

ACIT 3855 – Service Oriented Architectures – Assignment 1

Instructor	Mike Mulder (mmulder10@bcit.ca) – Sets A and C Tim Guicherd (tguicherd@bcit.ca) – Set B
Total Marks	20
Due Dates	Feb. 23 th at midnight on D2L

This assignment is to be completed and submitted individually.

This assignment allows you to research companies that or are currently using a Microservices Architecture. This assignment is purely research and must include the information described below.

Microservices in Industry

Select one of the following three options of companies to research and compare their successful use of a microservices architecture to a fictitious company that you make up:

- Option 1 – Ride Hailing: Uber (Real) vs. ExpressRide (Fictitious)
- Option 2 – Online Marketplace: Etsy (Real) vs. MakersMarket (Fictitious)
- Option 3 – Streaming Music Service: Spotify (Real) vs. MusicMax (Fictitious)

There is readily available information online for each of these companies on their microservices architecture.

You will make up a scenario for the fictitious company (from above) that has unsuccessfully used microservices for their software architecture which you will compare to the successfully company. Assume they are in the same industry as the real company. You may do online research on failures using microservices and/or use your knowledge of good use cases for microservices to help define you're the fictitious company from your option.

Write a report that includes the following content:

- Microservices Definition
 - In your own words, provide a definition of a Microservices Architecture
 - Describe in what cases you would use an MSA?
 - Describe in what cases you would not use an MSA?
- Company 1 (Success Story) – Uber, Etsy or Spotify
 - Describe the business of the company where they use software
 - What they are using microservices for? I.e., What is the product?
 - How did they implement the microservices, i.e., team composition, technologies, patterns, etc. did they use?
 - Why did they choose an MSA?
 - What successes did they have? What challenges, if any, did they have?

- Why did they make a good choice using a MSA?
- Company 2 (Failure Story) – ExpressRide, MakersMarket or MusicMax
 - Describe the business of the company where they use software
 - What they are using microservices for? I.e., What is the product?
 - How did they implement the microservices, i.e., team composition, technologies, patterns, etc. did they use?
 - Why did they choose a MSA?
 - What challenges did they have?
 - Why did they make a poor choice using an MSA?
- Compare and contrast the two company's use of an MSA
 - What are the similarities and differences between each company's use of an MSA.
 - Are these effective and appropriate uses of an MSA? Refer to your Microservices Definition and Use Cases to back up your claims.

This report should be between 5-10 pages in length (11pt font, 1.5 spacing) and should not exceed 10 pages (exclusive of title page and references).

Assessment

- Your submission must be titled: **ACIT 3855 – Assignment 1 – Microservices In Industry**
- It must include the content described in the content description.
- **References** – Include references to any sources of information you used for your assessment (i.e., websites). You may use this as a guideline for citing web references: <https://www.mendeley.com/guides/web-citation-guide>

Submission

Sections <ul style="list-style-type: none"> • Microservices Definition (5 marks) • Successful Company Description – Uber, Etsy or Spotify (5 marks) • Unsuccessfully Company Description – ExpressRide, MakersMarket or MusicMax (5 marks) • Compare and Contrast (5 marks) Assessment will be based on completeness and quality as per the table below.	20
References	-5
Total	20 marks

Assessment

Levels of Mastery	Level 0	Level 1	Level 2	Level 3	Level 4
		A limited mastery of knowledge and skills: below basic expectations	A partial mastery with limited to basic performance of expected achievement	A solid consistent performance; demonstrated competency of knowledge and skills	A superior, consistent performance; beyond expectations
	Incomplete	Major Problems Exist	Minor Problems Exist	Minor Issues Exist	No Issues Exist
Quality of the Written Material - Definition	Altogether missing, incomplete or incorrect.	There is some relevant content, but is mostly missing or incorrect.	Description of MSA and uses cases is mostly complete. Some of the content may be missing, incorrect or lacking in detail.	Description of MSA and use cases is complete. All required content is included. There may be some minor errors or misconceptions in the content.	Description of MSA and use cases is complete. All required content is included. The content is highly refined.
Quality of the Written Material – Companies (Successful and Unsuccessful)	Altogether missing, incomplete or incorrect.	There is some relevant content, but is mostly missing or incorrect.	Description of the company is mostly complete. Some of the content may be missing, incorrect or lacking in detail.	Description of the company is complete and all required content is included. There may be some minor errors in the content or lack of detail.	Description of the company is complete and all required content is included. The content is highly refined. Perhaps diagrams, graphics or tables are used to provide additional detail.
Compare and Contrast	Altogether missing, incomplete or incorrect.	There is some relevant content, but is mostly missing or incorrect.	Comparison is mostly thorough and shows some research into each of the companies was done. No references to the previous sections provided.	Comparison is thorough and shows detailed research into each of the companies. Some minor errors, incompleteness. Some references to the previous sections are provided to backup any claims.	Comparison is thorough and shows detailed research into each of the companies. References to the previous sections are included to backup any claims.
Marks	0	2	3	4	5