**Proposed project for the IT-specialist for application development for unit 10**

**Project Title:**

Development of a Smart Plug-Application implementing Automatic Shutdown During Inactivity to Optimize Energy Consumption.

**Project Description:**

Current State: Many households use smart home technologies to simplify daily life and reduce energy consumption. Despite these technologies, energy is often wasted on unused devices that remain plugged in but not actively in use. This unnecessary energy consumption leads to increased costs and higher CO₂ emissions, affecting both the economy and the environment.

**Problem:** Existing solutions on the market do not offer a simple, automated way to turn off unused devices, resulting in unnecessary energy consumption. Users lack the time and tools to constantly monitor and manage which devices need to be turned off.

**Desired State / Requirements:** The smart plug to be developed should automatically power off connected devices after a defined period of inactivity. The solution should be easy to use, secure, and compatible with existing smart home systems. This will reduce energy consumption while maintaining user comfort.

**Economic Benefits:** Implementing the smart plug will significantly reduce electricity costs for consumers. Additionally, the project contributes to reducing CO₂ emissions, supporting sustainable living practices. For the company, the product offers an opportunity to position itself as an innovative provider of smart home technologies, thereby gaining new market share.

**Project Phases with Time Planning:**

1. **Planning (10 hours)**
   * 1.1. Clarification of customer requirements (1 hour)
   * 1.2. Conducting a current state analysis (2 hours)
   * 1.3. Creation of a requirements specification (3 hours)
   * 1.4. Selection and evaluation of technology (2 hours)
   * 1.5. Development of a project plan (2 hours)
2. **Project Execution (20 hours)**
   * 2.1. Development of the software architecture (5 hours)
   * 2.2. Programming the control software (8 hours)
   * 2.3. Integration of the plug into an existing smart home system (3 hours)
   * 2.4. Testing and bug fixing (4 hours)
3. **Project Closure (10 hours)**
   * 3.1. Preparation of project documentation (3 hours)
   * 3.2. Final acceptance and client feedback (2 hours)
   * 3.3. Presentation of project results (2 hours)
   * 3.4. Post-processing and final report (3 hours)

**Target Audience for the Presentation:**

The target audience for the presentation includes the company’s management, technical leads, and the marketing team responsible for commercializing the smart plug. Additionally, representatives of potential distribution partners and stakeholders in the smart home technology sector will be included.

**Planned Presentation Medium:**

The presentation will be delivered using PowerPoint, supported by a live demonstration of the developed smart plug.

**Project Timeline:**

The project will be executed over a four-week period, starting on 02.09.2024 and concluding on 20.09.2024.