Oregon State University
Ecampus

CS361: Assignment 6: Sprint 2 Plan (for Microservice A)

Overview

Plan the microservice you'll make for your teammate(s). That includes defining how to **request** and **receive data** from the microservice.

Instructions

Complete each item below by replacing the highlighted text (**Usability note**: double-click the text to select it).

1) What is your **Sprint Goal**? (e.g., fully implement the spell-checker microservice) The Sprint Goal must clearly communicate what the microservice will do.

Fully implement the card shuffling microservice.

2) Define **at least three user stories** for this Sprint. Provide your user stories and their functional and non-functional acceptance criteria (and associated quality attributes).

Requirements for Microservice A:

- You must implement at least three user stories.
- Each user story must have a name.
- Each user story must use the "As a… I want to... so that…" format.
- Each user story must have at least one functional acceptance criterion.
- All functional acceptance criteria must use the "Given… when… then…" format.
- At least one of the user stories must have an associated quality attribute and non-functional acceptance criterion.

First user story

(Front of index card) *Randomize the List* *As a user I want to be able to get the randomized information I need from the program.*
(Back of index card) **Acceptance criteria** Functional requirements • *Given that the user has provided a list size and objects in the list, when the program receives the list, it calls the randomize function and then returns the list in random order.*

Quality attributes & Non-functional requirements

- *Integrity: should always return the same data back that is received*
- *The program should randomize the list within 4 seconds.*

Second user story

(Front of index card)

Access

As a developer I want to be able to easily access the API so that I can randomize a list

(Back of index card)

Acceptance criteria

Functional requirements

- *Given that I input a list, when I access the API it calls the function then it returns a randomized list.*

Third user story

(Front of index card)

List specific

As a developer I want to be able to only put lists into the function so that I am guaranteed a list when it returns information back to me.

(Back of index card)

Acceptance criteria

Functional requirements

- *Given that I am importing a list, when I use the function, then it should return a list as well. Not any other form of data structure.*

3) What kind of **communication pipe** will the microservice use? (e.g., text files, REST API)

Zero MQ

4) How will other programs be able to **request data** from the microservice? If possible, give an example call using pseudocode or actual code.

To request data from the program they have to have the API endpoint with the required socket and the ZMQ library imported. Then they need to submit a list to the endpoint which gets sent to the microservice and is processed by the function.

5) How will other programs be able to **receive data** from the microservice?

They will receive the data by implementing the ZMQ library and receiving the message from the socket specified. Then they can decode the message and use the data inside.

This would be a good time to make a new repository to house the microservice.

Submission

PDF or Word format via Canvas.

You must follow instructions at Modules > "Attach a Document to "Text Entry" Field".

Grading

You are responsible for satisfying all criteria listed in the Canvas rubric for this assignment. You will be able to revise this assignment if you miss points.

Questions?

Please ask via Ed so that others can benefit from the answer.