

## **An Intelligent Baby Care System Based on Smart Phone Application**

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**Abstract:** In today's life style due to the heavy burden and pressure of work it is difficult to remember vaccine period on new born baby as well as small once. To solve this we developed Android app for kids which is a complete guide and a memory tool for parents. The Skooly application helps parents to follow everything in a simple way and helps parents get satisfaction. This report details the work done towards the project Baby Care. This particular project is a solution developed for all the busy mothers and single fathers to take proper care of their little one. The Android app for kids is a complete guide and a memory tool for parents. The Skooly application helps parents to follow everything in a simple way and helps parents get satisfaction. We have felt the need to design this Skooly Android Application for the Android platform and we ensure the best possible performance, quality of the android application. The proposed system is Android based we choose Android operating system because Android operating system is at the top in market because of its features like portability, platform independence, and low memory consumption. As android operating System is used in mobile phones, tablets and laptops it has covered more than 80% of the market. Now everyone is using android phone. So we are Develop Skooly Application for android users.

**Keywords:** Portability, low memory, tablets, low power consumption.

### **I. INTRODUCTION**

In recent years Vaccines help protect infants, children and teens from serious diseases .Getting childhood vaccines means your child can develop immunity(protection) against diseases before they come into contact with them. Generally young children are at increased risk for infection diseases because their immune systems have not yet built up the necessary defences to fight serious infections and diseases. As a result, diseases like whopping cough or pneumococcal disease can be very serious and even deadly for infants and young children. Vaccinations start early in life to protects children before they are exposed to these diseases. Occurrence of sequential patterns in a sequence of Vaccination is the administration of a vaccine to help the immune system develop protection from a disease. Small pox was most likely the first diseases people tried to prevent by inoculation and was the first disease for which vaccine was produced. Vaccine contain a microorganism or virus in a weakened or killed state, or proteins or toxins from the organisms in stimulating the baby's adaptive immunity, they help prevent sickness from infectious diseases. When a sufficiently large percentage of a population has been vaccinated, herd immunity results. The effectiveness of vaccination has been widely studied and verified. Vaccination is the most effective method of preventing infectious disease, widespread immunity due to vaccination is largely responsible for the world wide eradication of smallpox and the elimination of diseases. The slightly modified form of a disease-causing organism is used for making vaccines. Today a combination of these organisms can be used in one vaccine, to limit the number of vaccinations your child gets. The basic principle through which a vaccine works is by creating immune memory to certain organisms. When a child's immune system is exposed to the organism within a vaccine, it starts to form memory towards the infectious organism. So, when your child is exposed to a similar organism in the near future, the body is already prepared with its defence mechanism. This paper proposed baby care system to reduce the caring burden of their parents. To remember information such as vaccination, hospitalization record, school record and so on can be acquired and analysed in real time environment to predict the potential danger condition and then push a notification to a portable device, or take emergency actions automatically to prevent the infant from injury.

## **II. LITERATURE REVIEW**

India with 1,258 million people, is the second most populous country in the world, just after China. More than 127 million children under 4 years, along with its nearly 27 million annual births and a fertility rate of 2.54 children per woman, make India an attractive market for the baby care industry. The domestic baby and child care market, which has been growing at CAGR of 17 per cent since 2012, is set for a big boom with a host of global players foraying with innovative products. Considering the huge potential that this market offers, brands like Brevi from Italy, Combi from Japan, Bubba Blue from Australia, Tiny Love from Israel, Grup Baby from Turkey, US Baby from China, Kiddy GmbH from Germany, Tolly Joy from Singapore and Farlin from Taiwan are some of the top brands which will be making a debut in the local market With India being home to around 50 million babies in the 0-2 years age group and 304.

8 million children in the 0-12 years group, the country offers immense opportunities to the segment players to tap this growing market. The Indian baby care market has been witnessing speedy transformation with rising income levels and changing consumer behaviour. At present, the Indian market is in the emerging stage of development and is expected to become one of the world's fastest-growing baby care markets. Moreover, large population base in the age group of 0-4 years and increasing willingness of parents to spend more on baby products will be the primary driving force in near future. Rising middle class contribution, introduction of baby care products for the bottom of the pyramid segment will drive the market towards steady growth. Most of the companies operating in this segment are going for product innovation and development. Manufacturing and trading of quality baby and child care products and services is becoming increasingly important for a wide range of companies in India and globally. India's children and baby product industry is at US\$11.12 billion (EUR. 8.52 billion). However, there is a lack of organized trade platform for the baby and child care product industry in India. So, let's look at some of the key pointers as follow. What is the approximately business volume generated by the childcare industry in the country? According to the statistics from the RNCOS March 2013 report, the Indian baby and child care market has substantially grown during the past few years and caught the attention of many international players. Estimated to be US\$11.12 billion and growing with a CAGR of 17%, Indian baby and children products market is expected to reach US\$ 21 billion (€16 billion) by the end of 2015.

Skooly application is the mechanism of how a vaccine works, the vaccine schedule. Vaccines given at birth Oral Polio Vaccine (OPV), Bacilli Calmette Guerin (BCG), Hepatitis B (1), Vaccines given at 6 weeks Diphtheria, Prussic and Tetanus (DPT 1), Hep B (2), Inactivated Polio Vaccine (IPV 1), Rotavirus (1), Pneumococcal Conjugate Vaccine (PCV 1), Haemophilic influenza type B (HiB). Vaccine gives at 6 Weeks Diphtheria, Prussic and Tetanus (DPT 1), Hep B (2), Inactivated Polio Vaccine (IPV 1), Rotavirus (1), Pneumococcal Conjugate Vaccine (PCV 1). The existing system was developed manually. In this process manually monitoring the polio drops information and it's provide complexity to the user. The immunization details are provided in the card and it is entered each time after the vaccination taken and it should maintain periodically. The information of polio drops are announced by manually through authorize person in the hospital. The Vaccination lists are not clearly defined in the current system. The card contains up to three year's Children vaccination details. The growth chart and daily care tips are not clearly defined. Childhood vaccine or immunizations can see overwhelming when you are a new parent. Vaccination not only protect your child from deadly diseases, such as polio, tetanus and diphtheria, but they also keep other children safe by eliminating or greatly decreasing dangerous diseases that used to spread from child to child. A vaccine is dead, or weakened version, or part of the germ that cause these diseases in question.

## **III. PROPOSED SYSTEM**

In our proposed system, we use The Android app for kids are a complete guide and a memory tool for parents. The Baby Care application helps parents to follow everything in a simple way and helps parents get satisfaction. Need to Design and build advanced Baby Care Android Application for the Android platform and ensuring the best possible performance, quality of the android application. Here the developer should have experience in handling Push notifications, Responsible for designing layouts and some of the modules in the application, Responsible to understand business requirements and translate them into technical requirements and Responsible to work with XML, SQL lite and Jason. The baby care application consists of four main modules. They are as below.

**1. Hospital Login**

- Government Hospital
- Private Hospital

**2. Registration and Login.**

- Up to 3years.
- 4 to 6years.
- 7 to10 years.

In this module the parent has to register their name and the child name first, then there will be an option for choosing the child age like Up to 3 years, 4 to 6 years and 7 to 10 years. Based on the option the parent chooses they will be directed to the specific page.

**A. Up to 3 years Module:**

By choosing the up to three years option in the login page parent will be directed to this module, where they will be given with two categories they are Vaccination Chart and the Doctor Details.

**B. 4 to 6 years Module:**

By choosing the four to six years option in the login page parent will be directed to this module, where they will be given with categories they are Vaccination Chart and School Fee.

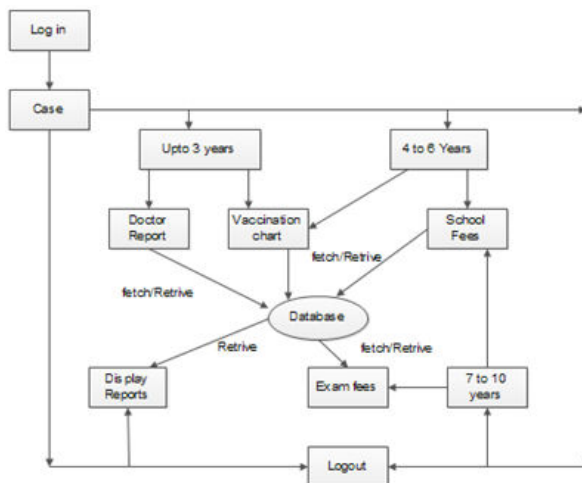
**C. 6 to 10 years Module:**

By choosing the six to ten years option in the login page parent will be directed to this module, where they will be given with categories they are School Fee & School exam details.

**IV.SYSTEM ARCHITECTURE**

In System architecture of skooly system firstly we logged in then from case we can divide in three parts.

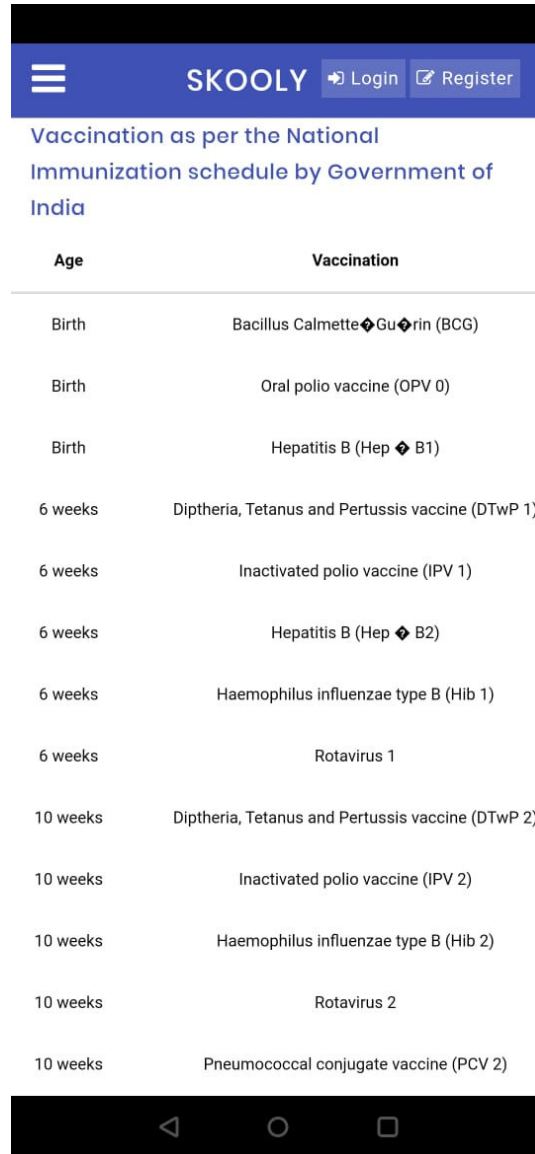
- a) Up to 3 Years
  - b) 4 to 6 Years
  - c) 6 to 10 Years
- a. **Up to 3 Years:** Normally we can divide into two types doctor report and vaccination chart. We can edit or modify database of doctor report and vaccination chart in database system.
  - b. **4 to 6 Years:** Normally we can divide into two types, vaccination chart and school fees. Either we can fetch or retrieve school fees and vaccination chart.
  - c. **7 to 10 Years:** Normally we can divide into two types, School fees and exam fees. We can modify exam fees also. The overall information is saved in database. It can display the report. The process is complete the system is logout.



**Figure 1.1:** System Architecture

**V. RESULT**

The proposed system is completely implemented by a laptop PC, an Arduino platform and a mobile phone with Android operating system.



**Figure 1.2:** Manu list of Vaccine

The implemented project shows the age group and name of vaccine the system will notify to the register user about vaccine as per their baby age goes to ahead.

**VI. CONCLUSION**

The main objective of the paper is to create a secured and happy caring relation between parents and their kids. We had taken a wide range of literature review in order to achieve all the tasks, where we came to know about some of the products that are existing in the market. We made a detailed research in that path to cover the loop holes that existing systems are facing and to eradicate them in our application. In the process of research we came to know about the different problems faced by parents, especially working ones.

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