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| FORM 2  THE PATENTACT 1970  (39 Of 1970)  &  The patents Rules, 2003 PROVISIONAL/COMPLETE SPECIFICATION  (See section 10 and rule 13) |
| **1. TITLE**  **App-Based Digital Audiometer for Assessing Hearing ability** |
| 1. **APPLICANT (S)**    1. **NAME:** Kamaraj College of Engineering and Technology    2. **NATIONALITY:** Indian    3. **ADDRESS:** S. P. G. Chidambara Nadar-C. Nagammal Campus, K. Vellakulam- 625 701,   Near Virudhunagar, Tamil Nadu |
| **3. PREAMBLE TO THE DESCRIPTION**  Overview:  The present invention discloses a novel audiometer app designed for pure tone testing with the capability to assess multiple frequencies in Hertz (Hz) and multiple decibels. The app provides a user-friendly interface for conducting audiometric evaluations and presents the results in a graphical representation, offering a comprehensive overview of the individual's hearing abilities. The primary objective is to offer a convenient, accurate, and accessible solution for audiometric assessments in diverse settings. |
| **4. DESCRIPTION**  Key Features:   * **Portability:** Users can conduct hearing tests anytime, anywhere, using their smartphone or web application along with compatible hardware. This makes it convenient for both users and healthcare professionals. * **Cost-effectiveness:** Traditional audiometry equipment can be expensive and bulky. App-based digital audiometers offer a more affordable solution without compromising on accuracy or reliability. * **Accessibility:** By utilizing widely available smartphones and web applications, digital audiometers can reach a broader range of users, including those in remote areas or with limited access to healthcare facilities. * **User-friendly interface**: The app provides an intuitive interface for conducting hearing tests, guiding users through the process with clear instructions and prompts. This ensures that tests are conducted accurately and efficiently. |

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| * **Pure Tone Audiometry:** This mode allows users to test their ability to hear pure tones at different frequencies. Users typically respond to the tones by pressing a button, enabling the app to determine their hearing thresholds. * **Data analysis:** The app analyzes the collected data to generate a comprehensive hearing profile for the user. This includes information about their hearing thresholds at different frequencies, helping to identify any hearing loss problem. * **Results and recommendations:** After the test is completed, the app provides the user with their hearing profile, including any identified hearing loss. It may also offer recommendations, such as seeking further evaluation by an audiologist or taking preventive measures to protect their hearing. |
| **5. CLAIMS – you can even claim your logo, if needed**  **Claim 1- Method Claims:**  A method for assessing hearing capabilities using a portable digital audiometer system comprised:  **a.** Initiating a hearing test through an android smartphone or web application interface;  **b.** Conducting pure tone audiometry to test the user's ability to hear pure tones at different frequencies;  **c.** Analyzing collected data to generate a hearing profile;  **d.** Providing test results and recommendations to the user through the application interface.  **Claim 2 - System Claims:**  **a.** A mode for testing the user's ability to hear pure tones at various frequencies, with the user responding through the application interface.  **b.** The smartphone or web application interface provides clear instructions and prompts to guide the user through the testing process.  **c.** Data analysis algorithms determine the user's hearing thresholds at different frequencies by analyzing collected data.  **d.** Test results and recommendations, including the user's hearing profile, identification of any hearing loss, and suggestions for further evaluation or preventive measures, are provided through the application interface.  **Claim - Software Claims:**  A computer-implemented method for conducting hearing tests, comprising:  **a.** receiving user input through a smartphone or web application interface;  **b.** generating pure tones at varying frequencies using compatible hardware;  **c.** presenting the pure tones to the user via the application interface;  **d.** receiving user responses to the presented pure tones;  **e.** analyzing the user responses to determine hearing thresholds at different frequencies;  **f.** generating a comprehensive hearing profile based on the analyzed data; and  **g.** providing test results and recommendations to the user through the application interface. |

**Main Claim:**

An android application to assess the hearing ability and generate the result in terms of graphical representation.

**ABSTRACT OF THE INVENTION – Add a word graphical representation**

Our invention introduces an innovative system and method for conducting thorough hearing tests via a digital audiometer seamlessly integrated with either an android smartphone or web application interface. The system incorporates compatible hardware designed to generate precise pure tones at varying frequencies. This hardware is complemented by a user-friendly interface within the application, which guides individuals through the testing process effortlessly. Users interact by responding to the presented tones directly through the intuitive interface. These responses are meticulously analyzed to ascertain the user's hearing thresholds across different frequencies. Leveraging this data, our system produces a comprehensive hearing profile, meticulously detailing any identified hearing loss or impairments. Beyond mere data provision, our invention goes a step further by furnishing users with actionable insights and recommendations directly through the application interface. These recommendations may include seeking further evaluation by a healthcare professional or adopting preventive measures to safeguard hearing health. Overall, our solution represents cost-effective and accessible means of accurately assessing an individual's hearing ability.

Can add the graph screenshots….

If logo is claimed, then add that diagram also

Diagram ?

Paste your Scanned signatures of all