

quizTime

play the game, seek the fame



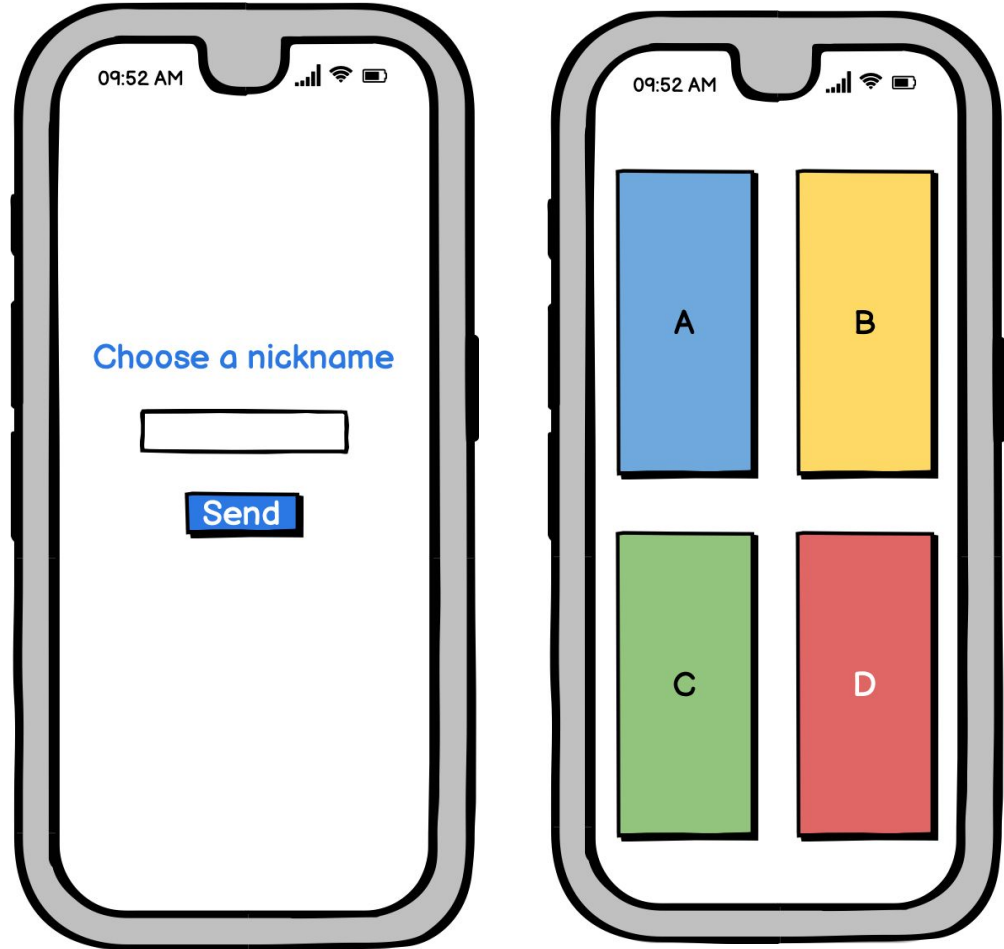
The Idea/1

Allow higher interaction between TV Quiz Shows and viewers, so that also the audience can answer the questions and receive a final score.



The Idea/2

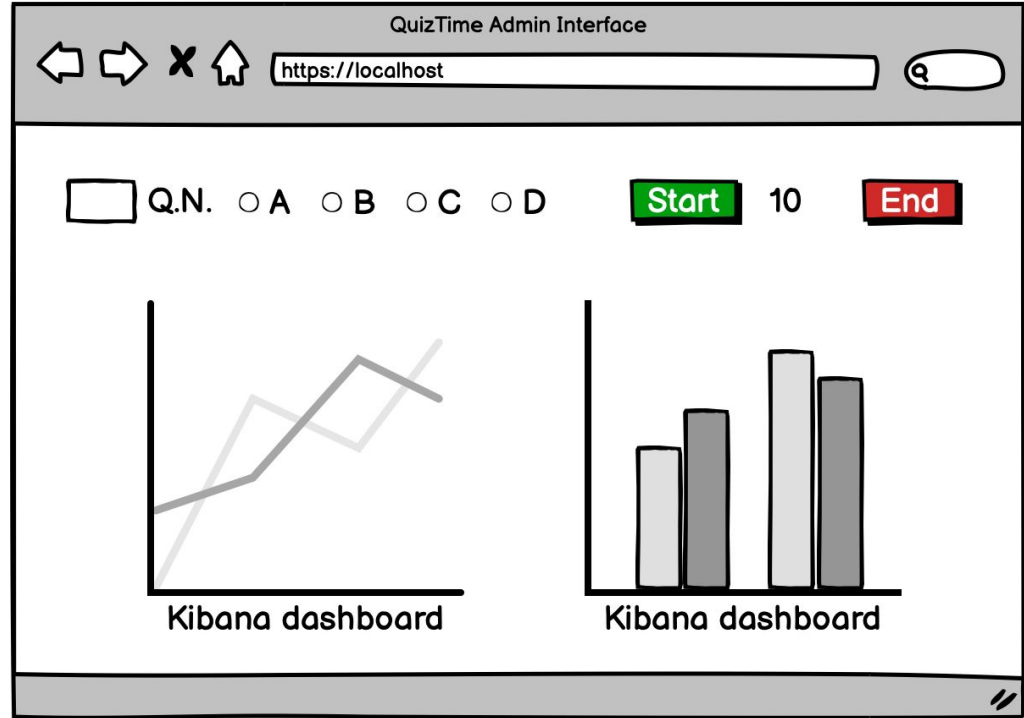
The user can answer questions proposed in the tv show by accessing the web app and selecting the answers (s)he believes to be correct.



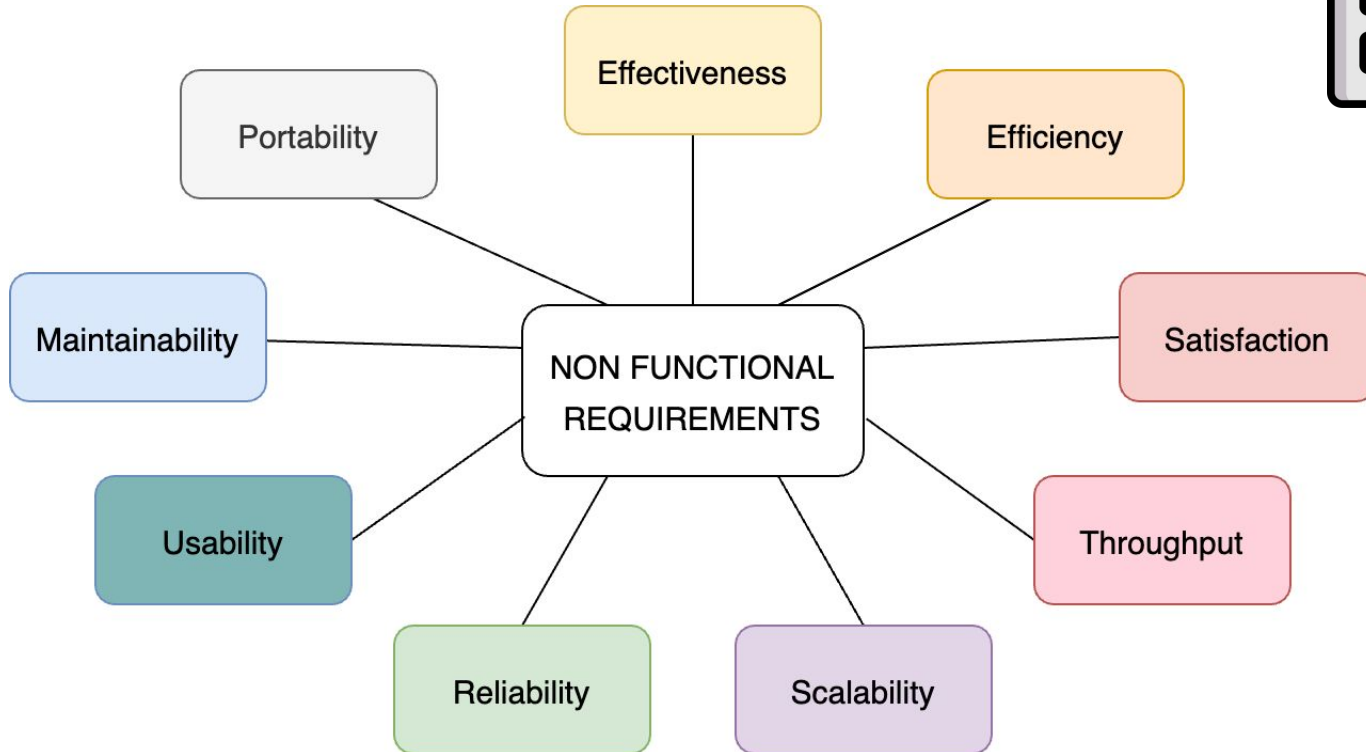
The Idea/3

The admin can manage the game using a simple web interface.

The web page also shows plots providing useful informations on the game



Non functional requirements



Estimates on project complexity

We used Function Points and Cocomo to estimate the complexity of the software development

Adjusted function points: 39,59

Equivalent SLOC in Javascript: 1227 - 2494 (average 1860)

Our SLOC: 1601 (mainly in Javascript)

Effort in person-months: 3.792

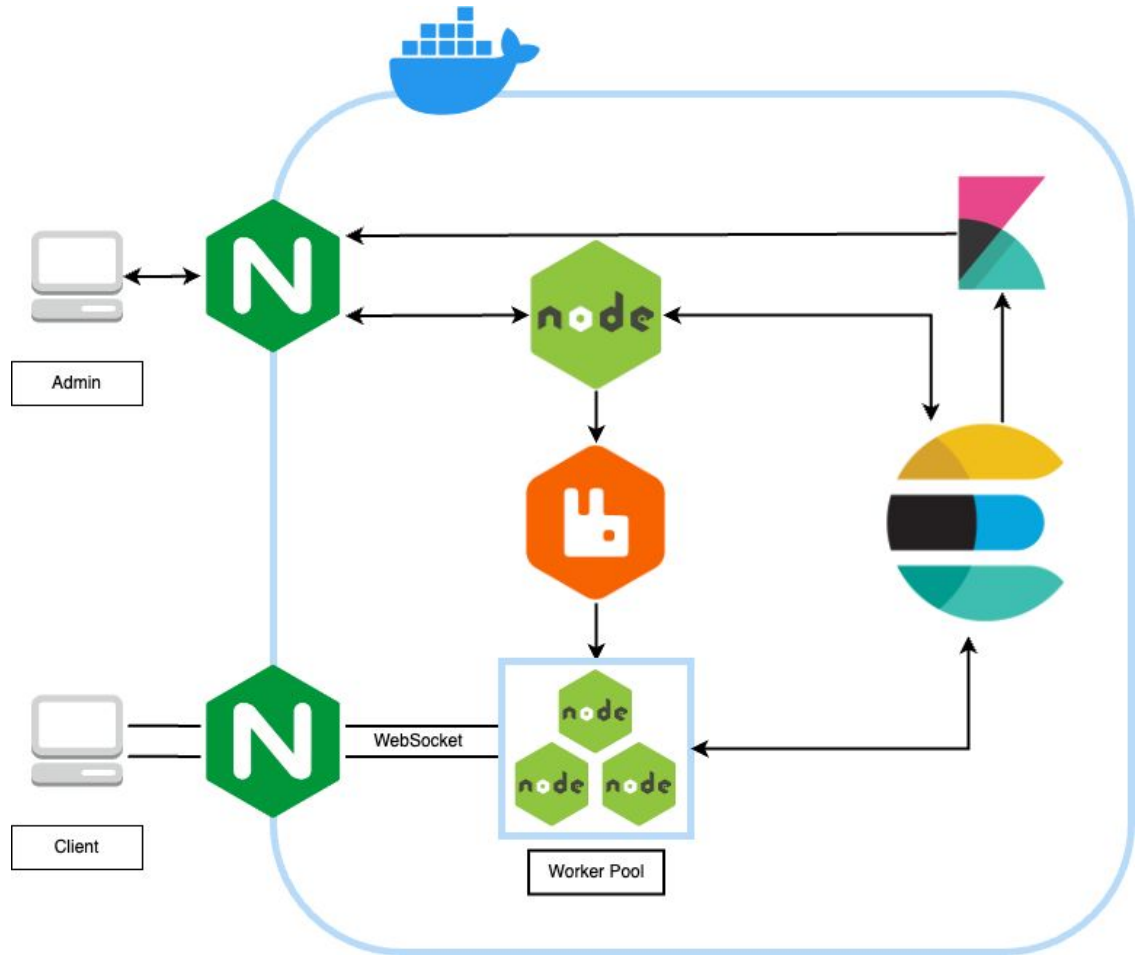
Staffing: 4

Duration in months: 0.94

<https://www.qsm.com/resources/function-point-languages-table>

<https://strs.grc.nasa.gov/repository/forms/cocomo-calculation/>

The Architecture



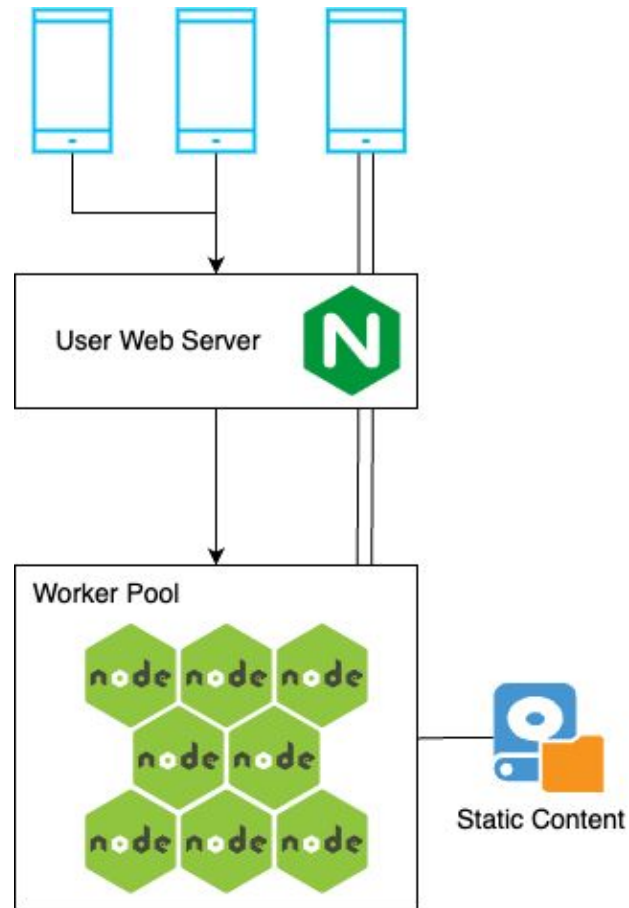
Base Services



User Side

The main components of the User Side are:

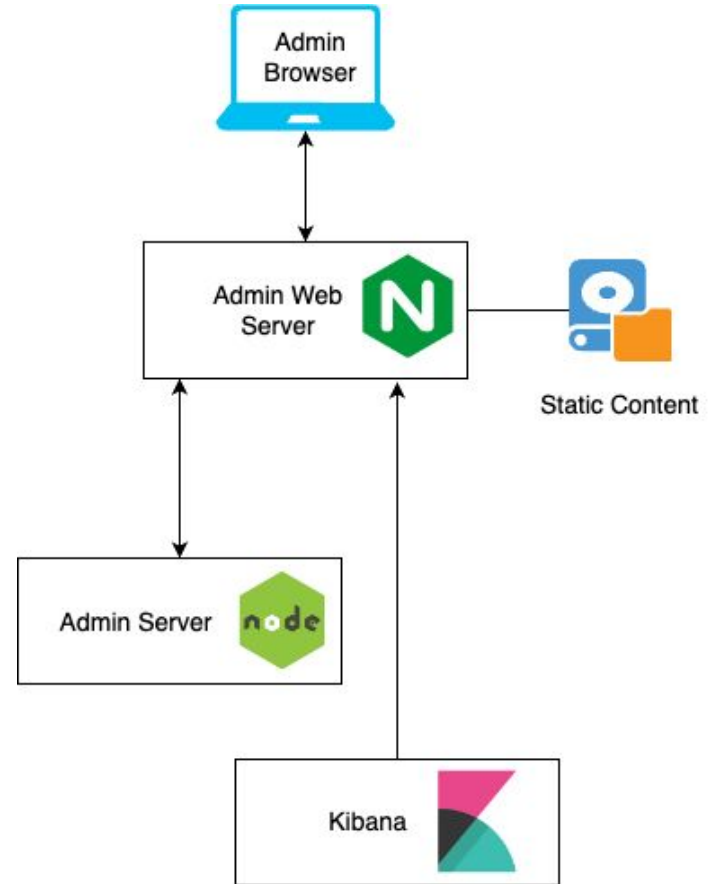
- Nginx as a Load Balancer
- Worker Pool composed of NodeJS Servers



Admin Side

The main components of the Admin Side are:

- Nginx as a Web Server and Reverse Proxy
- NodeJS Server to provide REST API
- Kibana to provide graph of the data collected in the database

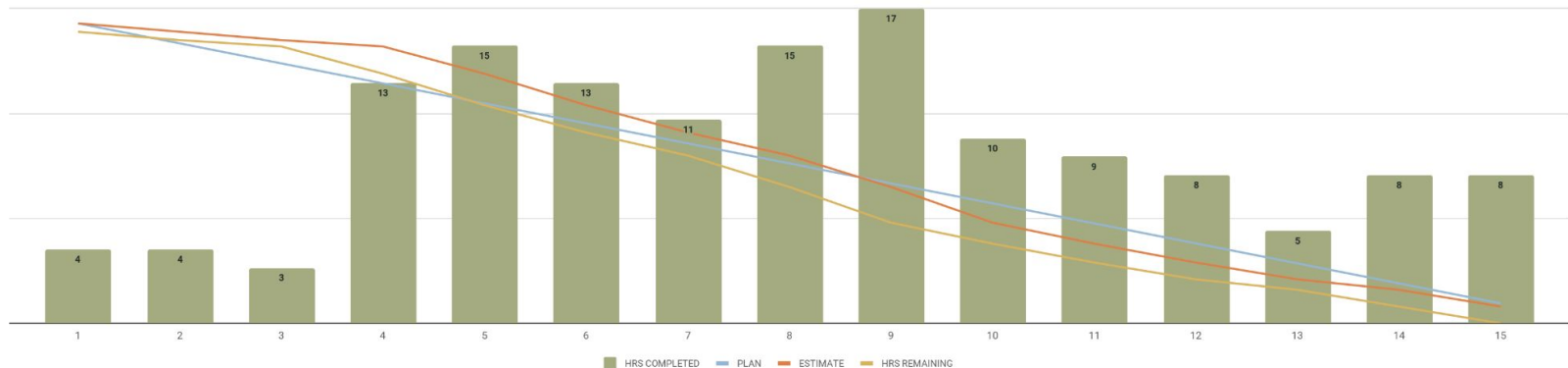


Development

We developed the system in 5 sprints:

1. Create Infrastructure
2. Develop Admin Side
3. Develop User Side
4. Test and Fix
5. Cloud Deployment

BURNDOWN CHART



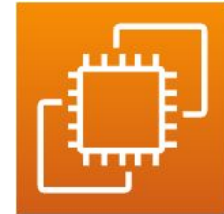
Cloud Deployment

To deploy the whole system we chose AWS as cloud provider, more in particular we used:

- Elastic Container Services - ECS
- Elastic Compute Cloud - EC2



ECS



EC2

Demo



Question 1

In which city is the colosseum located?

A. Rome

B. Milan

C. Florence

D. London

Question 2

Which is the highest mountain on planet Earth?

A. K2

B. Mont Blanc

C. Kilimanjaro

D. Mount Everest

Question 3

Who is the current U.S. president?

A. Donald Trump

B. Barack Obama

C. Joe Biden

D. Hillary Clinton

Thanks for the attention

The code can be found at:

<https://github.com/andreamazzitelli/quizTime>