In this Individual Project (IP), your main task is to create a high-level design document for a software used to support data classification. To assist you accurately in completing this task, please first read the following paragraphs.

3–4 pages (not including cover page and resource page)

First of all, you need to answer the following questions:

* What are the basics of data classification?
* Why data classification is important?
* How data classification works?
* Where does data classification fit in the data life cycle?
* What are guidelines (rules and policies) of data classification?

To assist you answering these questions, please study the following Web blogs:

* [Data Classification](https://www.imperva.com/learn/data-security/data-classification/)
* [Data Classification Guide](https://www.spirion.com/data-classification/)
* [Classifying Data: Why It’s Important and How To Do It?](https://kirkpatrickprice.com/blog/classifying-data/)

[Review this link to see a real-world example of data classification guidelines](https://www.cmu.edu/iso/governance/guidelines/data-classification.html).

There are many commercial software that focus on data classification have already exist. Here are three examples:

* [Data Classification Software Example 1](https://www.netwrix.com/data_classification_software.html)
* [Data Classification Software Example 2](https://www.pkware.com/products/pk-classification)
* [Data Classification Software Example 3](https://digitalguardian.com/products/data-classification)

When you evaluate these software, please pay special attention to the following:

* What are the main data classification functionality of the software? (i.e. how the data are classified, stored, accessed, transferred, processed based on the different levels of sensitivities)
* How does the software support the data life cycle through its functionality?
* How does the software support the access control to the classified data?
* What are the compliance regulations (e.g., System Organization Controls 2 [SOC 2], General Data Protection Regulation [GDPR], Payment Card Industry Data Security Standard [PCI DSS], and Health Insurance Portability and Accountability Act [HIPAA]) that the software supports?

Now, you are ready to create your own-high level design proposal for a software supporting data classification. In your high-level data classification software design document, the following sections are required:

* **Introduction:** In this section, you need to describe the purpose or background of this design proposal for data classification software, including the basic concepts of data classification, the importance of data classification, and an assumption on which compliance regulations (e.g., SOC2, GDPR, PCI DSS, and HIPAA) that your data classification software will support.
* **Functional Requirements for Data Classification System:** In this section, you need to define the requirement details of at least 4 functionalities of the data classification software. Each functionality should correspond to 1 specific stage of the data life cycle. When you specify the requirement details of these functionality, you need to specify the data classification guidelines (i.e., the data classification rules and polices to be used by each functionality).
* **Evaluating Typical Applications:** In this section, you first describe at least 2 real-world use cases (e.g., 2 different types of business or situations), and then you also pick up at least 1 functionality of the data classification software that you are designing to make an evaluation such that you will discuss the different considerations on the data classification guidelines (i.e., data classification rules and policies) when this functionality is applied to these two use cases.
* **Conclusion:** In this section, you summarize what you have designed and main takeaways.