

- **Your Application Name: SpotiViz**

- **Description**

What the application does. Consider including a screen-shot and a link to your demonstration video.

- **Data Sources**

List the data sources used by the application, along with their descriptions and links.

- **Running the Application**

Any dependencies (packages) needed to run your program and how to run it.

- **Design**

Describe the overall design, including a UML class diagram and a sequence diagram of a selected scenario.

- **Design Patterns Used**

Describe any design patterns you used, and how they are used in your application.

- **Graph Algorithm Used**

Describe the part of your application that is modeled as a graph problem (reachability, shortest path, 2-coloring, etc.), and the algorithm used to solve it.

- **Other Information**

Anything else you would like to include. Anything you think is important or interesting that you learned. For example, any interesting libraries or packages you use in your application.

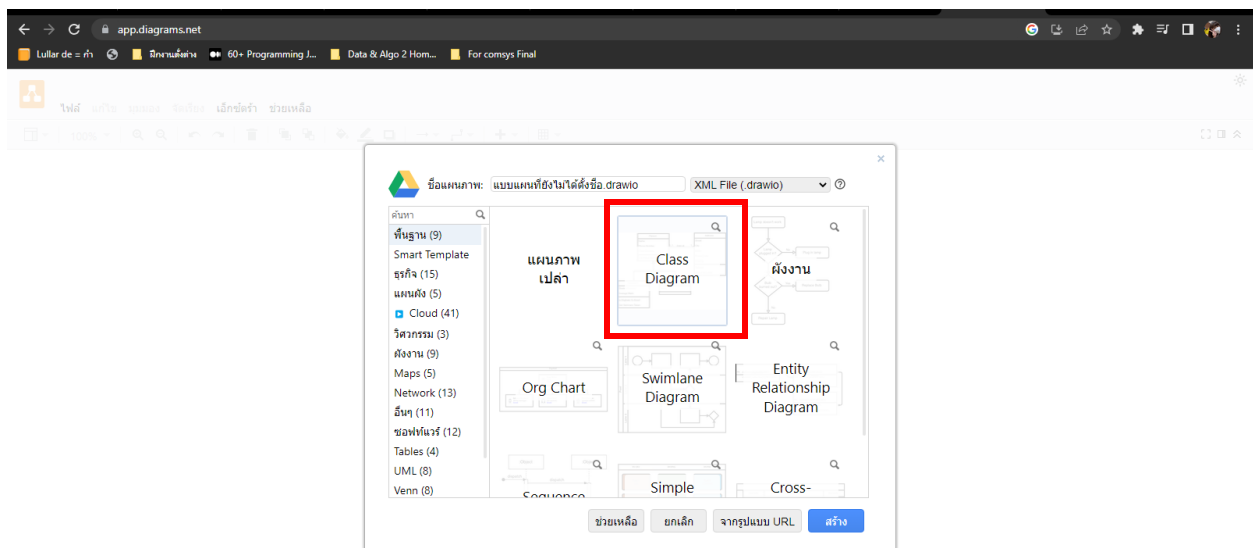
- Be responsive, that is, **when it is busy doing some work** in the background, the application must not freeze and should always **let the user know what it is doing**.
(ถ้าโปรแกรมกำลังทำงาน โปรแกรมจะแจ้งอะไรกับuser)

- Visualize data through **3 types of graphs**: distribution graphs (histogram and boxplots), everyday graph, and network graph.

- Provide informative descriptive statistics and correlation from data.

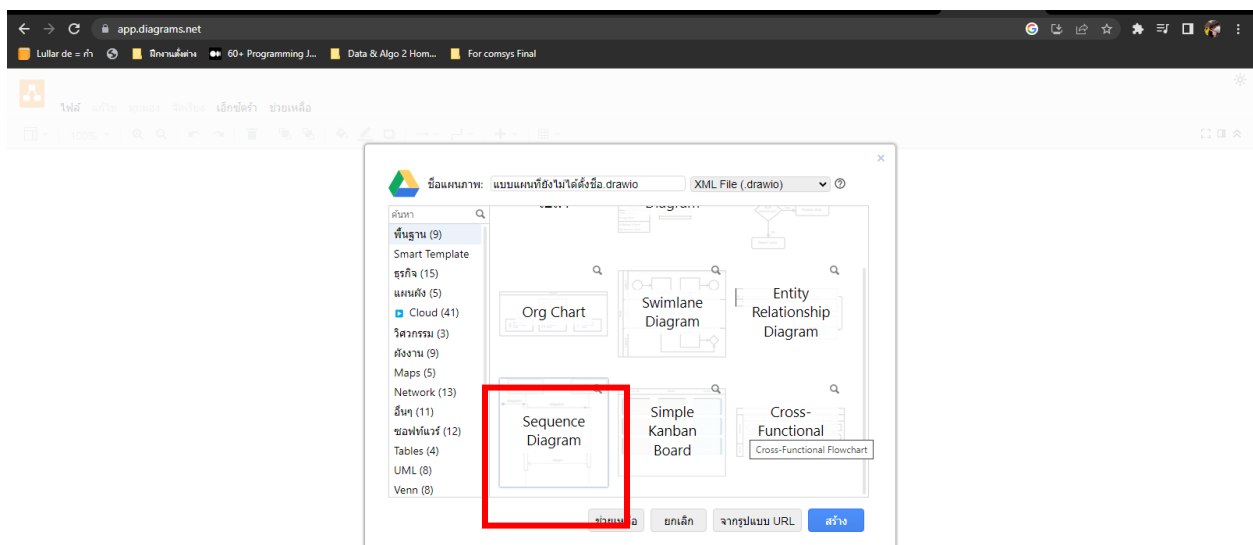
- **Model a part of the project as a graph problem** (reachability, **shortest path**, 2-coloring, etc.), then use an appropriate graph algorithm to solve it. (ในโปรแกรมใช้ shortest path ในขั้นตอนไหน)

- **Create a design class diagram to show the software architecture.** (ขอเป็นทั้งไฟล์รูปภาพและ.drawioเลยนะคะ)



<https://app.diagrams.net/>

- **Pick an arbitrary scenario and create a sequence diagram for that scenario.** (ขอเป็นทั้งไฟล์รูปภาพและ.drawioเลยนะคะ)



- Modify the provided README.md template to describe what the application does, any dependencies, and how to run it, including links to data sources used by your project. Any work without proper explanation in the README.md file will not be graded.

- Create a requirements.txt file listing all additional libraries used by your application (numpy, pandas, etc).

- วิธีใช้โปรแกรมแบบละเอียด, อธิบายการใช้โปรแกรม

- อธิบายโค้ดแต่ละไฟล์ของโปรแกรม

- โค้ดแต่ละฟังก์ชันใช้ทำอะไร (ถ้าอธิบายแต่ละ def)
- คำพูดสำคัญที่จำเป็นต้องใช้อธิบายเพิ่มเติมในวิดีโอ