K8C

Resources and microservices

Product description

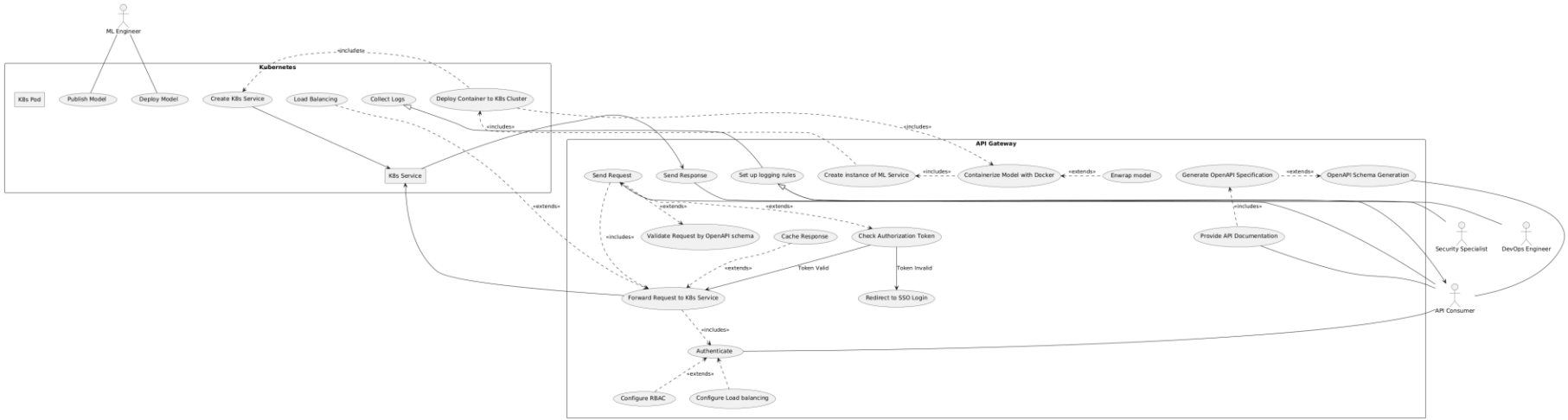
The product is a platform for deploying, managing, and scaling machine learning models in production. It offers a secure, flexible environment for automating ML tasks like model versioning, routing, and monitoring. With Kubernetes integration and containerization support, it's designed for developers, ML engineers, and enterprises needing scalable, reliable ML infrastructure.

Team K8C: Tsurkan Daniel; Dandamaev Gadji; Tsaturyan Konstantin; Smolkin Mikhail

Project repo: https://github.com/fanglores/Advanced-Software-Design

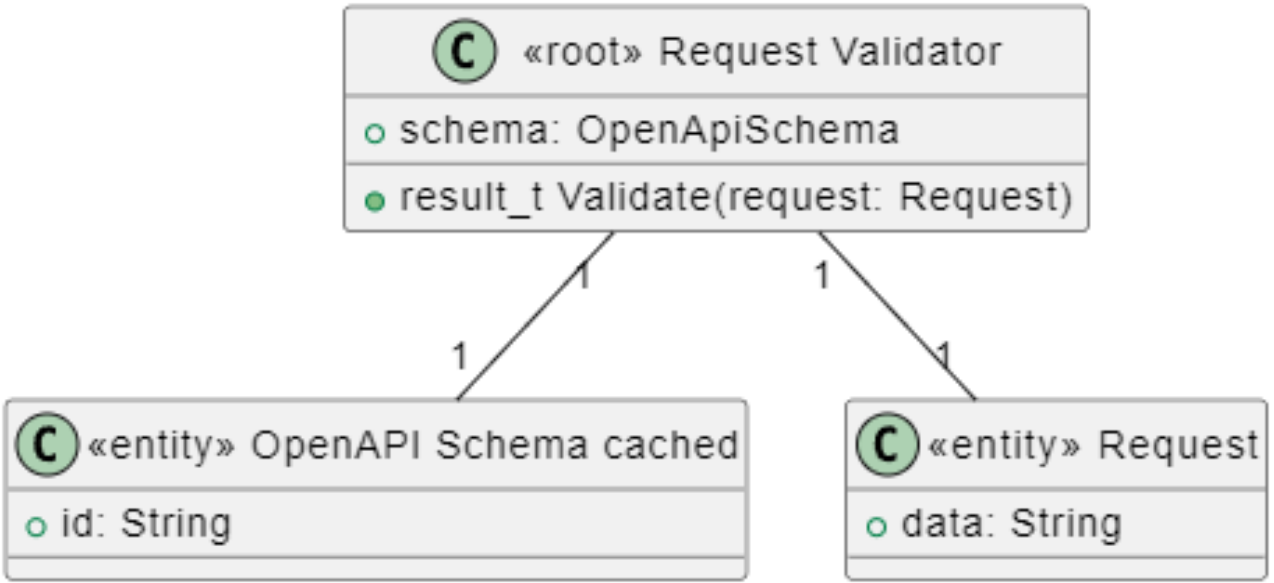
This report: https://github.com/fanglores/Advanced-Software-Design/blob/master/Practice%20Tasks/Module2/Task9/task9.1.pptx

Use case diagram

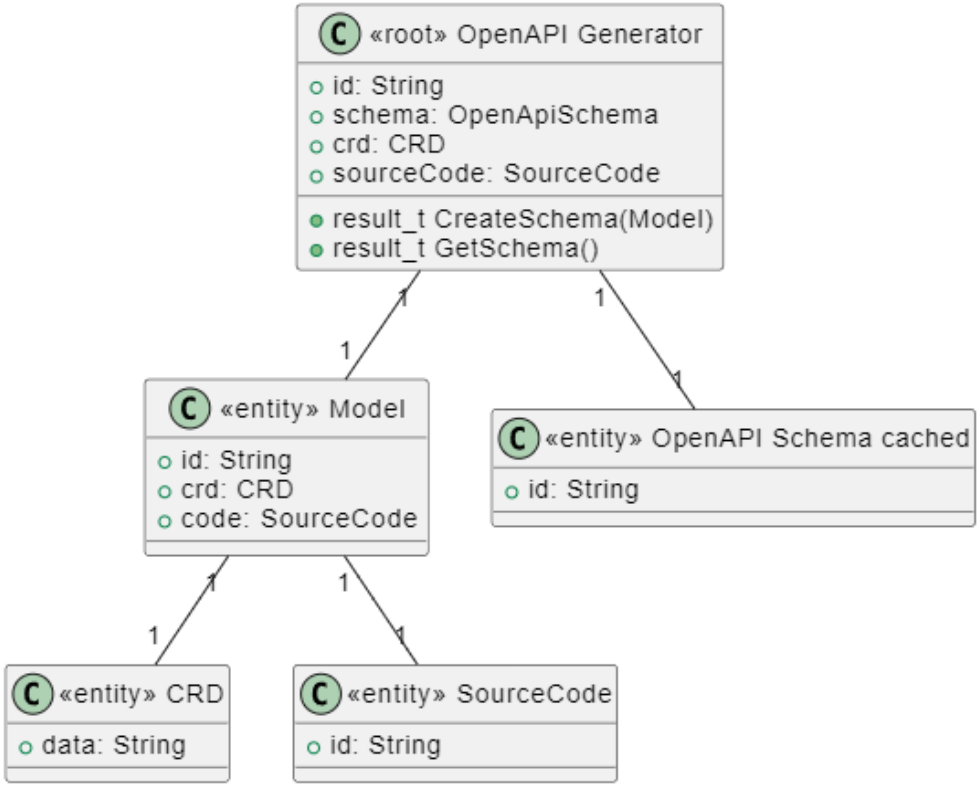


https://github.com/fanglores/Advanced-Software-Design/tree/master/General/UseCases

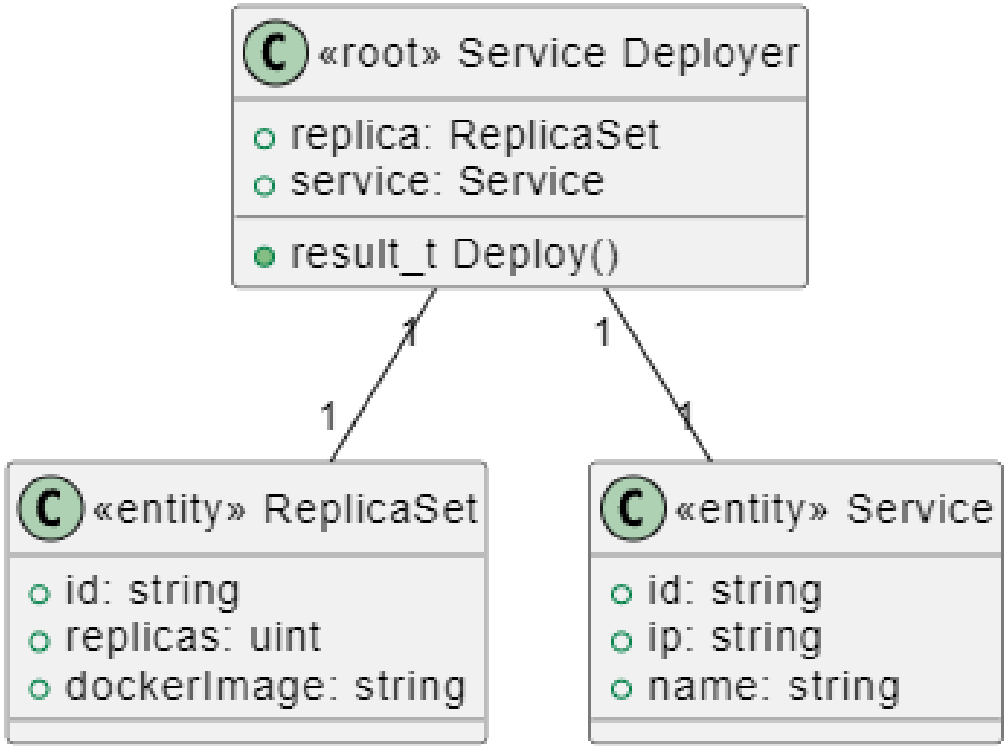
Request Validator Aggregation



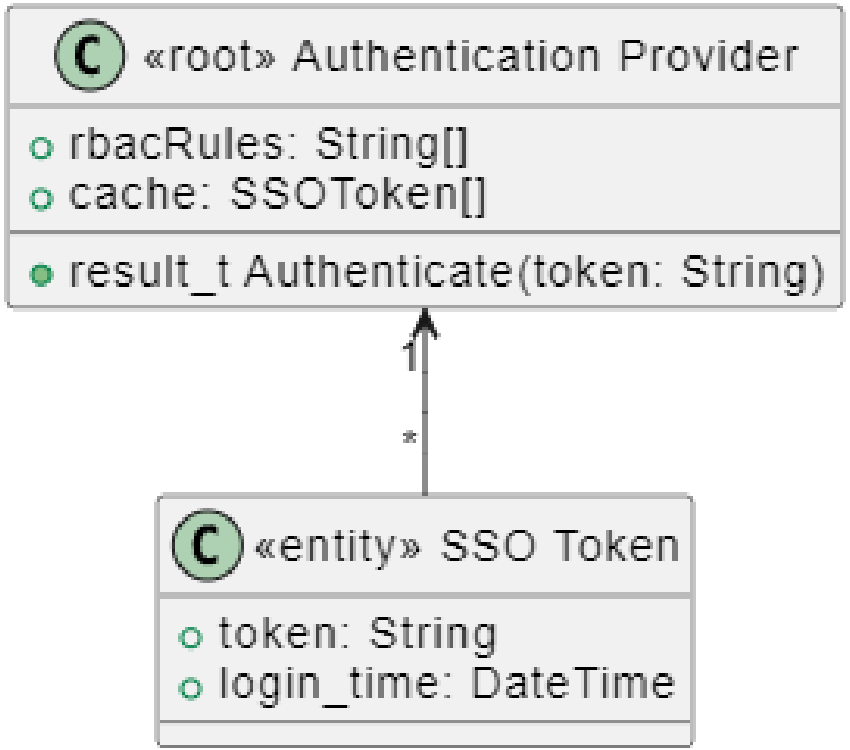
OpenAPI Generator Aggregation



Service Deployer Aggregation



Authentication Provider Aggregation



Service diagram

Draw a UML2 component diagram or physical DFD with microservices and their interfaces/data exchanges

Also include dependencies on external services

<At least one service/component per team member>

Traceability

Microservice (component)	Resource (interface)	Domain classes in the microservice	Use case that use the microservice
Request Router	IHttpRequest, ILoadBalancingRules	Request Router, Request Validator, Load Balancer	Request Routing, Request Validation, Load balancing
Authenticator	IAuthSession, IAuthRules	Authentication Provider	Authentication
Deployer	IModelData	Model Containerizer, Service Deployer	Model containerization, Service deployment
Schema Generator	ISchema	OpenAPI Schema Generator	OpenAPI schema generation
Logger	ILoggingRules, ILogEntry	Logger	Logging Rules