management** as well as with **modern requirements of learning**.

1. Disconnection With STEM

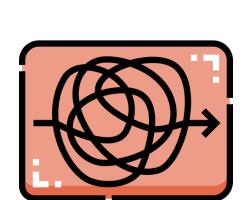
Untrained and understaffed institutes that wish to integrate STEM like education (such as Coding) simply don't have a tool available to easily make it a part of their current organization's management. Neither are the separate tools currently built to let concerned authorities use the tool as part of their system.

As a result, many institutes DON'T take the critical step of introducing a valuable skill such as programming to teach to their students.



2. A Complete Virtual Learning Environment Requires Currently Too Many Tools

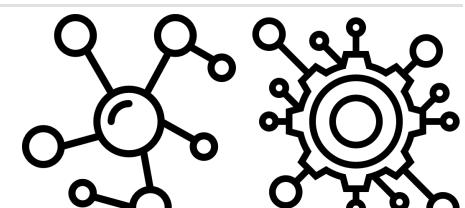
To currently achieve a fully fledged virtual learning environment that combines the best of both the physical classroom and the virtual world, you would need to utilize a number of tools for effective communication between students/teachers, then tools for assignments, then quiz taking, then attendance, then maintain records, etc.



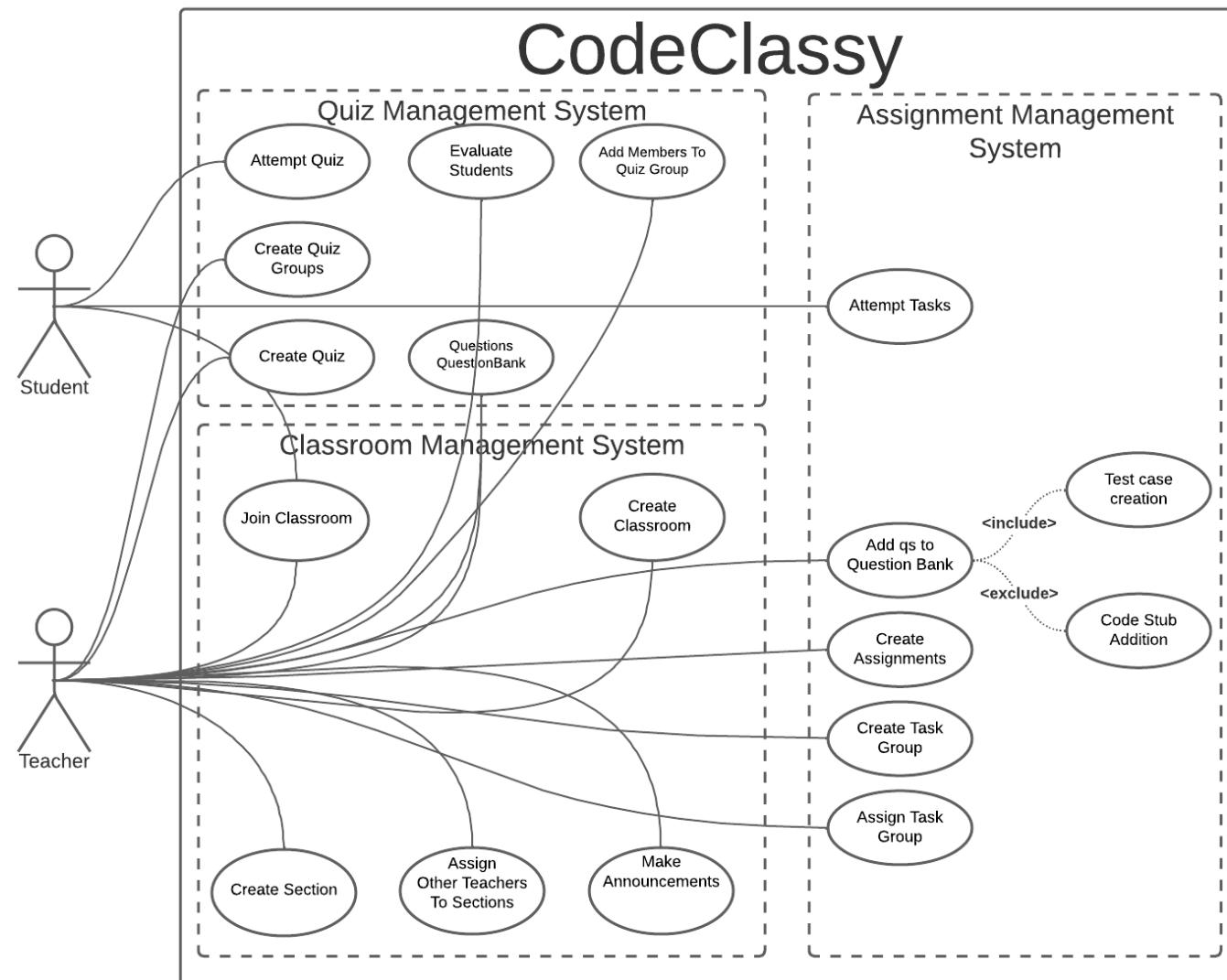
3. Interoperability

Because of various tools in combination, it is a very time consuming process to convert it to the appropriate format for another system, and to keep track of what changes were made.

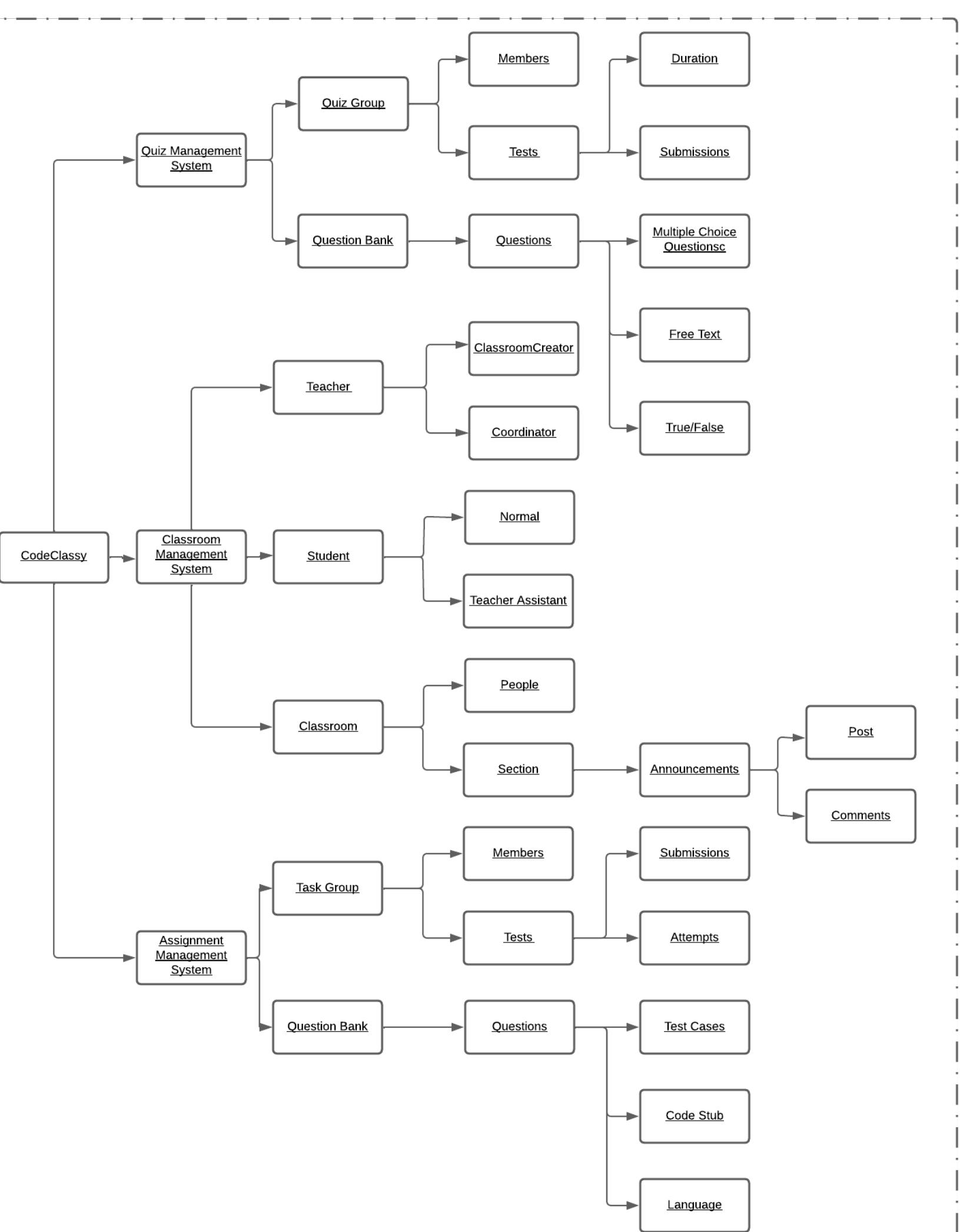
We hence need better systems of **interoperability** and **integration**.



II. Use Case Diagram



IV. Functional Hierarchy/ Feature Tree Diagram



III. Abstract - Desired Goals

collab assessments quiz system software engineering microfrontends remote code execution SaaS education mvp edtech product microservices real time code collaboration

EdTech Business Solution

A product aiming to provide a **flexible, heavily featured, organized**, **easy-to-use**, and **integrated system** to counter many challenges found in EdTech

Collaborative Model

A modernized software that's matched with a/an (a) **ease of use**, (b) **unified platform**, (c) **feedback system**, (d) **collaborative model**, (e) **tackling online vs hybrid challenges**

MVP Approach

Resulting MVP platform orchestrating a **submission**, **review**, and **feedback** process through **base functionalities**

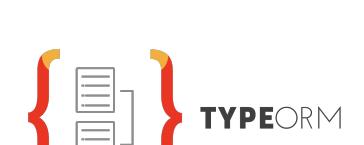
Feasible, Integrated Environment

Integrated platform as proposed solution combining 3 base modules, (a) **Classroom Stream**, (b) **Quiz Management Module**, (c) **RCE & Real-time Collaboration**

V. Technologies

Overall, **CodeClassy** uses **1 #backend**, **2 #frontends**, **3 #databases** (**1 #relational**, **2 #non-relational**), **#OpenSource** Tooling and **#DevOps** tools to develop a fully functional pipeline with automation, deployment, and pushing to production. They are as following,

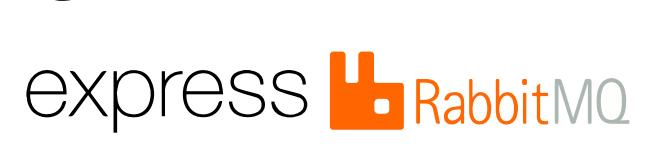
Backend



Frontend



RCE



Databases



Collab



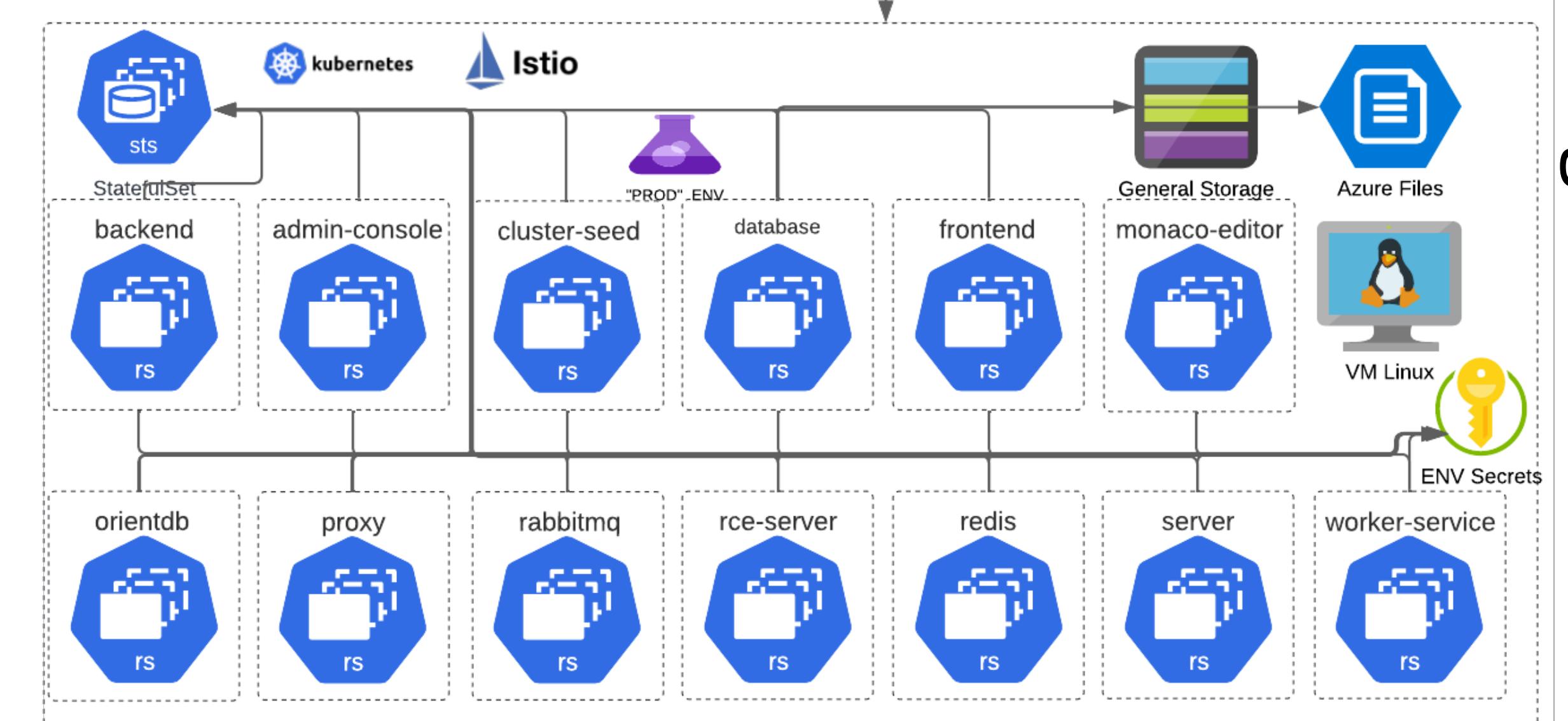
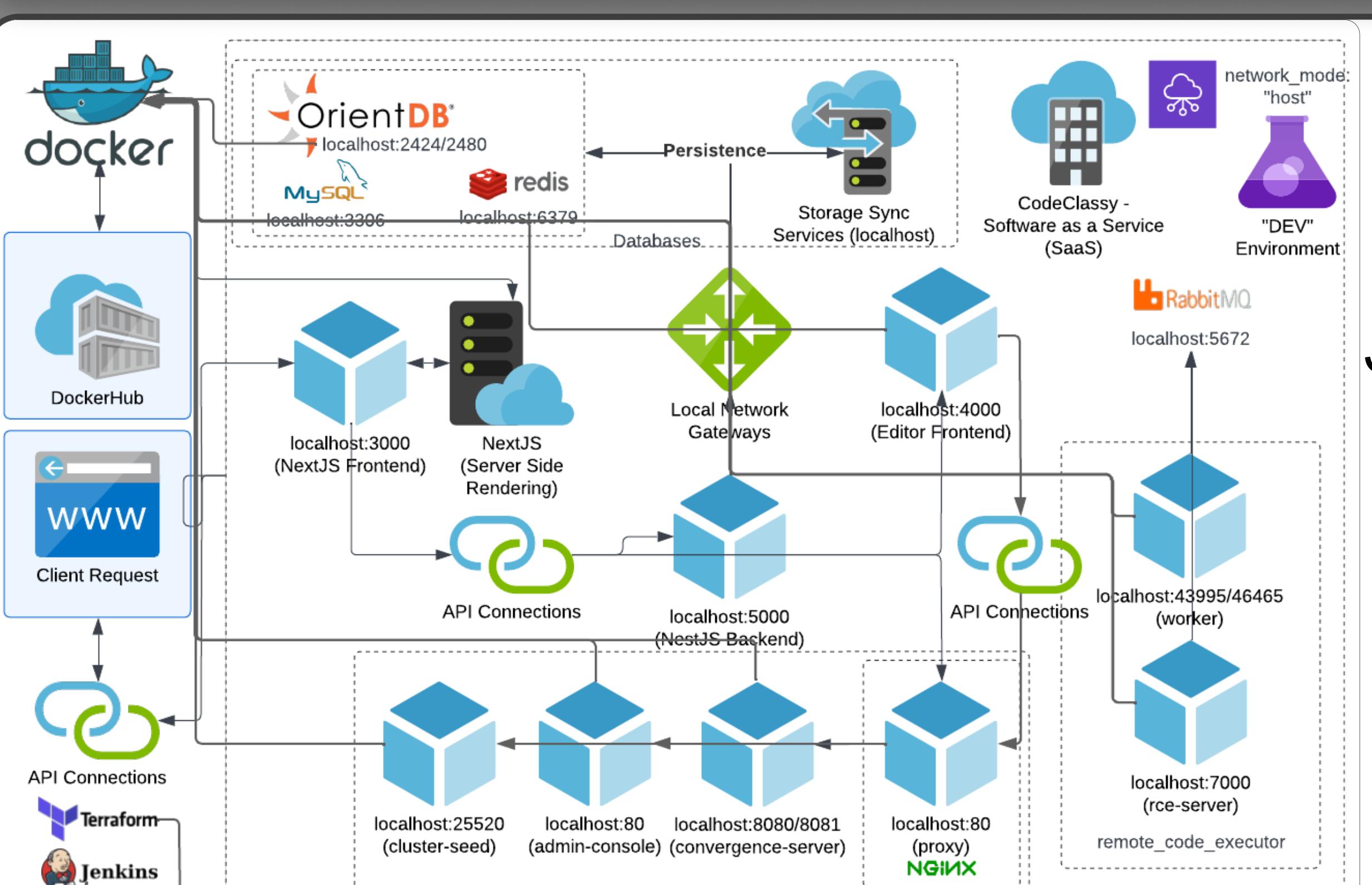
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DevOps



Cloud



VI. System Architecture Diagram