Task 06:- STORY BOARDING

CT & DT – SPSU

TEAM:-CYBER TRIBE

TITLE:- IoT Based Smart Home System

IoT-Based Smart Home System

Project Overview:

The IoT - Based Smart Home System allows users to control their home devices remotely via smartphone or other connected devices. This system integrates smart lighting ,temperature control , security system , and energy monitoring into a seamless , user-friendly experience. Below is a storyboard detailing the user journey for the IoT Smart Home System.

Introduction to the Smart Home:-

- **Visual:** The user opens the IoT smart home app on their smartphone. A sleek, modern interface with a welcome screen appears, showing icons of smart home features (lights, thermostat, security cameras).
- **Text:** "Welcome to your Smart Home. Control everything at your fingertips!"
- **Audio:** A gentle notification sound plays as the app opens.
- **Interaction:** The user is prompted to swipe through a quick tutorial or proceed to the home control dashboard.

Controlling the Lights:-

- **Visual:** User selects "Living Room Lights." A brightness slider and timer appear.
- **Text:** "Dim lights or schedule them to turn off automatically."
- **Audio:** Soft click as the user adjusts the slider. Light icon brightens.
- **Interaction:** User adjusts brightness and sets a timer for midnight.

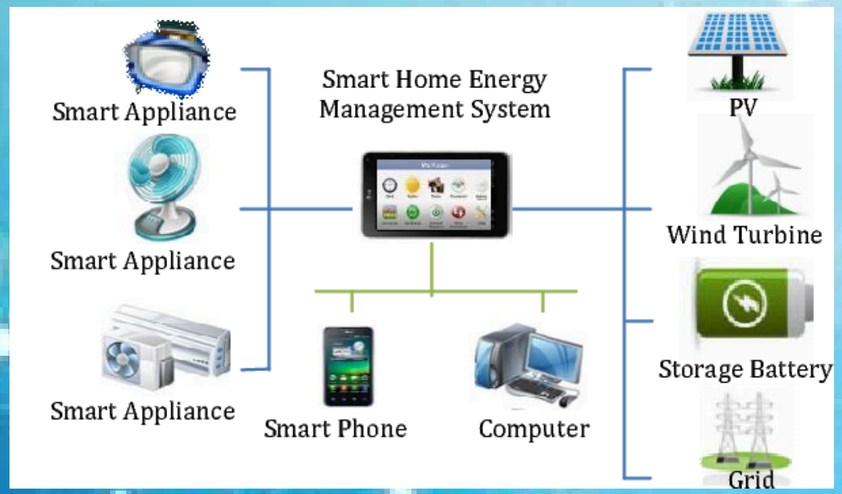
Security Camera :-

- **Visual:** User opens the "Security" section showing live front door camera feed and "Lock/Unlock" button.
- **Text:** "Monitor security or control your smart lock remotely."
- **Interaction:** User unlocks the door, hears a click, and gets a "Front Door Unlocked" confirmation.
- **Interaction:** User sees a package delivery on camera and taps "Record" to save footage.

Adjusting the Temperature:-

- **Visual:** User taps "Climate" tab, showing a thermostat dial (24°C) and heating/cooling toggle.
- **Text:** "Adjust home temperature and save energy."
- **Interaction**: User sets thermostat to 22°C and schedules AC to turn off in 2 hours.
- **Audio:** Soft buzz as AC starts.
- **Prompt:** "Energy-saving mode activated.

Energy Usage Overview:-



- **Visual:** User opens "Energy" section showing a real-time consumption graph and tips for saving energy.
- **Text:** "Track usage and get tips to save energy."
- **Interaction:** User reviews the report and turns off high-power devices remotely.
- **Audio:** Notification sound as energy usage drops.
- **Prompt:** "You've saved 10% energy this week!"

Custom Automation:-

- **Visual:** User taps "Automation" tab and sets rules for lights and cameras (lights off at 11 PM, cameras on at 10 PM).
- **Text:** "Create custom rules for your devices based on time or events."
- **Interaction:** User enters times and conditions.
- **Audio:** Confirmation sound as rule is saved.
- **Interaction:** User sets multiple rules for various devices and rooms.

Conclusion:-

The IoT-Based Smart Home System storyboard highlights a smooth, interactive journey for the user. From controlling lights and devices to monitoring security and energy usage, the system integrates convenience, security, and energy efficiency into a single platform. This storyboard can be the foundation for developing an intuitive, user-friendly interface that aligns with real-world smart home needs

Common Problems and Solutions in IoT-Based Smart Home Systems:-

1.Connectivity Issues:-

- **Problem:** Unstable Wi-Fi causes devices to become unresponsive.
- **Solution:** Use a reliable internet provider or backup connection.

2. Device Compatibility:-

- **Problem:** Devices from different brands may not work together.
- **Solution:** Choose devices that support standard platforms (Zigbee, Z-Wave).

3. Security Vulnerabilities:-

- **Problem:** Devices can be hacked if not properly secured.
- **Solution:** Use strong passwords, enable 2-factor authentication, and update firmware.

4.Power Outages:-

- **Problem:** Devices go offline during power outages.
- **Solution:** Install backup power like UPS or use devices with battery backup.

5. Privacy Concerns

- **Problem:** Data from devices may be mishandled.
- **Solution:** Review privacy policies and limit data sharing.