

I. INTRODUCTION

In general, in the development of software or software, a document is needed that can explain as a whole about the software such as the features in the software, the logic flow of the software, and the hardware specifications used during the development of the software and software, the document is called Software Requirement Specification (SRS) [1, 2, 3]. Sipranta is an Android application that aims to assist in implementing activities at posyandu. Posyandu is a center for pre and postnatal health services and information for women and children under five years old. Among the features of Sipranta are toddler data management, toddler immunization data management, examination schedules, and others. Fig. 1 depicts the use case modelling of the Sipranta application.

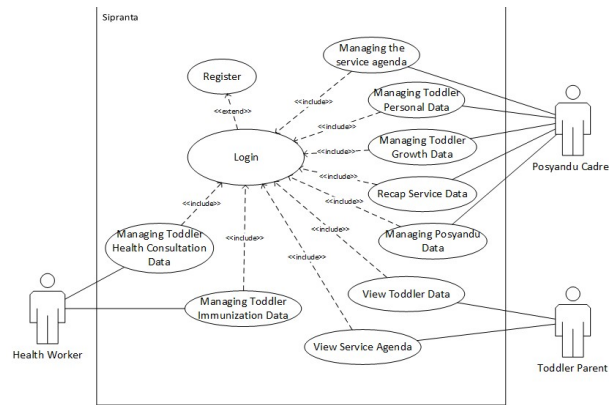


Fig. 1. Use Case Modelling of Sipra

The SRS document must be created appropriately under the Use Requirements for the program to be constructed as requested [4, 5]. A use case diagram, class diagram, sequence diagram, user interface, activity diagram and other artefacts are included in the SRS document. These artefacts must be interconnected to make the program developed clearer than required in software development.

Unified Modeling Language (UML) has a use case diagram to depict the interaction connection between actors and the system [4, 6]. On the other hand, the Use Case Description has Step Performed in the form of tabulation, which comprises an object's explanation flow in the Use Case Diagram. A sequence diagram attempts to depict the interaction of objects in a system, the messages or commands conveyed, and the implementation time. In other words, the Sequence Diagram, like the Use Case Diagram, encapsulates an object's explanation flow in a pictorial diagram [7].

The Sequence Diagram and the Step Performed should be linked. However, when developing the Sipranta Application SRS, the Step Performed and the Sequence Diagram have differences, so to overcome this problem, similarity measurements must be made between the two artifacts by implementing Text Pre-processing, which previously extracted the two artifacts. An assessment of the quality of the SRS created can be made by measuring the similarity between the two artifacts.

By adopting Text Pre-processing, this study intends to quantify the value of conformance between the Sequence Diagram and the Step Performed. Contributors to this study include: The goal is to quantify the value of conformance between the Sequence Diagram and the Step Performed section in Use Case Description using Text Pre-processing. This study makes the following contributions:

- Perform Text Pre-processing on the two extracted artifacts.
- Perform conformity measurements using the cosine similarity method from the results of Text Pre-processing.
- Perform validity and reliability evaluations on the findings of conformity assessment between Step Performed Section in Use Case Description and Sequence Diagrams.

Generate a Sequence Diagram appropriateness value based on the Step Performed in the Sipranta SRS, which generates objects to be compared with the Use Case Description.