Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY, THANE
(All Programs Accredited by NBA)
Department of Information Technology

IoT based Healthcare Kit

Group No. 23

Shreya Bhutada 17104019
Purvika Gaikar 15104027
Akshata Singh 17104033

Project Guide : Prof. Kaushiki Upadhyaya

Contents

Introduction

- Many rural areas don’t have enough hospitals and other health care resources to provide quality care.
- Also, in a world with an accelerated population aging, there is an increasingly interest in developing solutions for the elderly living assistance.
- To deal with these types of situations, our system is beneficial in monitoring health of every person by measuring various parameters like temperature, ECG, heart rate, blood pressure, etc.
- These real time data will then be stored on the cloud making it accessible anytime near in the future.
- The doctors can see the data on a website and can analyze the patient’s condition through their past records.
- Patients will be notified of their results on website or on our mobile based Application. This application can help the patients to self- assess the mild symptoms via our Healthbot.
- The healthbot will provide adequate health care tips for the identified issue.

Objective

- The objective is to develop an absolute, portable and cheap system which incorporates Arduino that will be 24/7 available.
- It will help the disabled and old people who cannot come to hospitals independently for their regular checkups.
- The healthcare system can enable constant monitoring of a patient through checking various parameters such as temperature, blood pressure and heart rate.
- It provides with real-time medical information about a patient via IoT and processes the information gathered about the patient.
- In addition to this, the chatbot will assists medical queries, symptom check, provide referral for major issues and will try to analyze the cause of illness according to the information given by the patient and provide adequate health care tips for the identified issue.
- With such feasibility of chatbot, it will help decrease time and expenditure of patients.

Problem Definition

- Many rural areas don’t have enough physicians, hospitals and other health care resources to provide quality care for the whole population.
- Long waiting times, long duration between visits and a wide range of other challenges can prevent health care professional from providing the best care possible.
- In addition to this, there are applications which are just limited to making appointments with doctors and very minimal interaction related to disease condition of the patients.
- This project aims at providing an Iot based remote Health care kit and AI Chatbot which provides healthcare tips to patients, and effectively, reducing the cost of customer service and providing a vital communication link between doctors and patients

Technological Stack

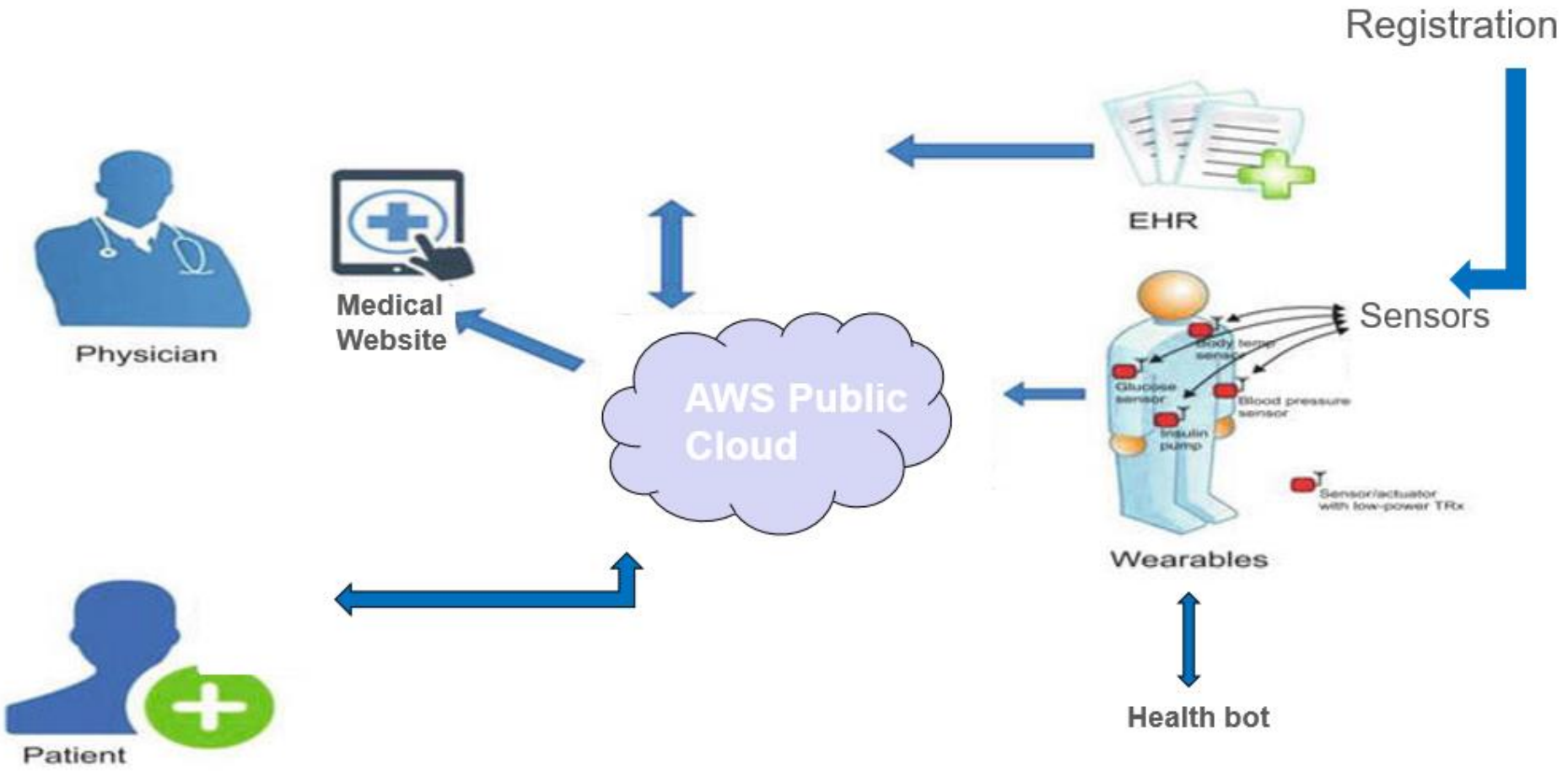
Hardware :

- ECG monitor sensor module
- Glucometer
- Temperature Sensor
- Blood pressure sensor
- Arduino UNO
- Display

Software :

- Python 3.7
- AWS Public Cloud

Proposed System Architecture/Working



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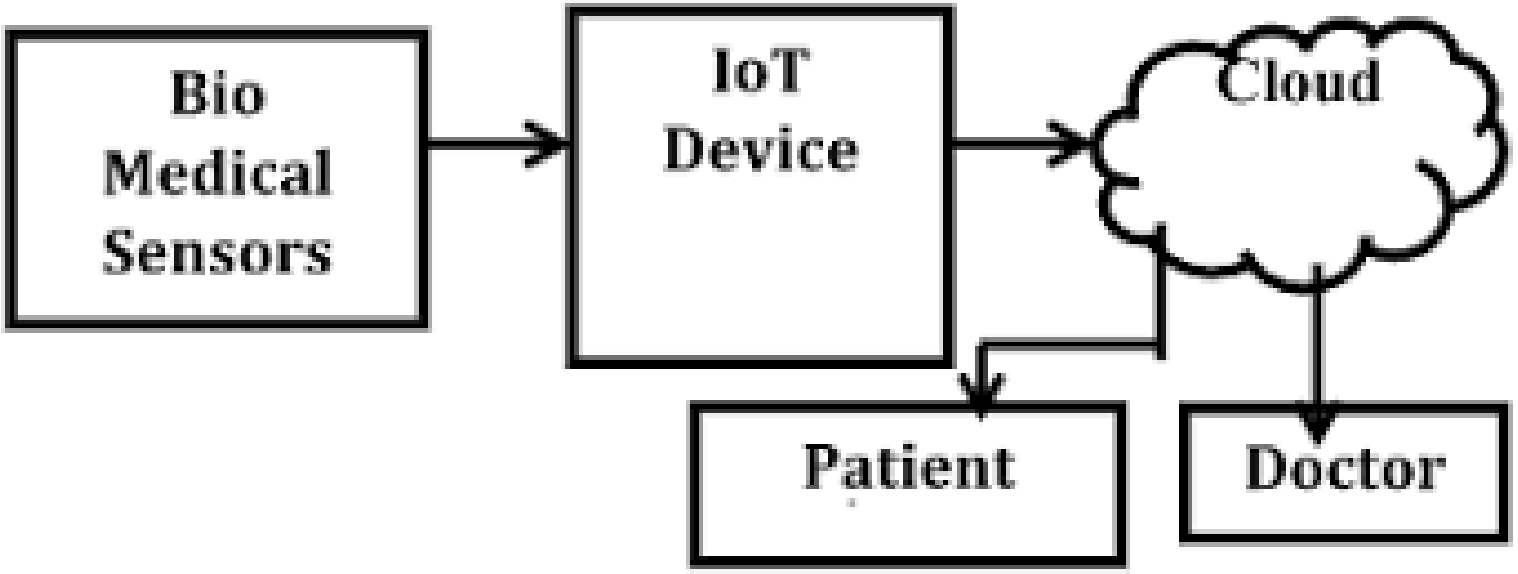
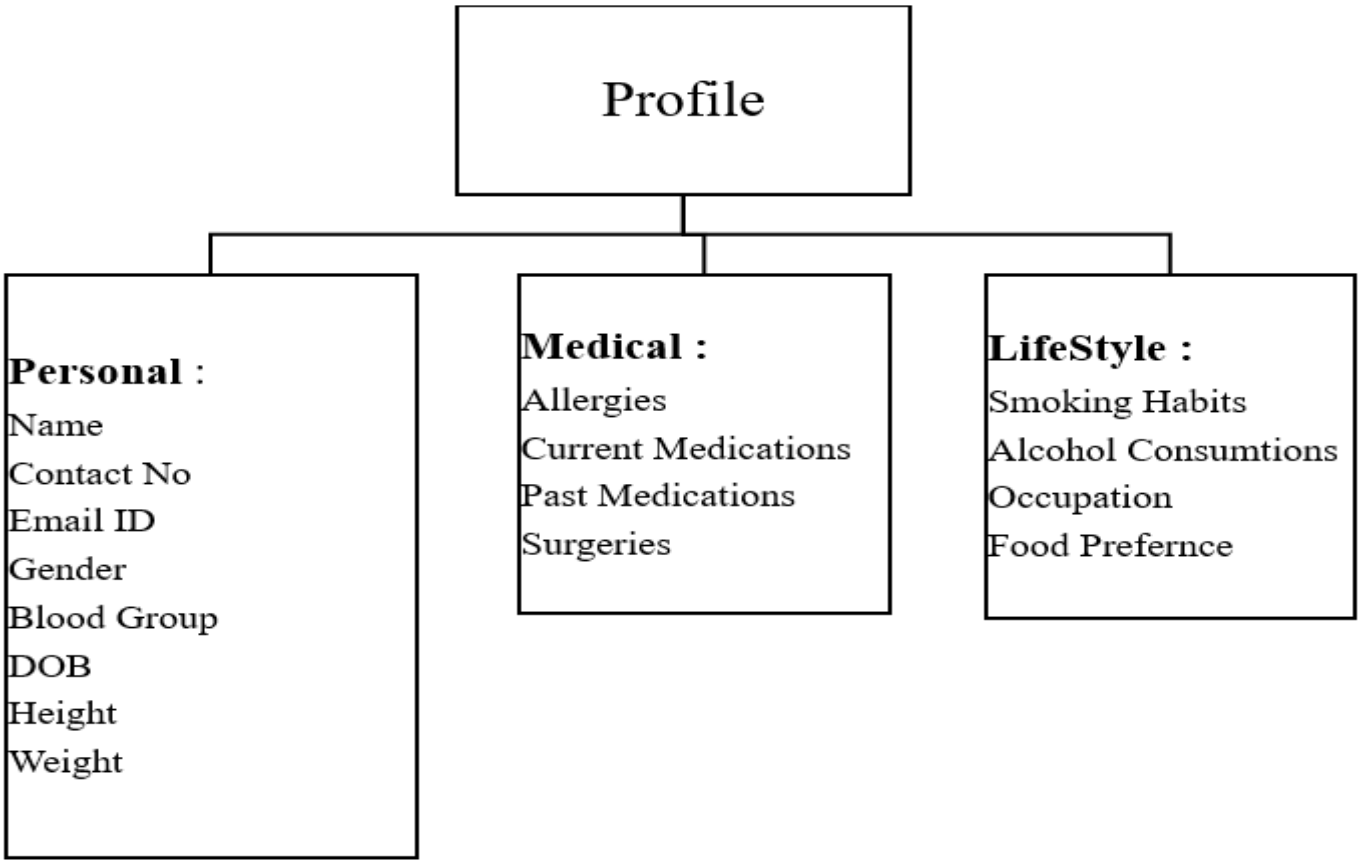


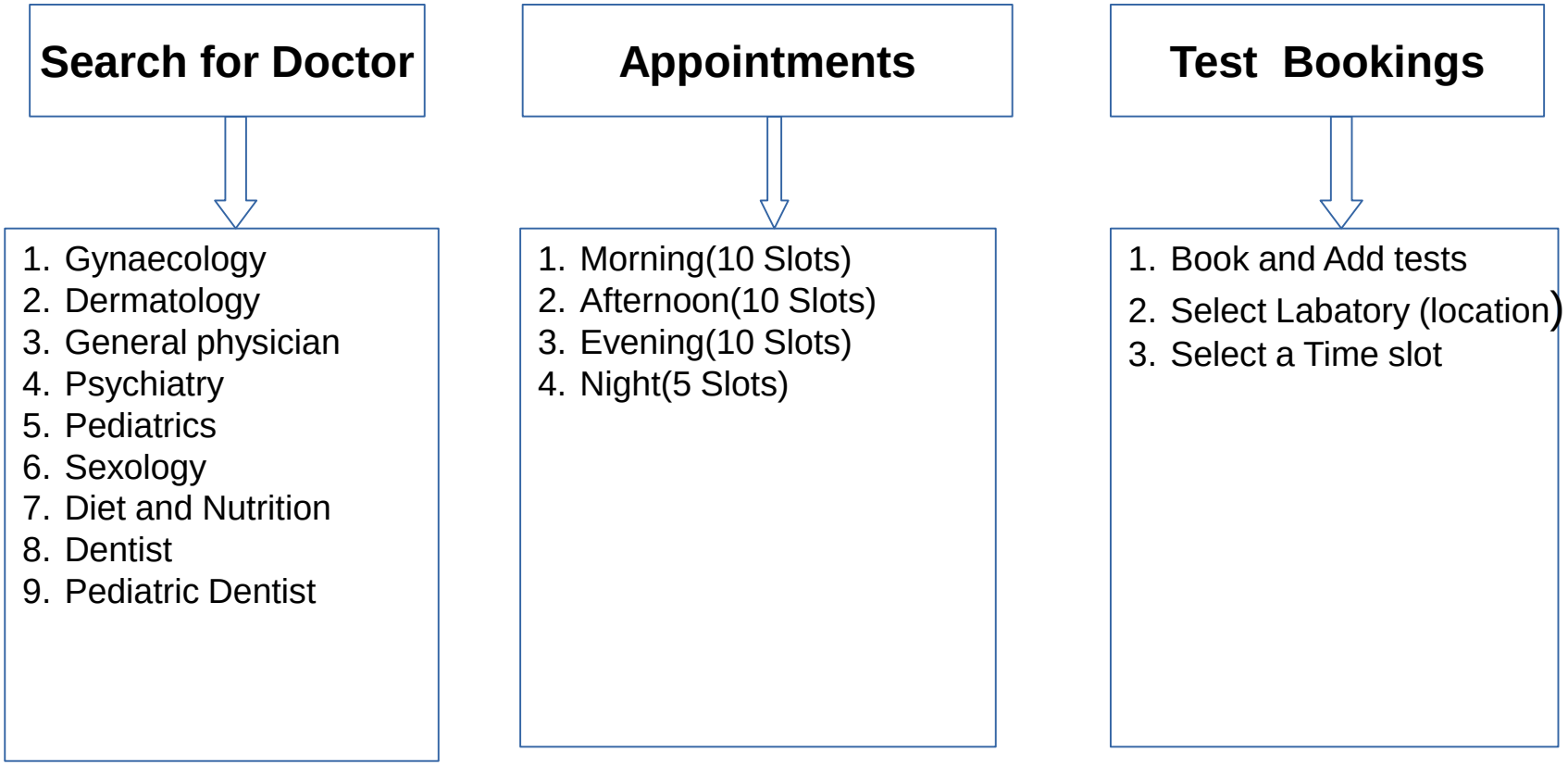
Basic working of IoT based health kit

Proposed System Architecture/Working

Patient Registration Profile



Mobile App Features



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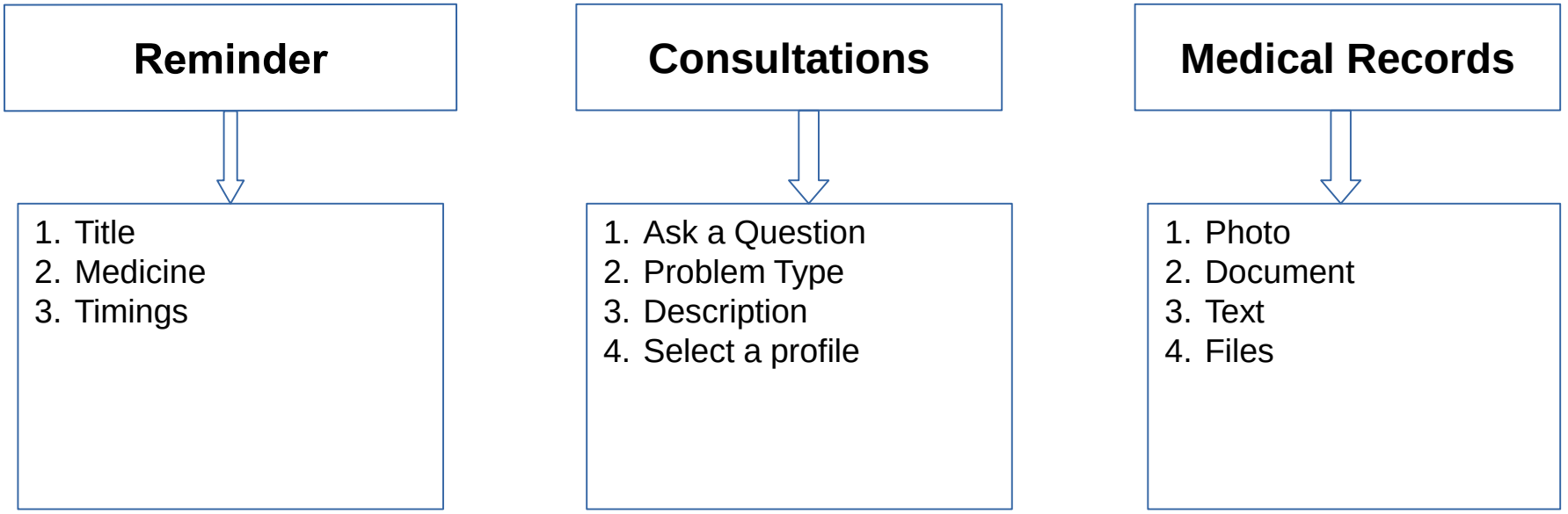
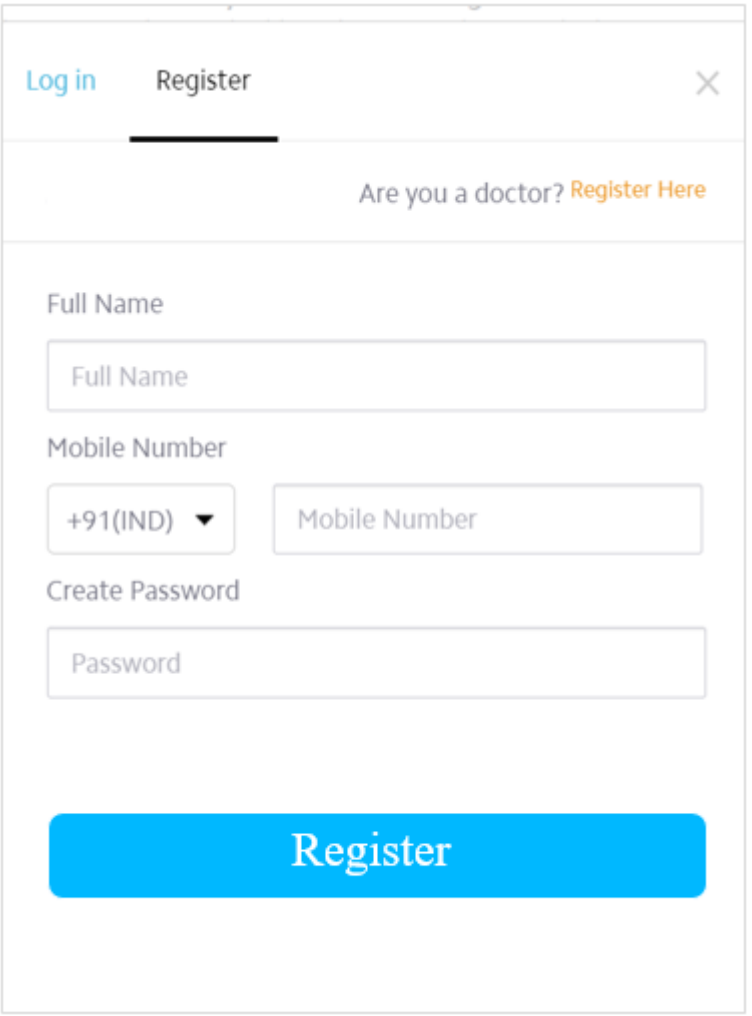


Prototype Design Demonstration

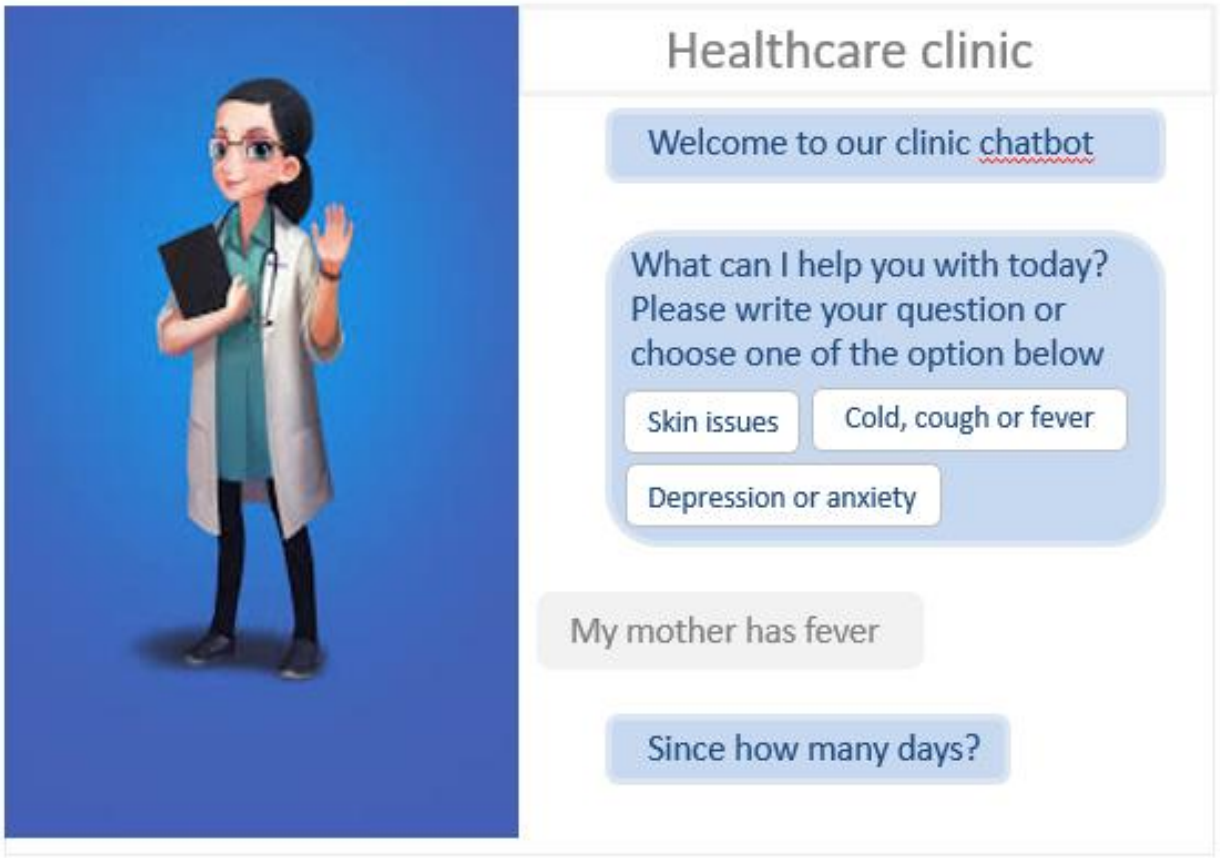


Registration

Prototype Design Demonstration

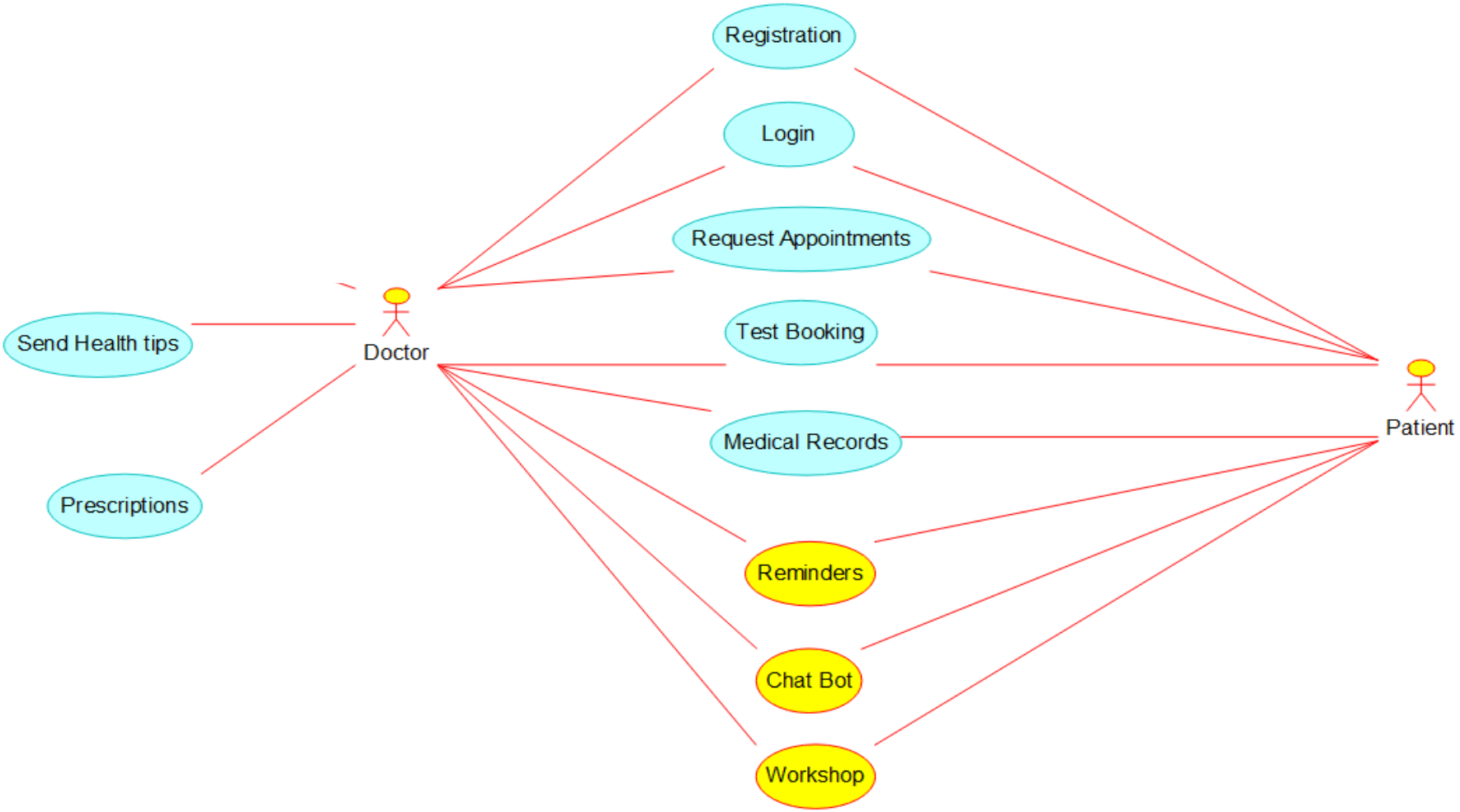
Doctor's Website

Prototype Design Demonstration



Healthbot

Health Bot – Use case diagram



Plan of paper publication

- We are planning to present a paper in IEEE 2021 6th international conference for convergence in technology. The full paper deadline for this conference is 15 November 2020.

Thank You...!!