# Acknowledgement

**Healzenic** is a project developed at **ABSS Institute of Technology, Meerut,** by **Jatin Kumar Mehta**, **Saurab Kumar Mishra**, and **Pankaj Kumar Ray**, students of Computer Science and Engineering. We extend our sincere gratitude to **Dr. Gopindra Kumar**, Head of the Computer Science & Engineering Department, and **Dr. Pritibha Sukhroop**, assistance professor for their valuable guidance and support in refining this project.

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# Problem Statement

Most fitness apps and services today primarily focus on exercise routines or health tracking through fitness devices, many of which, especially affordable smartwatches, lack accuracy. There is a gap in solutions that prioritize overall health improvement by leveraging simple user data and comparing it with health standards set by national and international organizations. Our project addresses this gap by providing a reliable, accessible, and comprehensive health assessment tool.

# Scope

**Objective:**
To develop a web-based health improvement and maintenance app that provides accurate initial health assessments by comparing simple user data with health standards set by national and international organizations. The app focuses on overall well-being without relying on fitness trackers or wearable devices.

**Expected Outcomes:**

1. **Accessible Health Assessment:**
   Provide a reliable platform for users to understand their health status using basic, non-invasive data inputs like age, weight, height, activity level, and lifestyle habits.

2. **Smartwatch Independence:**
   Offer a health improvement solution that doesn't depend on smartwatches, making it accessible to the 55% of users in India aged 25–34 who do not use such devices.

3. **User-Friendly Design:**
   Ensure the app is intuitive and easy to use, encouraging adoption by people unfamiliar with fitness apps.

4. **Accurate Data Insights:**
   Utilize verified health standards to generate trustworthy health reports, addressing the inaccuracy issue in many affordable smartwatches.

5. **Broader Reach:**
   Target users who lack access to expensive wearables, making health monitoring more inclusive and cost-effective.

6. **Promoting Preventive Care:**
   Educate users on maintaining and improving their health proactively through actionable insights based on their health data.

This project will bridge the gap between fitness tracking and overall health management, providing an affordable and practical solution for a wider audience.

**Data Study Source/s:**

Based on a survey conducted by **Rakuten Insight**:
https://www.statista.com/statistics/1052999/india-wearable-devices-ownership-by-age-group/#:~:text=A%20survey%20conducted%20by%20Rakuten,devices%20among%20all%20age%20groups

Study published by Published by **Shangliao Sun**:
https://www.statista.com/statistics/1033880/india-smartwatches-market-share-by-vendor/

## Social Impact:

1. **Increased Accessibility:**
   Offers affordable health assessment solutions for individuals without access to wearable devices or expensive medical consultations.

2. **Preventive Health Awareness:**
   Encourages users to take proactive steps to maintain and improve their health, reducing the prevalence of lifestyle-related diseases.

3. **Empowering Communities:**
   Makes reliable health insights available to underserved and low-income groups, fostering inclusivity.

4. **Reduced Healthcare Costs:**
   Promotes preventive care, potentially lowering the burden on healthcare systems by reducing the need for costly treatments.

5. **Health Education:**
   Provides users with actionable insights, fostering better understanding and management of personal health.

6. **Nationwide Impact:**
   Contributes to improved public health standards, aligning with global and national health improvement goals.

## Technologies Used

**1. Designing and Planning the Project:**

- **Notion:** For project management, task allocation, and collaboration among team members.
- **Figma:** To design user interfaces and prototype the app's workflow.
- **Adobe Illustrator:** For creating the project logo.
- **Canvas:** For designing and creating cover-pages & banners.
- **Colour Science:** To select and implement a cohesive and user-friendly colour palette.

**2. Developing and Implementation:**

- **Python:** Used for understand algorithm's concept and user health data.
- **HTML, CSS, JavaScript:** Core technologies for building the web app's front end to ensure a responsive and interactive user experience.
- **Mongoose:** A MongoDB object modelling tool for handling schema validation and interaction with the database.
- **Express:** A lightweight Node.js framework for creating and managing the backend server and API endpoints.
- **Node.js:** For building the server-side environment and handling app logic.
- **Cloudinary:** For managing and hosting media files, ensuring optimized storage and fast loading times.
- **StackBlitz:** For rapid development and testing of web components in a browser-based coding environment.
- **GitHub:** For collaboration, and hosting the source code repository.
- **MongoDB Atlas:** A cloud-based database solution for managing and scaling user data securely.
- **MongoDB Compass:** A GUI tool to visualize and interact with the MongoDB database during development.

# Conclusion and Uniqueness

**Conclusion:**

Our project addresses a significant gap in health management by providing an accessible, reliable, and user-friendly solution for initial health assessments without relying on wearable devices. It empowers users to monitor and improve their health through simple data inputs and actionable insights based on verified health standards. This approach promotes preventive care, and fosters a culture of health awareness and maintenance.

**Uniqueness:**

1. **Smartwatch Independence:**
   Unlike most health apps that rely on fitness trackers, our solution works entirely on basic user inputs, making it inclusive and accessible to those without wearables.

2. **Evidence-Based Standards:**
   The app generates health insights using globally recognized health standards, ensuring credibility and accuracy.

3. **Cost-Effective Solution:**
   Eliminates the need for expensive devices or tests, making health monitoring affordable for all.

4. **User-Centric Design:**
   Focuses on simplicity and usability, catering to a wide demographic, including those unfamiliar with technology.

5. **Preventive Health Focus:**
   Shifts the emphasis from tracking fitness metrics to providing actionable insights for overall health improvement.

6. **Scalable and Adaptable:**
   Built with modern, scalable technologies, the app can easily integrate new features, like personalized recommendations or AI-driven insights, to evolve with user needs.

This project stands out as an innovative and inclusive approach to health management, making it a valuable contribution to society and the health-tech industry.