ASDs

Resources and microservices

Team member who will get access to and work with the k8s cluster: Lukashin Daniil

Product description

An application continuity service dynamically backs up and restores the state of applications running within the framework on K8s. The service uses the DSL of the framework to determine the relevant application state and its backup policies. Developers of an application are able to backup and restore a specific version from images and relevant state from the service. The application state is stored externally on the given S3-compatible object storage.

Team: Gorelyi Mikhail, Lukashin Daniil, Derezovskiy Ilya, Sigal Lev

Repo: https://github.com/gorelyi-code/advanced_software_designers

Report: a link to this slides within project repo/doc storage

Use case diagram
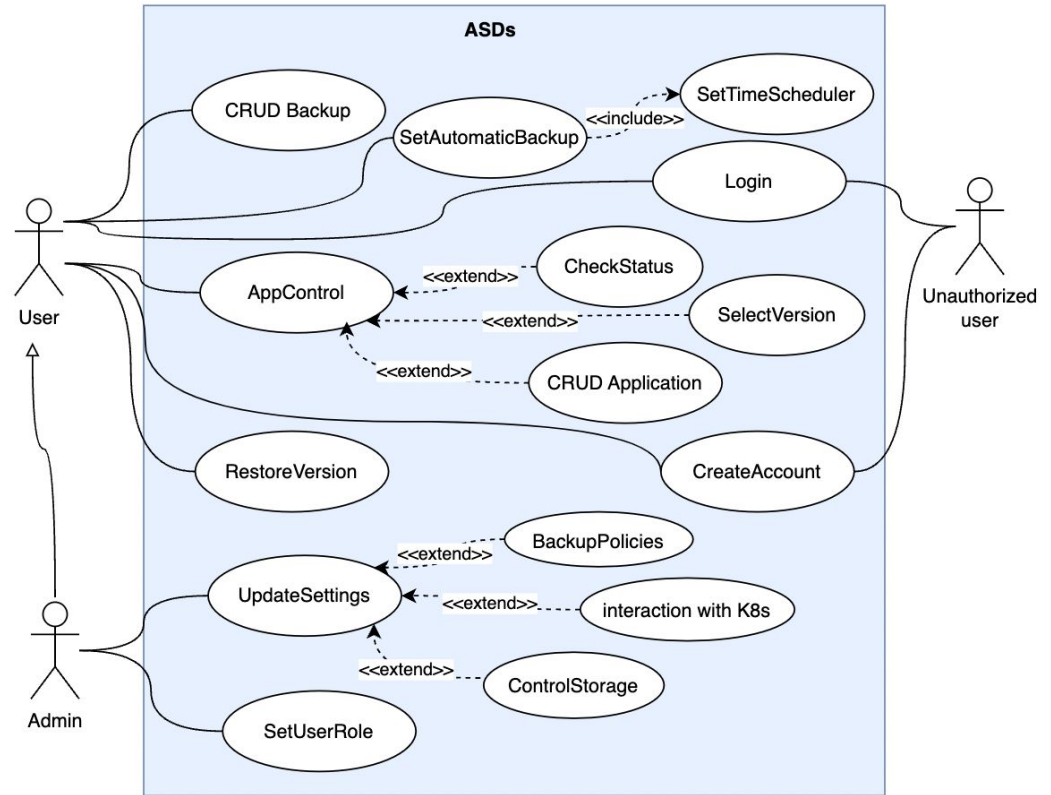
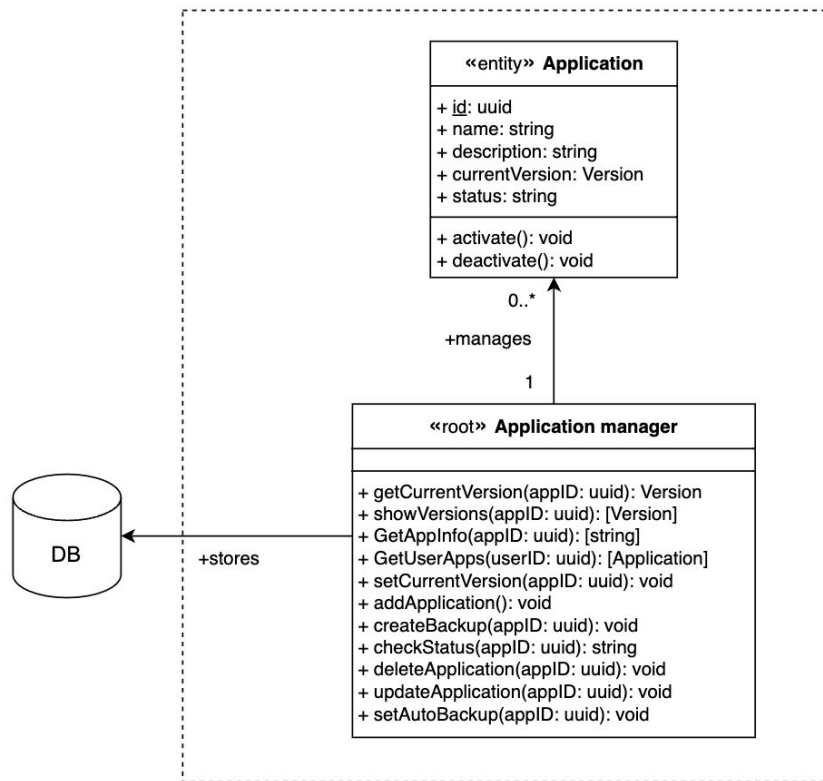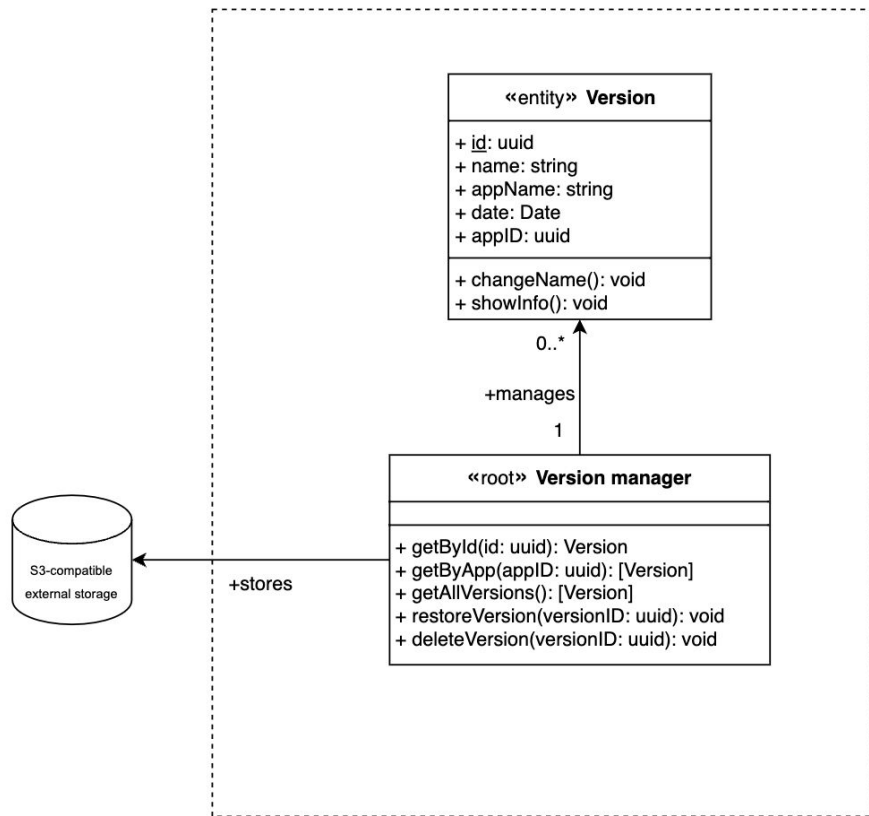
CRUD: create, read, update, and delete

Textual description in github:
https://github.com/gorelyi-code/advanced_software_designers/blob/main/Use%20case%20diagram/main_scenarios.md

Aggregate Application Manager

Aggregate Version Manager

«entity» **Version**

+ <u>id</u>: uuid
+ name: string
+ appName: string
+ date: Date
+ appID: uuid

+ changeName(): void
+ showInfo(): void

0..*

+manages

1

«root» **Version manager**

+ getById(id: uuid): Version
+ getByApp(appID: uuid): [Version]
+ getAllVersions(): [Version]
+ restoreVersion(versionID: uuid): void
+ deleteVersion(versionID: uuid): void

S3-compatible
external storage

+stores

Aggregate Kubernetes Manager

Kubernetes

1

+interacts

1

«root» **Kubernetes manager**

+ changeBackupPolicies(): void
+ setKubernetesSetting(): void
+ updateConfigurations(): void
+ updateConnection(): void
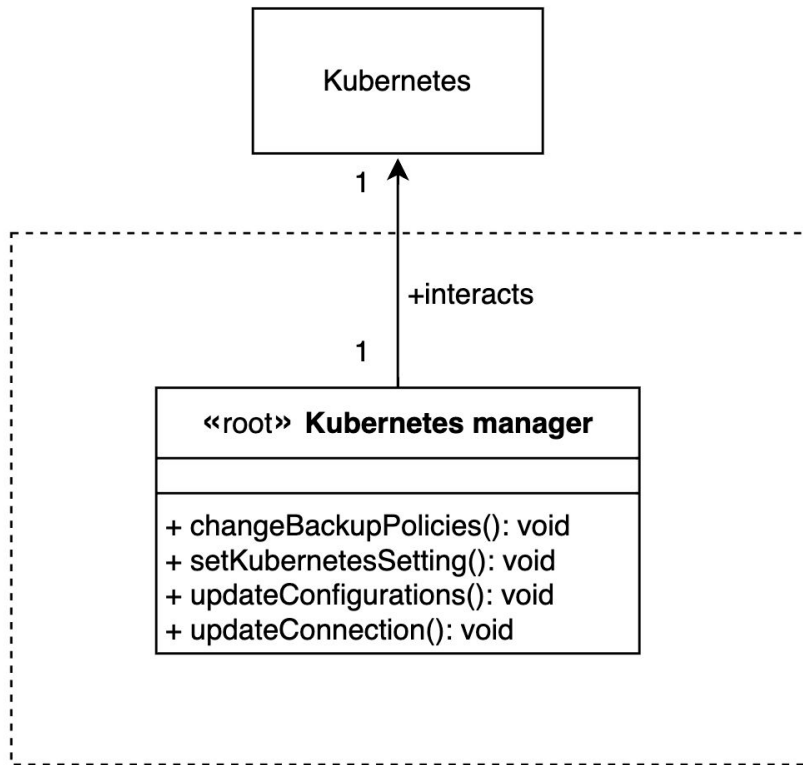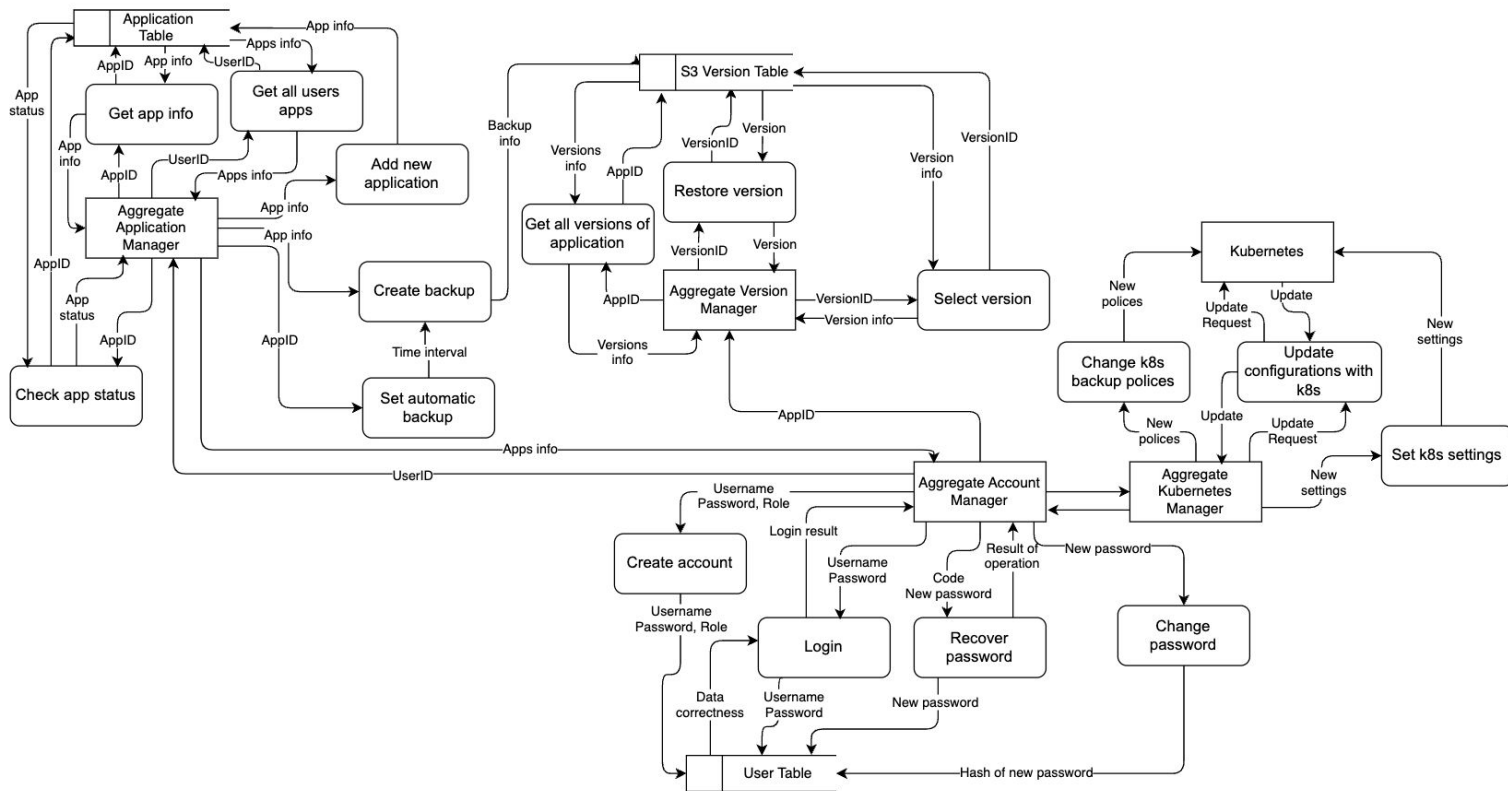
Aggregate Account Manager
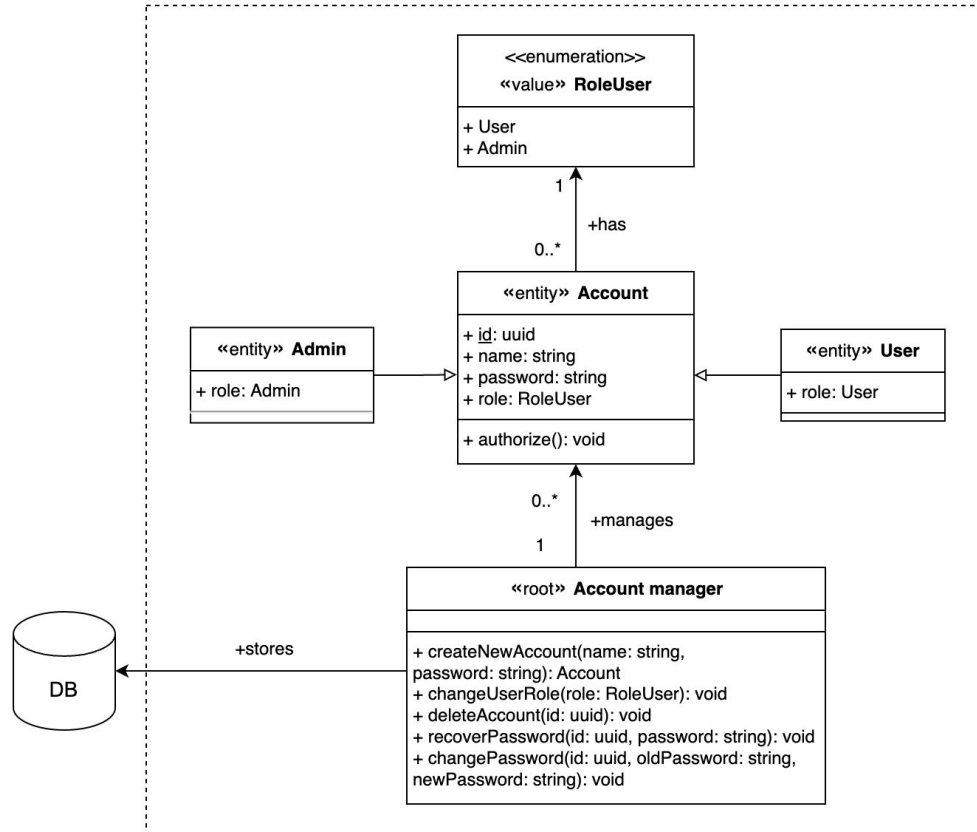
Service diagram (DFD)

Traceability

Microservice (component)	Resource (interface)	Domain classes in the microservice	Use case that use the microservice
Application Manager	Application	Application Manager Application	Add new application Create backup Set automatic backup Check app status Get app info Get all users apps
Version Manager	Version	Version Manager Version	Restore version Select version Get all versions of application
Kubernetes Manager	-	Kubernetes Manager	Change k8s backup polices Set k8s settings Update configurations with k8s
Account Manager	Account	Account Manager Account Admin User	Create account Login Recover password Change password