

Personal Assistance for Elderly People using Mobile Application

Nitinkumar Chaudhary¹, Abhishek Vishwakarma^{2*}, Arya Bhavate³, Ankit Shah⁴, Ganesh Nanhe⁵, Satish Dhakate⁶

¹ Department of Computer Science and Engineering, JD College of Engineering and Management, Nagpur, Maharashtra, India

²³⁴⁵⁶ Department of Computer Science and Engineering, JD College of Engineering and Management, Nagpur, Maharashtra, India

ABSTRACT

Article Info

Volume 9, Issue 4

Page Number : 213-216

Publication Issue

July-August 2022

Article History

Accepted : 05 July 2022

Published : 14 July 2022

At 110 million, India has the second largest global population of ageing citizens. The elderly Indian population is one of the fastest growing in the world. By 2045, population will be probably more than 200 million. Today, majority of the people are migrating to urban areas. In rural areas, due to less employment opportunities, low wages, drought, lack of basic amenities, landlessness, social factors act, people migrate to urban areas to get more employment opportunities, higher income, better wages, better facilities activities and live far away from their parents. In this scenario, the entire responsibility of the house falls on the elderly parents, which creates stress on them and children also worry about their parents how will they handle alone. Losing the ability to perform normal tasks of daily living makes aging adults feel that they are losing independence and control over their lives. In India, there are many families at the moment who are going through this situation. For most of the Indian senior citizens, the biggest concerns are healthcare costs, lack of financial support and isolation. In addition, most of the aged are not accorded the dignity of care they deserve in later life. Due to the aging of parents, increasing health issues and deprivation of knowledge of online media, they are unable to do all the necessary work. They have no one when they need help. And if there is someone for help, it is difficult to trust on them.

Keywords: Senior Citizen, Elderly, Migration, Personal Assistant Application, Android.

I. INTRODUCTION

Today migration has spread its roots widely. There is an upward trend in the living arrangement pattern of elderly staying alone or with spouse only from 9.0% to

in 1992 to 18.7% in 2006.[1] As people become older, people generally will experience a health decline such as becomes weak, susceptible to disease, decreased vision ability, etc. Therefore, they are not in situation to carry out daily works by their own and special

attention is needed for the elderly people. On the other hand, the number of elderly people in the world is rapidly increase so there's more people will need special attention. Therefore, this research has tried to develop an android application on mobile phone that could help elderly people and their adult child to not only monitor the health of the elderly but also to help in their daily life work. [2] Parents are left behind with no choice but compromising on the quality of life when the assistance is not provided in that particular activity. The aged people experience various types of problems. These are social, economic, psychological, health, crime and violence, abuse and other miscellaneous problems. These challenges are broadly clustered in to three groups namely; economic, social and psychological challenges. [3]. In Indian society, family members are the main source of care and support to the old age people. Therefore, it would be important to know, what are the opinions of selected old age people. [4] The elderly people often struggle with technology. Many senior citizens do not know how to use smart phones. But in new era, as the population of adult children are familiar with the smart phones, they can operate the application and get their work done from easy to difficult for elder parents. We often focus only on big problems and not on small things. But there are hundreds of tasks in a day which only we have to do. To do these daily tasks is also difficult for elders. The application helps the elder people to do everyday tasks like bringing grocery, vegetables, medicines, general products, taking elder people to bank, family functions, walk, and other places, doing technically difficult tasks etc. Some of the services will be pick and drop service to bank, hospital for regular check-ups, relative's home, wedding location and other destinations The adult child usually gets worried when they ask any neighbourhood person for task, because of neighbour unviability and trust issues. The application provides the flexibility of tasks as well as the bridge of trust. The volunteer will help the parents in every way to complete the task with love and care.

II. METHODS AND MATERIAL

The application is written in Kotlin language, which is a cross-platform, statically typed, general-purpose programming language with type inference. For the database storage, google firebase console is used. This application can play a vital role in betterment of elder people's daily lifestyle.

Authentication

When user first opens the application, the authentication will be the foremost process will be the authentication, which is an essential part of mobile application security. The user attestation is achieved by one-time password (OTP), which is an automatically generated numeric or alphanumeric string of characters that is authenticating a user for login session using google firebase authentication.



Figure 1: A screen short of login screen

Work Flow

The services are broadly divided into two categories

(a) Travel (b) Work or Task.

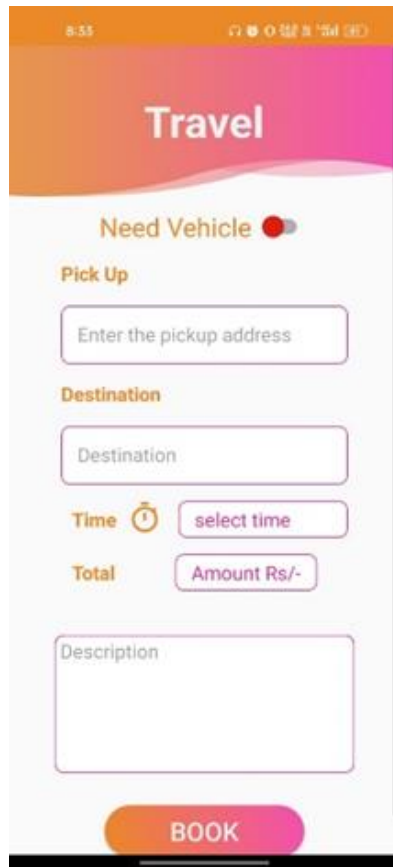


Figure 2: A screen short of home screen.

The interface is designed using Extensible Markup Language (XML). The backend is stabilized using firebase real-time database, which is a cloud-hosted NoSQL database, which we can store and sync the data between our users in real-time.

In work category, the adult child can select the type of work he/she wants to get done. Work can be

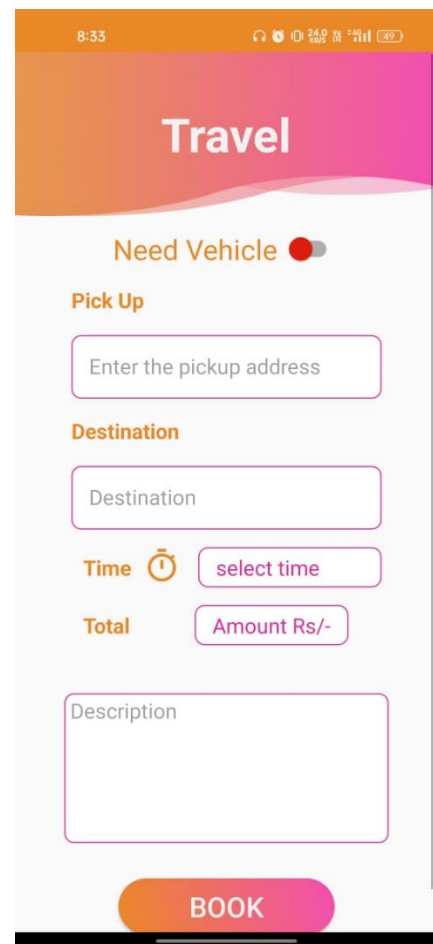


Figure 3: A screen short of book work screen.

shopping, medicine, money transfer, bringing vegetables, daily need things etc. The adult can add other options fields like description, any reference image like list of shopping items, doctor's prescription etc. By adding pickup and destination location, which will be helpful for service-man, booking can be confirmed. The data will be sent to database and stored instantly.

In travel category, if elderly do not have vehicle, then one can on the need vehicle option and select the type of vehicle. By filling the pickup location and destination, and selecting date and time adult child can confirm booking.

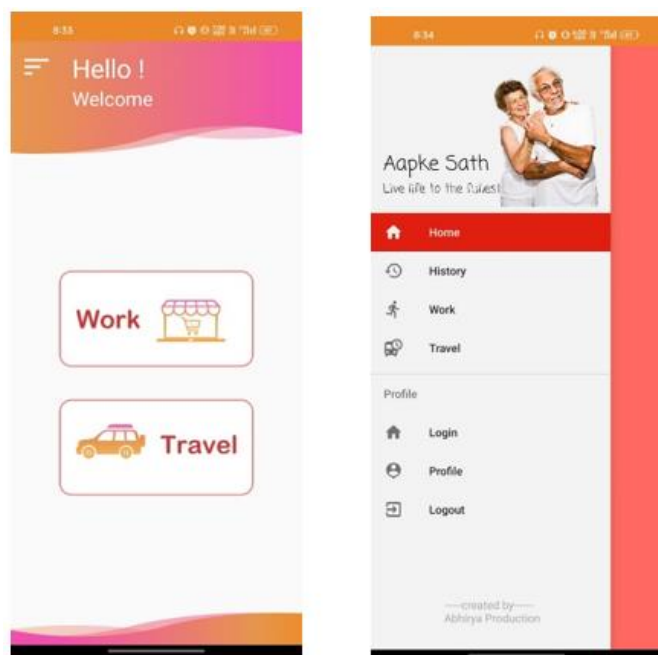


Figure 4: A screen short of book travel screen

The block diagram of application is as follows.

Block Diagram

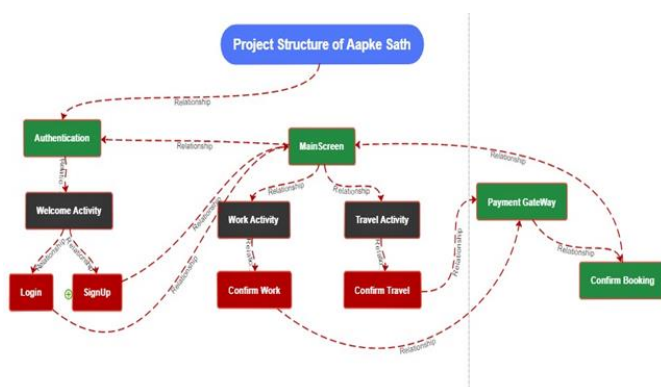


Figure 5: Flowchart of application

In case of emergency the elder parents can dial emergency, number and get immediate help. The volunteers will take instant action as per the situation. A trustworthy employee of application will reach the home of parent and will provide the service to them. Household services like cleaning home, cloths, cooking good healthy food, paying monthly bills, etc. will be regulated for their peaceful life.

III.RESULTS AND DISCUSSION

The individual living in urban area can easily take care of his/her rural elderly parents with the help of application. And can be assured of their good lifestyle and wellbeing. Even though, the elderly parents are not aware of current social and digital technology and not physically capable of doing much exhausting work they can take benefits of technology and live life peacefully.

IV.CONCLUSION

The problems of the aged people are diverse. These are, social, economic, psychological, health, crime, abuse and other miscellaneous problems. The most important aspects are health care, financial security, housing and family and community support. When these are available then they are able to live their lives efficiently, practice their norms and principles, make their own decisions and are able to get along with other individuals. With the help of current advanced technology and help provided by the physical service provider, the trouble facing by child and elderly parents is handled. The distance is no more hurdle for child to take care of their elderly parents.[5]

V. REFERENCES

- [1] B Mane*. Ageing in India: Some Social Challenges to Elderly Care.10.4172/2167-7182.1000e136
- [2] Andreas Handojo, Tioe Julio Adrian Sutiono, Anita Nathania Purbowo. Elderly Healthcare Assistance Application Using Mobile Phone. DOI 10.1109/ICSIT.2017.69
- [3] Manish Katke, Kadambini Katke. Challenges in Meeting Healthcare Needs of Urban Aging Population: A Case Study of Bangalore. DOI: 10.37896/jxu15.6/039

- [4] Mohammad Amiri. Problems Faced by Old Age People. DOI: 10.25215/0603.026
- [5] Nitinkumar Chaudhary¹, Abhishek Vishwakarma^{2*}, Arya Bhavate³, Ankit Shah⁴, Ganesh Nanhe⁵, Satish Dhakate⁶. Personal Assistant Application for Senior Citizen. DOI: 10.51201/JUSST/22/0657

Cite this article as :

Nitinkumar Chaudhary, Abhishek Vishwakarma, Arya Bhavate, Ankit Shah, Ganesh Nanhe, Satish Dhakate, "Personal Assistance for Elderly People using Mobile Application ", International Journal of Scientific Research in Science and Technology (IJSRST), Online ISSN : 2395-602X, Print ISSN : 2395-6011, Volume 9 Issue 4, pp. 213-216, July-August 2022. Available at doi : <https://doi.org/10.32628/IJSRST229415>
Journal URL : <https://ijsrst.com/IJSRST229415>