

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.

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| *Fully implement the card shuffling microservice.* |

1. 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**

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| (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**

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| (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**

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| (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.* |

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

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| *Zero MQ* |

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

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| *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.* |

1. How will other programs be able to **receive data** from the microservice?

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| *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.