

## **FEASIBILITY STUDY**

Feasibility is defined as the practical extent to which a project can be performed successfully. To evaluate feasibility, a feasibility study is performed, which determines whether the solution considered to accomplish the requirements is practical and workable in the software. Information such as resource availability, cost estimation for software development, benefits of the software to the organization after it is developed and cost to be incurred on its maintenance are considered during the feasibility study. The results of the feasibility study should be a report that recommends whether or not it is worth carrying on with the requirements engineering and system development process.

Feasibility study includes consideration of all the possible ways to provide a solution to the given problem. The proposed solution should satisfy all the user requirements and should be flexible enough so that future changes can be easily done based on the future upcoming requirements

### **Economic Feasibility**

Economic feasibility determines whether the required software is capable of generating financial gains for an organization. It involves the cost incurred on the software development team, estimated cost of hardware and software, cost of performing feasibility study, and so on.

This is a very important aspect to be considered while developing a project. We decided the technology based on minimum possible cost factor. All hardware and software cost has to be borne by the organization. Overall, we have estimated that the benefits the organization is going to receive from the proposed system will surely overcome the initial costs and the later on running cost for system.

One reason why a dental clinic can be economically feasible is the consistent demand for dental services. Dental care is an essential aspect of overall health, and people require regular check-ups, cleanings, and treatments to maintain their oral health. This steady demand ensures a consistent flow of patients and potential revenue for the clinic.

Additionally, dental clinics often offer a range of services, from routine check-ups to more complex procedures like fillings, root canals, and orthodontic treatments. By providing a comprehensive set of services, the clinic can cater to a broader clientele, further enhancing its economic feasibility.

### **Technical Feasibility**

Technical feasibility assesses the current resources (such as hardware and software) and technology, which are required to accomplish user requirements in the software within the allocated time and budget.

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable system. For this feasibility study, we studied complete functionality to be provided in the system, as described in the System Requirement Specification (SRS), and checked if everything was possible using different type of frontend and backend platforms.

The continuous evolution of dental technology, the adoption of digital dentistry, telehealth solutions, and improvements in dental materials have all contributed to making dental clinics technically feasible. These technological advancements not only enhance the quality of dental care but also improve patient comfort and overall treatment outcomes.

Technological advancements have led to the development of sophisticated dental equipment and tools, such as digital X-ray machines, intraoral cameras, and dental lasers. These tools enable dentists to diagnose and treat dental issues more accurately and efficiently.

### **Operational Feasibility**

Operational feasibility assesses the extent to which the required software performs a series of steps to solve business problems and user requirements. This feasibility is dependent on human resources (software development team) and involves visualizing whether the software will operate after it is developed and be operative once it is installed. No doubt the proposed system is fully GUI based that is very user friendly and all inputs to be taken all self-explanatory even to a layman. Besides, a proper training has been conducted to let know the essence of the system to the users so that they feel comfortable with new system. As far our study is concerned the clients are comfortable and happy as the system has cut down their loads and doing.

A dental clinic is operationally feasible due to various factors that make it practical and viable to run efficiently. Dental clinics have trained and qualified staff, including dentists, dental hygienists, dental assistants, and administrative personnel. The expertise of these

professionals ensures the clinic can deliver high-quality dental care and efficiently manage day-to-day operations.

Dental clinics often employ appointment management software that allows them to efficiently schedule patient visits, optimize the dentist's time, and reduce waiting times for patients. Dental clinics often offer multiple payment options to accommodate patients' preferences and financial situations. Efficient insurance processing and billing practices facilitate smooth transactions for both the clinic and patients.

For complex cases or specialized treatments, dental clinics may collaborate with dental specialists and maintain referral networks. This ensures that patients receive comprehensive care, enhancing the clinic's reputation and operational feasibility.