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**Title**

An Automated System to Connect Patients and Hospitals Based On Service-Oriented Architecture

**Abstract**

This project aims to study the current research and state-of-the-art practices involved in developing service-oriented systems. From this research, an optimal process will be drawn for developing an SOA-based application which enables users to find hospitals and book appointments, with the focus on users living in remote areas. This process will then be used to create an implementation of the same.

**Objectives**
- To develop a software which can be used by patients, particularly the ones in remote areas, to find nearby hospitals based on filters like availability of treatment for specific diseases, beds, blood bank, and other resources and requirements.
- To research, analyze and adopt suitable practices involved in creating SOA-based systems while developing the software.

**Work Methodology**

**Sept. 15 - Initial Analysis and Requirements Engineering.** In this phase, a detailed study of the selected research papers, along with other papers dealing with implementations of SOA, will be carried out. A methodology for developing the proposed software will be drawn, and requirements will be identified and validated.

**Sept. 30 - Software Design and Architecture.** This phase corresponds to designing the model for the 'search hospitals and book appointments' application using the methodology proposed in the previous phase.

**Oct. 31 - Software Implementation.** During this phase, the application will be built by encoding the design in a suitable programming language.

**Nov. 30 - Testing and Report.** Individual components will be tested, followed by testing the entire system. Bugs found at this stage will be fixed. A report will be made which covers the details of the research and work done during the course of the project.

**Outcome**

Design and implementation of an optimal process for developing SOA-based utility platforms such as the proposed 'hospital search and book' application, and publishing a research paper for the same in a scientific journal.

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