*Abstract*— **Requirement Specification is defined as a condition or capability that must be met or possessed by a system or system component to comply with contracts, standards, specifications, or in other officially enforced documents. In this study, the example of the SRS document used is the Smart Sleeping Lamp Application, a software application to help and provide solutions to everyone who experiences insomnia. There are differences in interpreting the activities that exist in the Use Case Diagram artifact, with the Use Case Description, which provides an overview of the functionality of a process, so that it can show the involvement of an activity related to the Use Case Diagram. The purpose of this study is to process text data between the Use Case Diagram and the Use Case Description contained in the Software Requirements Specification (SRS) to produce similarity between the artifacts contained in the SRS. In this study, the extraction process was implemented in several parts, namely: Use Case Description (on UCDES1, UCDES2, UCDES3, UCDES4, UCDES5), and Use Case Diagrams (on UCD01, UCD02, UCDE03, UCD04, UCDE05). There are important things produced in this study, namely: The highest similarity is found in the UCDES1 and UCD01 documents with a similarity value of 0.69713076, the highest similarity is obtained in documents between the words "sleeping" and "lights" with a similarity value of 0.7500, the highest value Kappa Score in the program python uses the Gwet's AC1 formula of 0.06097 which means "Less than Chance-agreement," and the results obtained from the calculation of the questionnaire from the experts are 0.84787 which means "Almost Perfect."**

*Keywords*— *Requirement Specification, Similarity, Use Case Diagram, Use Case Description, SRS.*