Tony Le Prog 4 Report

Not going to submit code because it's 7 gigs total and would take too long.

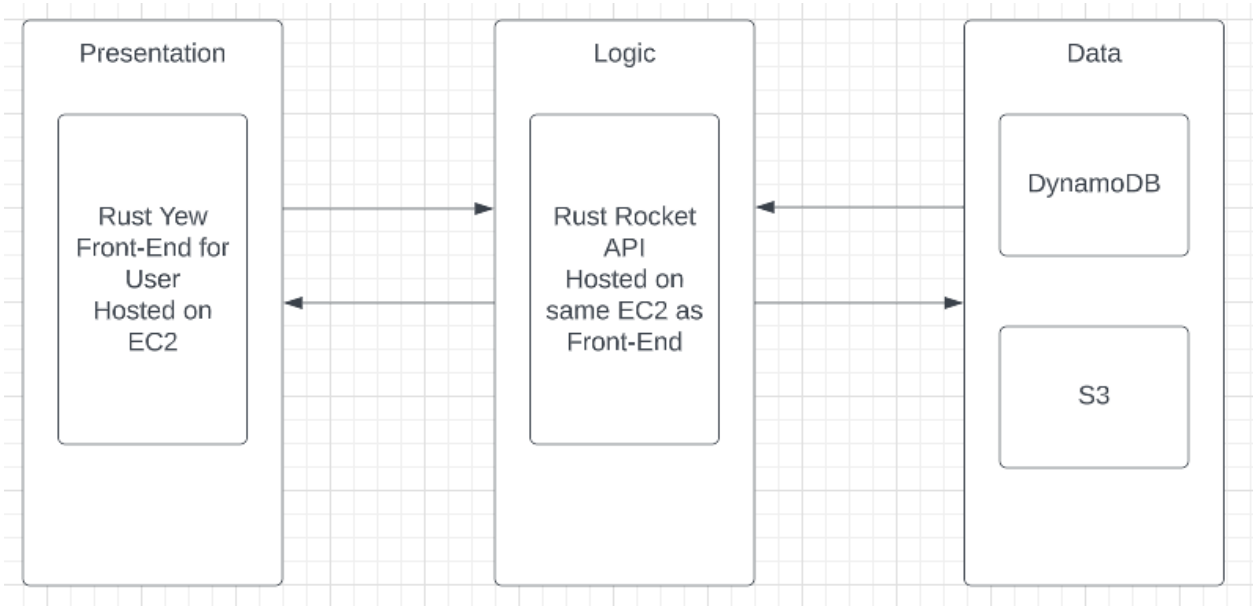
Location of Website (URL)

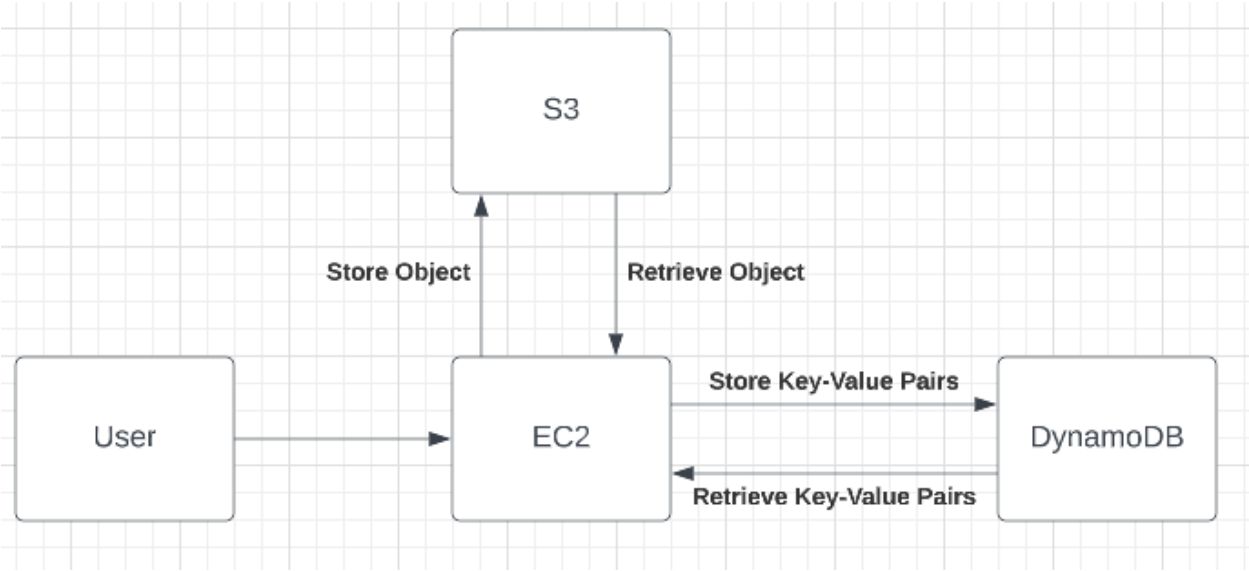
- Website:
  - http://18.236.174.10:8080
- API Endpoints
  - http://18.236.174.10:8000/load
  - http://18.236.174.10:8000/unload
  - http://18.236.174.10:8000/query/first/your-first-name
  - http://18.236.174.10:8000/query/last/your-last-name
  - http://18.236.174.10:8000/query/full/your-full-name

Location of Object

- https://tonyleprog4.s3.us-west-2.amazonaws.com/names.txt
- It downloads instead of just showing as plain text. Tried to fix by changing metadata, only works if I manually change it in S3 console, doesn't work when trying in code.

Diagrams





- Tech and Frameworks used:
    - Languages: Rust
    - Frameworks: Yew (Front-End), Rocket (API)
    - Services: EC2(Hosting), DynamoDB(DataBase), S3(Storage), EBS (Storage volume for the EC2)

Scale with Load

- As for the website, mine will not scale with load. It is currently hosted on a single ec2 instance, both the front-end and back-end. Had I used elastic beanstalk to host my front-end and lambda for my back-end, then it would scale depending on the amount of traffic. I could also set up an auto scaling group of EC2 machines, where it would automatically scale and launch instances based on the traffic. However, I feel like just 1 is fine for this assignment and saves me some money :).
- As for S3 and Dynamodb, by default they automatically scale depending on the traffic.

Monitoring

- I can monitor all the services through AWS Cloudwatch. This shows the usage of the EC2 machine, DynamoDB, S3, and EBS (used on EC2).

SLA Estimate

- Individual EC2: 99.5%
- Standard DDB Table: 99.99%
- S3: 99.9%
- Volume-Level EBS: 99.9%
    - 0.995 * 0.9999 * 0.999 * 0.999 = 0.9929116 = 99.3%