

**Computer science department.**

**Human Computer Interaction COMP332. PHASE One .**

**“Online shop for selecting and buying Smart Home Devices and Solutions”**

**Prepared by Team 11 .**

|  |  |
| --- | --- |
| **Student Name** | **Student ID** |
| **Abdallah Mattour** | **1223061** |
| **Sameer Ayman** | **1221561** |
| **Mohammad Abuthaher** |  |
| **Zaid Tuffaha** | **1213434** |
| **Abdallah Najjar** | **1220864** |

**1- User Research**

This online shop is for people who want to buy smart home products like cameras and smart lights. We talked to people and got survey answers to understand what they want.

* Grandparents want safety alarms.
* First-time homeowners setting up a smart house.
* Parents want smart lights and baby cameras.
* Students want smart plugs and speakers.
* Young couples setting up their first home.

**User Insights:**

* People don’t like using many apps for different devices.
* Setting things up is hard and confusing for many.
* Some are worried about privacy and data.
* Older users find smart home apps hard to use.
* Many people think smart home products are too expensive.

**2- Competitive Analysis**

I looked at some smart home stores online like **Amazon ,IKEA** and **Sbitany**,

to see what they do well and what problems they have. This helps us understand what people like and what’s missing in the market.

**Amazon**

**Advantage:**

1. You can find almost any smart device here.
2. Fast delivery.
3. Works well with Alexa devices.

**Disadvantage:**

1. Too many products hard to choose for new users. (Minimal tech support)
2. No help in picking the right items. (Minimal integration guidance)
3. No setup support after you buy.

**Sbitany سبتاني-**

**Advantage:**

1. Trusted store — people know and trust it.
2. Sells some smart devices like cameras, smart TVs, lights.
3. You can shop in-store or online.

**Disadvantage:**

1. Not many smart devices to choose from.
2. No full smart home packages.
3. No help in choosing the right products.

**IKEA**

**Advantage:**

1. Very affordable.
2. Design is intuitive and simple
3. Works with Alexa, Google, and Apple.

**Disadvantage:**

1. Not many products to choose from.
2. The app is basic and not powerful.
3. Doesn’t have many advanced features.

None of these shops help people **choose** based on their **home**, **family**, or **needs**.  
Also, they don’t show if the products work well **together** or how to use them in a real house.  
That’s why I think my shop should give more **help**, like smart advice, a short quiz, and videos.  
My shop will be **simple**, made for people who are new to smart homes and want easy answers.

**3- Summarize Findings**

## Key Findings for Smart Home by Statistics

1. **Convenience is the Primary Motivation**
   * **46%** of consumers use smart home devices primarily for convenience
   * **17%** use it to monitor their homes while away.
2. **Homebuyer Preferences**
   * **78%** of potential home buyers are willing to pay more for a smart home.
   * **70%** are actively seeking homes equipped with smart technology
3. **Renters' Interests**
   * **82%** of renters desire at least one smart device or system in their homes.
   * Top preferences among renters include:
     1. **Voice control**: 50%
     2. **Smart appliances**: 41%
     3. **Smart lights**: 36%
4. **Security Devices are Highly Valued**
   * **37%** of consumers rank fire/theft alarm systems as the top protective devices.
   * Women and people over 35 cares more about home safety features.
5. **Gender-Based Usage Differences**
   * **17%** of men use smart home devices to lower utility bills, compared to **13%** of women.
   * **19%** of women use smart home devices for added security, compared to **13%** of men.
6. **Age-Based Preferences**
   * **36%** of individuals aged 35–54 believe cameras provide the most home protection.
   * **14%** of women aged 25–34 consider automatic locks as the most protective smart home device.
7. **Consumer Demographics**
   * **Approximately 75%** of smart home consumers are under the age of 55.
   * **40%** of smart home devices are owned by individuals aged 18–34, even though they represent only about 30% of the population.

**Implications for our Online Smart Home Shop**

1. **Tailor Marketing by Gender**
   * For men, focus on energy-saving devices that reduce utility bills.
   * For women, emphasize security features and peace of mind.
2. **Target Younger Demographics**
   * Develop marketing strategies aimed at consumers under 55, particularly those aged 18–34, who are more likely to adopt smart home technology.
3. **Cater to Homebuyers and Renters**
   * Offer packages tailored to homebuyers seeking comprehensive smart home solutions.
   * Provide affordable, easy-to-install devices suitable for renters, focusing on popular items like voice-controlled systems, smart appliances, and lighting.
4. **Offer Competitive Pricing and Support**
   * Combat perceptions of high costs by offering competitively priced products and bundles.
   * Provide robust customer support to assist with setup and troubleshooting, alleviating concerns about usability.
5. **Address Age-Specific Needs**
   * For the 35–54 age group, showcase high-quality camera systems.
   * For younger women (25–34), promote the benefits of automatic locks.
6. **Stock Popular Products**
   * Ensure availability of in-demand items like smart TVs, speakers, and home monitoring systems.

**4- Create Personas**

1. Adam The Tech Enthusiast

* Age: 29
* Background: Software Engineer who loves trying new technologies and smart gadgets.
* Tech Experience: Very tech-savvy; comfortable setting up and experimenting with different smart devices.
* Goals:
* Create a seamless smart home system with all devices working together.
* Stay updated with the latest smart home trends.
* Challenges:
* Gets frustrated when devices are not compatible.
* Annoyed by complicated and confusing setup processes.

1. Lina – The Working Mom

* Age: 34
* Background: Marketing Manager balancing work and family life.
* Tech Experience: Average; uses smart devices mainly for convenience.
* Goals:
* Automate daily tasks to save time and manage home safety.
* Use reliable devices that don't require much technical effort.
* Challenges:
  + Limited time to research and set up devices.
  + Overwhelmed by too many product options and choices.

1. Khalid – The Retiree

* Age: 67
* Background: Retired teacher focused on maintaining a safe and comfortable home.
* Tech Experience: Low; finds technology confusing and prefers simple solutions.
* Goals:
* Use smart devices for safety, like alarms and easy lighting control.
* Feel confident and independent using smart home features.
* Challenges:
* Struggles with complex apps and small device interfaces.
* Needs voice-activated systems and easy-to-follow instructions.

1. Nour – The Budget Renter

* Age: 22
* Background: University student living in a rented apartment.
* Tech Experience: Moderate; uses tech mainly for study
* Goals:
  + Find affordable, easy-to-install smart home products.
  + Set up temporary devices without needing to make permanent changes.
* Challenges:
* Budget limits choices.
* Needs non-invasive solutions that don't damage rental property.

1. Omar – The Green Advocate

* Age: 38 Background: Environmental consultant passionate about sustainability.
* Tech Experience: High; actively seeks out eco-friendly technologies.
* Goals:
  + Reduce energy usage through smart automation.
  + Track and manage carbon footprint with smart devices.
* Challenges:
* Hard to find products that are truly eco-certified.
* Needs clear, honest information about product sustainability

**5- Define the Problem Statement**

As the smart home technology market grows, customers face serious challenges when trying to buy smart devices.  
While many online stores (like Amazon, IKEA, and Sbitany) offer hundreds of products, they fail to guide users properly in choosing devices that are compatible, easy to install, and matched to their real needs.

Many users, especially non-technical buyers, families, elderly users, and first-time homeowners, feel overwhelmed by the technical terms, endless choices, and complicated setup processes.  
They also worry about privacy and fear wasting money on devices that won't work together.

There is also a trust gap: customers are not sure which products will work together smoothly (e.g., combining a smart camera from Brand A with a smart light from Brand B).  
They also find it hard to get post-purchase help, with most stores offering little or no live support during or after the purchase.

**Existing Problems:**

* Too many options without clear guidance.
* Lack of smart home packages or curated bundles.
* No help to ensure device compatibility.
* Complex setup instructions.
* Little or no real-time customer support.
* Privacy and security concerns not addressed clearly.

Therefore, there is a strong need for a **trusted, easy-to-use online store** that:

* **Simplifies** smart home shopping through **guided tools** (like quizzes and manuals).
* **Curates** smart home bundles that are guaranteed to work together.
* **Offers live expert help** during shopping.
* **Explains privacy features** clearly.
* **Makes setup easy** with videos and simple guides.
* **Focuses on user needs** (budget, ecosystem, ease of use) rather than only selling random products.

Our solution aims to **remove the confusion**, **build trust**, and **make smart living easy** for everyone — from tech lovers to beginners, from students to families, from retirees to eco-friendly homeowners.

**6 - Brainstorm Solutions**

**1. Smart Shopping Assistant (Guided Quiz)**

Many users, especially first-time buyers and older users, feel lost when faced with hundreds of products.  
To solve this, we propose a **Smart Shopping Assistant**, a short interactive quiz that helps customers find the right devices based on:

* **Home Size** (Small apartment, Medium house, Large villa).
* **Primary Need** (Security, Lighting, Energy Saving, Entertainment, etc.).
* **Ecosystem Preference** (Alexa, Google Home, Apple HomeKit, No Preference).
* **Budget Range** (Economy, Mid-range, Premium).

### 2. Setup Tutorials, Manuals, and Video Guides

Setup difficulty is a huge problem, especially for older users or busy families.  
We propose offering:

* **Written Easy Setup Guides** with step-by-step pictures.
* **Short Video Tutorials** (1-3 minutes max) for each major product.
* **One-page "Quick Start" Sheets** in the product delivery box.
* Simple diagrams explaining step-by-step where to click .

### 3. Focus on Privacy, Security, and Trust

Because many users are concerned about hacking, spying, and data privacy,  
we propose the following:

* Add **Privacy Badges** on products that meet strong security standards.
* Create **Privacy and Security Pages** explaining:
  + How user data is protected.
  + How to set up devices securely.
  + What encryption or privacy certifications products have.

### 4. Community Hub

We will create a community space on our website where users can:

Share their smart home setups (like showing pictures of their homes).

* Give tips or ideas to other users.
* Ask for advice from people who already tried something.
* It's like a friendly club for smart home lovers.

**\*( people love learning from others, and it builds trust in our brand when customers help each other )**

### 5. Device Compatibility Checker

Customers often worry: "Will this camera work with my smart home system?"  
We propose building a **Compatibility Checker Tool** where users can:

* Enter the smart device they already own (example: Google Nest Hub).
* See a list of compatible products automatically.

This feature will:

* **Save time** for customers.
* **Increase trust** in buying multiple products together.
* **Reduce product returns.**

### 6. Full Mobile Optimization

Since more than 70% of users will shop from their phones,  
our website must be **fully mobile-optimized**:

* Large, easy-to-tap buttons.
* Clean menus with clear categories.
* Very fast loading speeds.
* “Quick Compare” function for mobile.

A great mobile experience will increase sales and satisfaction.

Top of Form

**7- Prototype Ideas**

## Prototype 1: Home Page

**Sketch Idea**:

* Top**: Logo** and **simple navigation bar** (Home, Shop, About, Help)
* Big **search bar** in the center ("Search for devices...")
* Below search bar: **Smart Quiz Banner** ("Not sure what you need? Take our 1-minute quiz")
* Sections**:**
  + **Popular Bundles** ("Starter Kit for Apartments", "Family Home Essentials")
  + **Shop by Category** (Lights | Cameras | Speakers | Plugs | Full Packages)
  + **How-To Videos** ("Easy setup in minutes!")

## Prototype 2: Product Page

**Sketch Idea**:

* Product Image (big and clear)
* Short Description (simple language)
* Price + Discount if available
* Compatibility Icons (e.g., "Works with Alexa", "Google Home", etc.)
* User Ratings and Reviews
* Buttons: "Add to Cart" | "Compare" | "Buy Now"
* "See How It Works" button (short demo video)

## Prototype 3: Smart Quiz Page

**Sketch Idea**:

* Friendly title: "Let's Find Your Perfect Smart Home Setup!"
* 5–6 simple questions (ex: "How many rooms do you want to automate?" "Do you prefer voice control?")
* At the end: Personalized device recommendations with bundles
* Button: "Shop My Matches"

## Prototype 4: Shopping Cart and Checkout

**Sketch Idea**:

* Cart shows:
  + Product name
  + Small image
  + Price
  + Compatibility Info (e.g., Alexa/Google)
* Checkout Page:
  + Delivery Date Estimate
  + Secure Payment Options (Visa, PayPal, Apple Pay)
  + Quick Summary of Return Policy
  + Live Chat Help Button

## Prototype 5: Help Center and Live Chat

**Sketch Idea**:

* Search Bar: "Ask a question..."
* FAQs by categories (Setup | Returns | Compatibility | Shipping)
* "Live Chat Now" button always visible at the bottom corner
* Option to **book a quick expert call**