1. **RESEARCH METHODOLOGY**

**Research Stage I**

1) **Review of Pertinent Literature**
   
   (a) Research Reports of NGOs Agencies working for the Social Cause.
       
       [i] Study of proprietary research reports published by Agewell foundation. This is a Delhi based NGO established in 1999 and has been working for the empowerment & welfare of older persons since its inception. Presently Agewell foundation has a network of over 1500 NGOs over 6500 volunteers and 70000+ sub-volunteers spread across 540 districts of India. Agewell interacts with over 2500 older persons and other concerned people on daily basis through its nationwide network of volunteers.
       
       [ii] Study of proprietary research reports published HelpAge India. HelpAge India (HI) is another NGO, that has been actively participating in the Age Demands Action Campaign of HelpAge International since 2007, they organize different activities for the underlying theme of assertion of rights and entitlements of older persons in the country.
   
   (b) Research Reports of Government of India for Senior Citizens to understand the initiatives taken by them.
   
   (c) Research Reports of Health issues of Senior citizens published by International agencies like WHO. This will help to understand the common health problems faced by the senior citizens.

2) **Data collection of primary data to understand the requirements at Senior Citizens Associations will help in understanding their requirements.**

3) **The analysis of secondary data from the proprietary reports and the primary data to understand the problems faced by the senior citizens in India to understand their need pertaining to health care. Analyzing the opinion of the senior citizens about their willingness to adapt and use an internet based technology, for their health care, essential care and social interaction with their peers.**

4) **Discussions with Domain experts from the medical field and other health practitioners to understand, their requirements to help them serve the senior citizens better. Accessing the steps for storing medical records, and understanding the federal regulations to be followed for the same.**

5) **Analysis of Technology options for system design**
   
   a. Exploring the various technological applications available in health care.
   
   b. Understand the requirements of the Healthcare organizations in India,
   
   c. The barriers for the adoption of Information technology in health care in India
   
   d. The Federal regulations imposed.
   
   e. Study of limitations of existing options.

6) **Study of Cloud Technology as an option for system design.**
7) Proposal of Functional Design for Senior Citizens Wellness Management based on cloud

Research Stage 2

1) Solution Strategy

- Information technology with the power of the cloud has enabled the delivery of quality and cost effective services to even remote locations.
- Collection and sharing of information via the cloud is very efficient and it thus promotes collaboration. It is critical for the NGOs and other agencies to effectively collaborate specially in times of emergency.
- The social networking promoted by the cloud also enhances the capability of the NGOs to remain connected to others in the community and also extend and mobilize support to a social cause.
- Many IT companies are supporting the development for social causes to serve the community to be hosted on the cloud.
- As the community needs and number of uses grow globally the cloud also enables to deliver scalable IT solutions.
- The cloud computing is a good option for non-governmental organizations (NGOs) to optimize their operations more effectively, and deliver a broader array of services at much lower costs and thus make a greater impact on the communities they serve.
- Cloud computing technology should be leveraged so that it can help to serve the senior citizens community better.

2) Modeling Research

The design of the prototype of the system is the main focus of this research project. To do this, the *Prototype software Model Design* will be adopted. In this method, a working prototype of the project is developed and this is discussed with the end users, and a feedback is taken for improvement. Based on this method, the research for prototype design would involve the following steps.

a) Design of Basic working prototype
   - Feasibility Study
   - Consolidation of Requirements, Analysis and Specifications
   - Modular Design
   - Functional Design
   - Development of prototype to demonstrate basic features.
   - Design of Data collection instrument for feedback and survey for fine tuning of requirements.

b) Presentation of Prototype with end users and collection of feedback
• Presentation of working of prototype to Senior Citizens and NGOs working for the cause.
• Data collection from survey, directly at Senior Citizens Associations and online by floating in blogs, and other social networking sites.
• Analysis of data about opinion about the system design and additional functional requirements.

c) Detailed Design of SCWM.
   • Final Architecture and design of SCWM based on survey results.
   • Database Design
   • Detailed Modular Design of prototype

d) Development of prototype.

e) Testing of Cloud Hosting