



**NEW HORIZON  
COLLEGE OF ENGINEERING**

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC  
Accredited by NAAC with 'A' Grade, Accredited by NBA

## **A MINI PROJECT REPORT**

*on*

**WEB DESIGN TECHNOLOGIES (24CSE361)**

**PRODUCT LANDING PAGE**

*Submitted by*

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*In partial fulfillment for the award of the degree of*

**BACHELOR OF ENGINEERING**

*in*

**COMPUTER SCIENCE AND  
ENGINEERING**

**Academic Year: 2025-26 (ODD SEM)**



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## CERTIFICATE

This is to certify that the mini project work titled “**PRODUCT LANDING PAGE FOR SELFCLEANING EARPODS**” is a bonafide work carried out by **RAHUL (1NH24CS161)** in partial fulfillment of the degree of **Bachelor of Engineering in Computer Science and Engineering** of the New Horizon College of Engineering during the year **2025-2026**.

Signature of Guide

Signature of HOD

### SEMESTER END EXAMINATION

*Name of the Examiner*

*Signature with date*

1. \_\_\_\_\_

2. \_\_\_\_\_

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## ABSTRACT

The Self-Cleaning Earpods are designed to solve one of the biggest problems with everyday earbuds—hygiene. Traditional earbuds quickly collect earwax, sweat, and dust, which not only affects sound quality but also creates health risks and forces users into constant manual cleaning. Our innovation combines smart vibration cleaning technology with an antimicrobial nano-coating to automatically remove debris and prevent bacterial growth. With a simple one-touch cleaning mode, users can refresh their earpods anytime, while a companion app provides real-time cleanliness monitoring and alerts. The result is a product that delivers crystal-clear sound, effortless hygiene, and extended durability, ensuring a healthier and more convenient listening experience. By merging style, technology, and wellness, Self-Cleaning Earpods redefine personal audio for modern lifestyles.

Say goodbye to messy, unhygienic earbuds. Self-Cleaning Earpods are designed to keep themselves fresh and spotless with every use. Powered by smart vibration cleaning and antimicrobial coating, they automatically remove dust, sweat, and earwax—so you enjoy crystal-clear sound without the hassle of manual cleaning. With a sleek design, long-lasting performance, and effortless hygiene, these earpods redefine what it means to stay connected in style.

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## **CHAPTER 1**

### **INTRODUCTION**

In today's fast-paced digital world, wireless earpods have become an essential accessory for communication, entertainment, and productivity. However, issues related to hygiene, maintenance, and long-term audio performance often affect user satisfaction. The introduction of **self-cleaning earpods** represents a significant advancement, addressing these concerns through innovative technology that automatically removes earwax, dust, and bacteria. To effectively present this breakthrough to potential users, a dedicated **product landing page** plays a critical role. It serves as the primary platform for showcasing the earpods' features, explaining the benefits of the self-cleaning mechanism, and guiding users toward informed purchasing decisions. A well-crafted landing page not only enhances product visibility but also establishes trust,

#### **1.1 PROBLEM DEFINITION**

Traditional earpods accumulate earwax, dust, and bacteria over time, leading to hygiene issues, degraded audio quality, and frequent manual cleaning, which is inconvenient and often ineffective. Customers looking for premium audio devices increasingly expect built-in maintenance features and hygienic solutions.

Despite the market growth for wireless audio products, there is a lack of awareness about self-cleaning technology and its benefits.

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## 1.2 OBJECTIVE

### Primary Objectives

- To clearly communicate the features and benefits of the *self-cleaning earpods*.
- To build trust and educate consumers about the hygiene and performance advantages.
- To drive conversions through compelling design, storytelling, and user engagement.
- To highlight the innovation and differentiate the product in a saturated audio market.

### Secondary Objectives

- Improve brand visibility and product awareness.
- Capture leads through newsletter sign-ups or early-access forms.
- Provide an intuitive and visually appealing user experience.
- Encourage social sharing and word-of-mouth promotion.

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### 1.3 METHODOLOGIES TO BE FOLLOWED

The project development follows a standard web development methodology, involving:

- Requirement Analysis: Defining the necessary fields for the appointment form and the information required for the specialist list.
- Design: Creating the structure (HTML) and visual style (CSS) for the pages.
- Implementation: Coding the web pages (Main Page, Appointment Form Page, etc.).
- Testing and Review: Ensuring all form fields work and the styling is consistent

---

## **CHAPTER 2**

### **FUNDAMENTALS OF THE LANGUAGES USED**

#### **2.1 HTML**

**Hypertext Markup Language (HTML)** is the standard markup language[a] for documents designed to be displayed in a web browser. It defines the content and structure of web content. It is often assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for its appearance.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes, and other items. HTML elements are delineated by *tags*, written using angle brackets. Tags such as `<img>` and `<input>` directly introduce content into the page. Other tags such as `<p>` and `</p>` surround and provide information about document text and may include sub-element

---

tags. Browsers do not display the HTML tags, but use them to interpret the content of the page.

## 2.2 HTML TAGS

Tags	Descriptions
<html> ... </html>	Declares the Web page to be written in HTML
<head> ... </head>	Delimits the page's head
<title> ... </title>	Defines the title
<body> ... </body>	Delimits the page's body
<b>...</ b >	Set ... in boldface
<i>...</ i >	Set ... in italics
<center>...</center>	Center on the page horizontally
<ul> ... </ ul >	Brackets an unordered (bulleted) list
<ol> ... </ol>	Brackets a numbered list
<li> ... </li>	Brackets an item in an ordered or numbered list
 	Forces a line break here
<p>	Starts a paragraph
<hr>	Inserts a horizontal rule
	Displays an image here
<a href="...">... </a>	Defines a hyperlink

### 2.2.1 HTML TAGS

## 2.3 CSS

Cascading Style Sheets (CSS) is a style sheet language used for specifying the presentation and styling of a document written in a markup language such as HTML or XML (including XML dialects such as SVG, MathML or XHTML).[2] CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of content and presentation, including layout, colors, and fonts. This separation can improve content accessibility, since the content can be written without concern for its presentation; provide more flexibility and control in the specification of presentation characteristics; enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, which reduces complexity and repetition in the structural content; and enable the .css file to be cached to improve the page load speed between the pages that share the file and its formatting

---

## 2.4 CSS properties

### Common CSS Properties and Their Descriptions:

Property	Description
Color	Sets the text colour.
font-family	Specifies the font.
font-size	Sets the text size.
background-color	Sets the background colour of an element.
Margin	Defines space outside the element's border.
Padding	Defines space inside the element's border
Border	Defines the border around an element.
text-align	Aligns text (e.g., left, right, center).
Display	Specifies layout behaviour (e.g., block, inline).

#### 2.4.1 CSS PROPERTIES

---

## **CHAPTER 3**

### **REQUIREMENT SPECIFICATION**

#### **3.1 HARDWARE REQUIREMENTS**

##### **1. Processor:**

- Minimum: Dual-core processor (e.g., Intel Core i3 or equivalent).
- Recommended: Quad-core processor or higher for multitasking.

##### **2. RAM:**

- Minimum: 2 GB (sufficient for lightweight operations).

##### **3. Storage:**

- A minimum of 100 MB of free space (to store the HTML file, assets, and browser cache).

##### **4. Display:**

- Screen resolution of at least 1024x768 to accommodate the quiz UI.
- A modern display supporting standard web colors.

##### **5. Input Devices:**

- Keyboard and mouse (or touch input for tablets and mobile devices).

##### **6. Internet Connection:**

- Required since some animations in the document are procured from sources in the internet.



### 3.1 SOFTWARE REQUIREMENTS

#### 1. Operating System:

- Windows (7 or higher), macOS (10.12 or higher), or a modern Linux distribution.
- For mobile: Android 5.0+ or iOS 10+.

#### 2. Web Browser:

- Modern web browsers like:
  - Google Chrome (latest version preferred).
  - Mozilla Firefox (latest version preferred).
  - Microsoft Edge (latest version).
  - Safari (for macOS/iOS).
- Ensure the browser supports ES6 JavaScript and CSS3 features.

#### 3. Text Editor/IDE (for development or modification):

- Notepad, Visual Studio Code, Sublime Text, Atom, or any basic text editor.

#### 4. Web Server (Optional):

- For local hosting (if not opening directly in a browser):
- Use a lightweight server like Python's built-in HTTP server (`python -m http.server`) or tools like XAMPP.

#### 5. Dependencies:

- No external libraries are used, so no additional installations
  - Ensure JavaScript is enabled in the browser.
-

---

**CHAPTER 4****DESIGN****4.1 DESIGN GOALS****1. Interactive Learning Experience:**

The primary goal is to create an engaging and educational environment where users can test and improve their knowledge of HTML, CSS through a dynamic quiz interface.

**2. User Engagement:**

Use visually appealing elements like gradient backgrounds, animations (waves and shake effects), and hover interactions to captivate users and keep them engaged.

**3. Ease of Use:**

Simple and intuitive navigation with clear instructions, a prominent "Appointment form" button, and user-friendly controls for transitioning.

**4. Dynamic Feedback:**

Patient feedback is a powerful way to collect patient insights by listening to the voice of patients at various points of the patient journey and use them to drive quality improvement, enhance patient safety, and foster a culture of continuous care and improvement. It is a great way to assess how well your healthcare professionals are able to satisfy your patients with treatment and health services, identify points of friction or frustration which patients go through while availing your healthcare services, and take action to improve their overall patient experience.

---

**5. Responsive Design:**

Ensure the layout is adaptable and centered, with sufficient padding and alignment to maintain a clean and professional look across different screen sizes.

**6. Encouragement and Motivation:**

Use performance messages based on appointments to encourage users to continue.

**7. Reusability and Extendibility:**

Modular design with clear structure in HTML, CSS.

---

**CHAPTER 5****IMPLEMENTATION**

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width,
initial-scale=1.0">
  <title>Self-Cleaning Earbuds</title>

  <style>
    body {
      margin: 0;
      font-family: Arial, sans-serif;
      background: #f9f9f9;
      color: #333;
    }

    header {
      background: #111;
      color: #fff;
      padding: 20px 40px;
      display: flex;
      justify-content: space-between;
      align-items: center;
      position: sticky;
      top: 0;
      z-index: 1000;
    }

    header h1 {
      margin: 0;
      font-size: 24px;
    }
  </style>
```

---

```
nav a {
    color: #fff;
    margin-left: 20px;
    text-decoration: none;
    transition: 0.3s;
}

nav a:hover {
    color: #00e6a8;
}

/* HERO WITH BACKGROUND IMAGE */
.hero {
    padding: 120px 20px;
    text-align: center;
    color: white;
    background-image:
url('https://th.bing.com/th/id/R.c1293faa2874ab9dabec154e2b39c2
02?rik=PnEuaS%2fflD71ZA&riu=http%3a%2f%2ffreviewcentralm
e.com%2fwp-content%2fuploads%2f2023%2f10%2f1.-Free-Buds-
Pro-
3.jpg&ehk=zc6NsyyEvmDRu%2fgtwYrSIh6DHXuXJebChss96u1
xwUA%3d&risl=&pid=ImgRaw&r=0');
    background-size: cover;
    background-position: center;
    background-repeat: no-repeat;
    position: relative;
}

/* dark overlay for readability */
.hero::before {
    content: "";
    position: absolute;

    top: 0; left: 0;
    width: 100%; height: 100%;
```

---

---

```
        background: rgba(0, 0, 0, 0.55);
        backdrop-filter: blur(2px);
    }

    .hero > * {
        position: relative;
        z-index: 2;
    }

    .hero h2 {
        font-size: 42px;
        margin-bottom: 10px;
    }
    top:0px;
    }

    .hero p {
        font-size: 18px;
        max-width: 700px;
        margin: auto;
    }

    .btn {
        background: #00e6a8;
        padding: 12px 28px;
        border-radius: 25px;
        font-size: 18px;
        margin-top: 25px;
        text-decoration: none;
        color: black;
        display: inline-block;
    }

    .btn:hover {
        background: #00c292;
    }

    }
```

---

---

```
.section {
    padding: 60px 20px;
    max-width: 1100px;
    margin: auto;
    text-align: center;
}

.features {
    display: grid;
    grid-template-columns:          repeat(auto-fit,
minmax(280px, 1fr));
    gap: 30px;
    margin-top: 40px;
}

.feature-box {
    background: #fff;
    padding: 25px;
    border-radius: 10px;
    box-shadow: 0px 4px 12px rgba(0,0,0,0.1);
}

.pricing {
    background: #111;
    color: white;
    padding: 60px 20px;
}

.price-box {
    background: #222;
    padding: 35px;
    border-radius: 10px;
    max-width: 400px;
    margin: auto;
}
}
```

---

---

```
        footer {
            background: #000;
            color: #aaa;
            text-align: center;
            padding: 20px 0;
            margin-top: 40px;
        }
    </style>
</head>

<body>

<header>
    <h1>CleanSound Pro</h1>
    <nav>
        <a href="#features">Features</a>
        <a href="#pricing">Pricing</a>
        <a href="#buy">Buy</a>
    </nav>

</header>

<section class="hero">
    <h2>The World's First Self-Cleaning Earbuds</h2>
    <p>Experience ultra-clear audio with automated UV-C
sterilization, water resistance, and all-day battery life.</p>
    <a href="#buy" class="btn">Pre-Order Now</a>
</section>

<section class="section" id="features">
    <h2>Revolutionary Features</h2>

    <div class="features">
        <div class="feature-box">
            <h3>Water Resistant</h3>
            <p>Engineered to withstand splashes and sweat.</p>
```

---

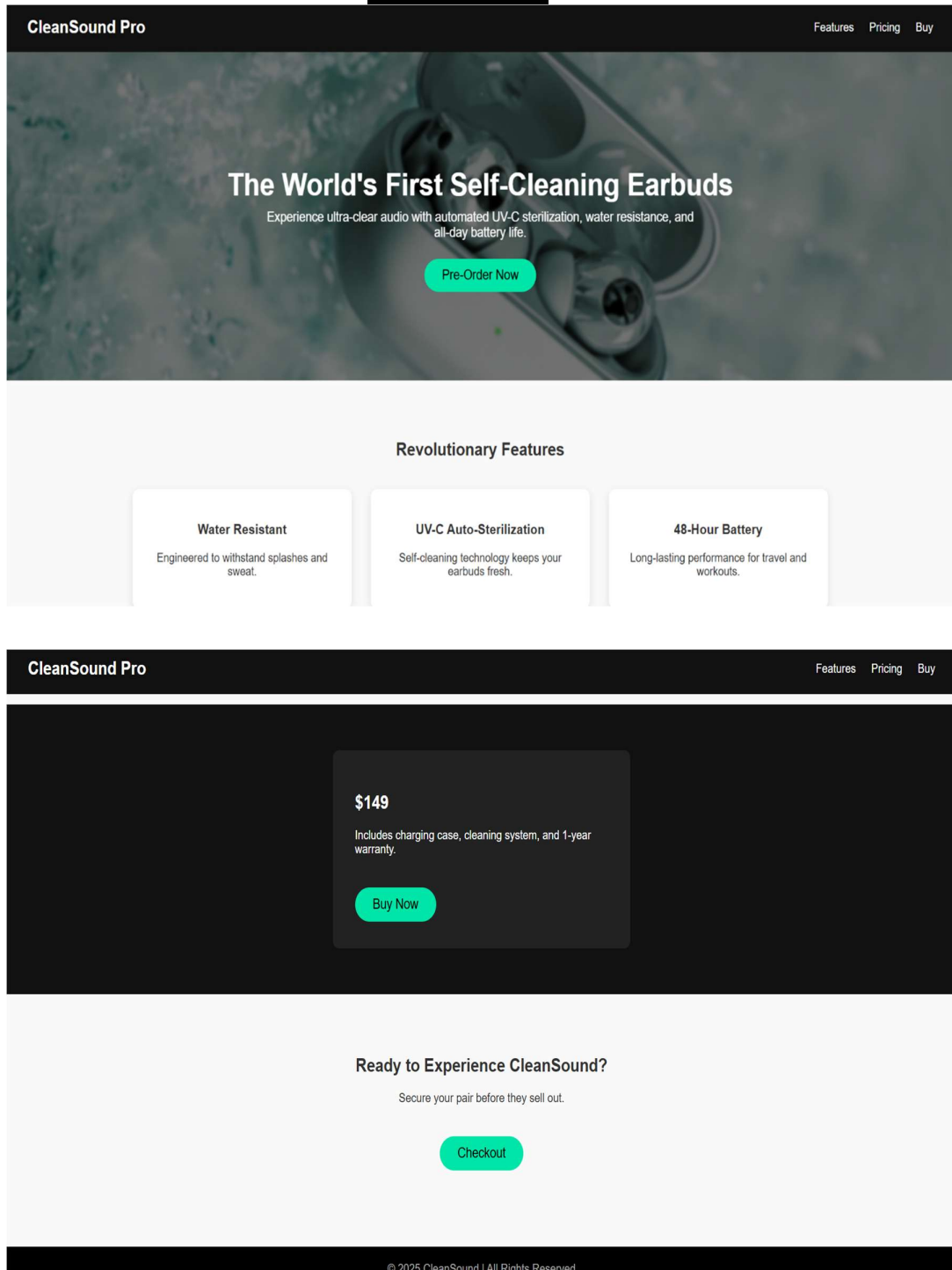


```
</div>
    <div class="feature-box">
        <h3>UV-C Auto-Sterilization</h3>
        <p>Self-cleaning technology keeps your earbuds
fresh.</p>
    </div>

    <div class="feature-box">
        <h3>48-Hour Battery</h3>
        <p>Long-lasting performance for travel and
workouts.</p>
    </div>
</div>
</section>
<section class="pricing" id="pricing">
    <div class="price-box">
        <h2>$149</h2>
        <p>Includes charging case, cleaning system, and 1-year
warranty.</p>
        <a href="#buy" class="btn">Buy Now</a>
    </div>
</section>
<section class="section" id="buy">
    <h2>Ready to Experience CleanSound?</h2>
    <p>Secure your pair before they sell out.</p>
    <a class="btn" href="#">Checkout</a>
</section>
<footer>
    © 2025 CleanSound | All Rights Reserved
</footer>
</body>
</html>
```

## CHAPTER 6

### RESULTS



### 6.1 Landing page

## **CHAPTER 7**

### **CONCLUSION**

The development of a product landing page for self-cleaning earpods is essential for showcasing this innovative technology and communicating its unique value to consumers. By clearly defining the problem of earbud hygiene, outlining focused objectives, and following a structured methodology—from research and design to content creation and optimization—the landing page can effectively educate users, build trust, and drive purchasing decisions.

Through compelling visuals, user-centric design, and clear messaging, the landing page will not only highlight the product's self-cleaning functionality but also position the earpods as a premium, future-ready solution in a competitive audio market. Ultimately, a well-designed landing page will play a crucial role in increasing product visibility, enhancing customer engagement, and achieving strong conversion outcomes.

## **REFERENCES**

- <https://devdevout.com/css/css-animated-backgrounds>
- [https://www.w3schools.com/tags/tag\\_html.asp](https://www.w3schools.com/tags/tag_html.asp)
- <https://github.com/topics/web-development-project>
- [https://www.w3schools.com/js/js\\_object\\_property.asp](https://www.w3schools.com/js/js_object_property.asp)
- <https://developer.mozilla.org/en-US/docs/Learn/CSS>