

# CMPE48A Term Project: **Online ToDo App**

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# About Project

**Objective:** Develop a ToDo application with added features and cloud-native deployment.

**Frontend:** React.js (based on TodoMVC repository) with custom enhancements (description, document attachment, deadline, priority).

**Backend:** Using Django for authentication, additional processing if needed.

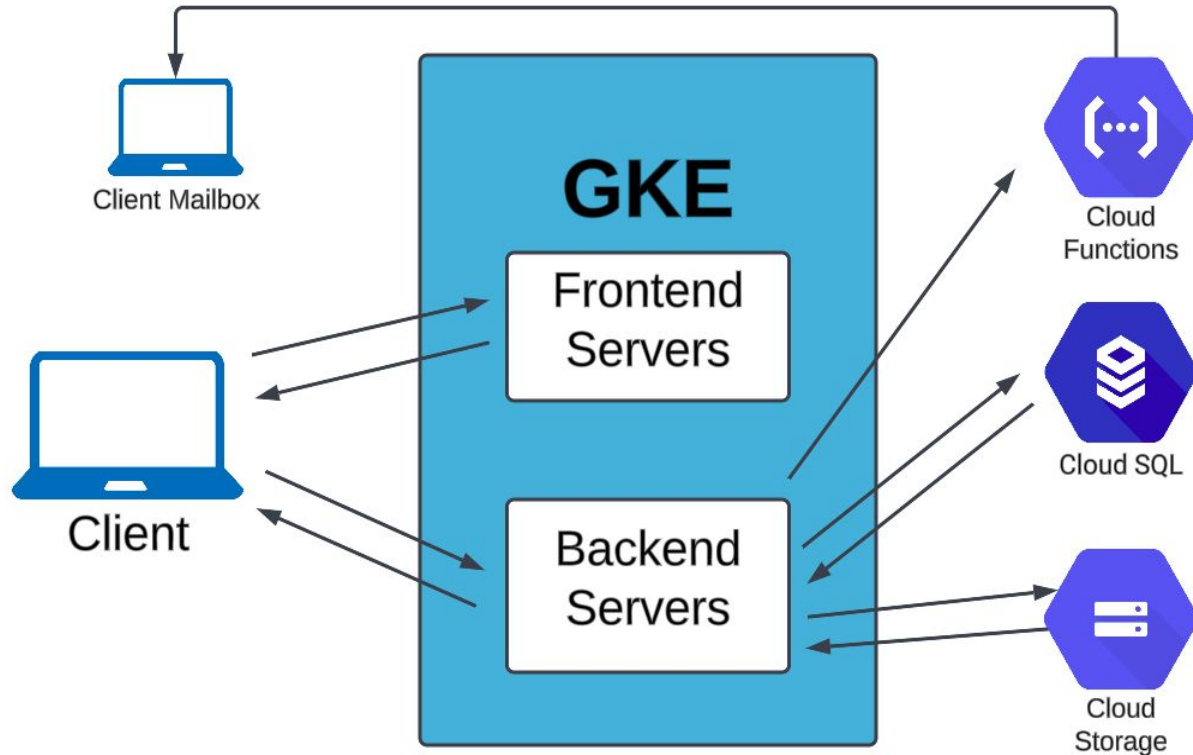
**Deployment:** Dockerized containers on Google Kubernetes Engine (GKE) with load balancing and autoscaling.

## Key Features:

- Enhanced ToDo items with extra features
- Document storage via GCP Cloud Storage
- Relational database with Cloud SQL
- Email reminders using GCP Cloud Functions



# Project Structure



# Cost Analysis (Monthly)

## Low Workload Scenario:

Total estimated usage: 30 hours

- GKE : \$0.58
- Cloud SQL: \$2.15
- Cloud Storage: \$0.10
- Cloud Functions: Negligible (under \$0.10/month).

Total: ~\$3

## High Workload Scenario:

Total estimated usage: 30 hours

- GKE : \$2.92
- Cloud SQL: \$4.31
- Cloud Storage: \$0.20
- Cloud Functions: ~\$0.5.

Total: ~\$8

Thank you.

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