



## Final Year Project Showcase Batch-2018 Year 2022

<b>Department: Software Engineering</b>		
<b>Programme: Software Engineering</b>		
<b>1</b>	<b>Project Idea</b>	MediSol - A dynamics 365 solution for healthcare that allows efficient scheduling of appointments. "MediSol" aims to solve the outpatient no show problem that is faced by many healthcare service providers by providing excellent customer service using different modules for customers, doctors and front end users.
<b>2</b>	<b>Process</b>	The process of development is carried out by following the standard of the project's process, i.e., initiating, planning, executing, monitoring and closing. Agile best practices were adopted to complete the project successfully in the most efficient manner. The team work in close collaboration to achieve the project milestones timely and with acceptable level of quality.
<b>3</b>	<b>Outcome</b>	The outcome of our project is based on three modules that we have covered for different user segments in a healthcare place. The first module is intended for administrative users that will be able to view patients, doctors and appointments records. The executives will be able to view BI reports integrated in the Dashboards of Model Driven application. It allows us to manage patients and prospects, doctor's details and its working hours and appointments creations using advance search criteria. The second module allows doctors to view its appointments according to status and date picker filters. It allows updating the status of the patient's appointment on the basis of patient check in and checking out timing. Moreover, it also views the relevant patient details to the doctor. The third module gives a more personalized care to the patients. It allows customers to register themselves and after becoming the prospect, they can book appointments 20 on their own. This module also allows the patients to view the doctor's availability according to their search criteria and to have interactive chatbots answers for their queries.
<b>4</b>	<b>Evidence Basis) (Theoretical</b>	Our solution "MediSol" aims to solve the outpatient no show problem that is faced by many healthcare service providers. The most frustrating problem that healthcare service providers are facing nowadays is the "patient no show" problem. The outpatient cancellations of appointments results in significant damage to both service providers as well as the patients. The long waiting time in the process of attending appointments make the patients helpless and they skip their important appointments which may result in severe damage to their health. The health care providers may suffer wastage of resources and time in case of patients' no shows. Our solution is being developed by using the ground breaking technology of Dynamics 365 in integration with PowerApps, Power Automate, Microsoft Dataverse, JavaScript, .NET and XML queries. The use of Dynamics 365 ensures the integrated flow of data within different applications of our solutions. It facilitates excellent customer service which is a critical requirement in any healthcare organization. We can provide better customer service with Microsoft Dynamics 365 CRM. The solution provides the front desk view to the organization to effectively manage patients, doctors - working hours and appointments using advanced search criteria. The doctors are put at ease by giving details of their upcoming and current appointments. The customers are allowed to book their



		<p>appointments on site as well as by using their customer portal which will provide ease to them in their hectic schedules. They are further provided mail reminders of their upcoming appointments. The solution is useful in reducing wastage of hospitals' resources in case of patient's no shows and provides a more personalized care to patients in their day-to-day life. We have developed a complete solution to deal with the appointment management and to minimize the possible issues in handling appointments, both from patients' and hospitals' perspective.</p>
5	<p><b>Competitive Advantage or Unique Selling Proposition</b> (Cost Reduction, Process improvement, Attainment of any SDG (Sustainable Development Goal), increase of market share or capturing new market or having superior performance over a competitor. In summary, any striking aspect of the project that compels the industry to invest in FYP or purchase it. Some detailed description is required in terms of how, why when what. You can select one or more from the following dropdown and delete the rest of them). Please keep relevant options, delete the rest of them, and correct the sequence</p>	
a	<p><b>Attainment of any SDG</b> (e.g. How it is achieved and why it is necessary for the region)</p>	<p><b>SDG#3: Good Health &amp; Well-Being</b>  <b>How:</b> It will reduce outpatient cancelations in many hospitals by sending reminders. It will also reduce the time needed for administrative tasks. Good health of patients can be ensured by addressing this concern. The solution will bring efficiency in the healthcare process by providing a more personalized care to the patients (reserving and tracking appointments, online booking of appointments).  <b>Importance:</b> The issue of appointment no-shows and cancellations, often known as appointment disruption, can cause chaos on the normal running of practically all scheduling systems. When booked patients fail to show up for their appointments, resources are overused, and other patients are unable to get timely appointments since a portion of the calendar is filled with no-shows. Furthermore, when scheduled patients cancel their appointments, the clinic is often left with very little time to complete the schedule. These issues are very prevalent in our region i.e. the patients' busy lives, current appointment management systems do not allow them to track their appointments that results in huge lineups outside the doctors' office.</p>
b	<p><b>Any Environmental Aspect</b></p>	<p>----</p>
c	<p><b>Cost Reduction of Existing Product</b></p>	<p>The solution that the team developed can be efficiently customize w.r.t healthcare institution in which it is to be used. Due to this, end-user can select the features that they want. Therefore, cost can be reduced for the end-user by not using the entire solution but only the required features and modules.</p>
d	<p><b>Process Improvement which Leads to Superior Product or Cost Reduction, Efficiency Improvement of the Whole Process</b> (e.g. What is the issue is current process and what improvement you suggests)</p>	<p>There are many issues for booking an appointment using manual systems, incomplete or missing appointment is also one of them. An incomplete appointment is described as an individual that refuses to show up for a planned hospital appointment without alerting the institution or requesting that the appointment either suspended or postponed. Medical appointments that are missed are a problem for health systems all over the world.          Messaging service, texting reminders, telephonic reminders, rebooking of consultations, imposing a penalty to patients who missed their meetings, and using an appointment booking system to make appointment cancellation and rebooking easier are now the most popular techniques utilized in MediSol.</p>
e	<p><b>Expanding of Market share</b> (e.g. how it expand and what is the problem with the current market</p>	<p>Hospital appointments were previously been booked over the phone or in person with coordinators. These techniques were based on real-time oral communication involving actual individuals, and</p>



		they provide maximum adaptability in difficult situations. Moreover, since these old techniques rely on coordinators, the opportunity to have a consultation on time is constrained not just by accessibility of appointment slots, as well as by the availability of coordinators and telephone service. Because of the popularity of the internet, digital health services are becoming a valuable means of medical information for patients. Messaging service, texting reminders, telephonic reminders, rebooking of consultations, imposing a penalty to patients who missed their meetings, and using an appointment booking system to make appointment cancellation and rebooking easier are now the most popular techniques utilized.
f	<b>Capture New Market</b> (e.g. Niche market or unaddressed segment)	The niche market of this solution is any healthcare sector institution, i.e., hospital, clinic, etc. that are facing difficulties in efficiently managing the appointment booking. As described, our solution provides most comprehensive and the efficient appointment handling for the healthcare institutions and the most streamlined way for patients to book their appointments remotely.
6	<b>Target Market</b> (Industries, Groups, Individuals, Families, Students, etc) Please provide some detail about the end-user of the product, process, or service	HealthCare Institutions i.e. Hospitals , Clinics
7	<b>Team Members</b> (Names along with email address)	1. Rida Taufique ( <a href="mailto:ridataufique77@gmail.com">ridataufique77@gmail.com</a> ) 2. Noorah Ahmed ( <a href="mailto:noorah.ahmed98@gmail.com">noorah.ahmed98@gmail.com</a> ) 3. Maryam Muhammad Tahir Sultan ( <a href="mailto:maryamtahir914@gmail.com">maryamtahir914@gmail.com</a> )
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