ICE Malta

MySuccess Website Developer

Final Project v2.2

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Contents

Project Overview

This project is designed to exercise your skills on multiple concepts covered throughout the MySuccess Website Developer course. You will be building a warranty system for a company, including a basic trouble-ticket system.

Skills you will exercise in this project include:

- Designing a database.
- Creating and implementing a database.
- Creating a REST API backend using PHP.
- Creating a frontend using HTML, CSS, and JavaScript.
- Testing an API with Postman.
- Making a project available via source control and creating a README file.

The exact methodology of designing your system is up to you! Check the following sections to see what you need to build.

Final Project

Kahuna Control

Scenario

Kahuna Inc. is a manufacturer of smart home appliances. They wish to implement a portal where customers can register their appliances. Once registered, customers will be able to check on their products, and see information such as serial number, purchase date, warranty time left and so on.

For products still under warranty, Kahuna also wants to implement a simple trouble-ticket system. Customers can submit a ticket regarding a product and receive replies from the customer support team. The customer support team will have elevated privileges, allowing them to view and reply to customer tickets.

For this prototype system, the following products should be made available to register:

Serial #	Product	Warranty
KHWM8199911	CombiSpin Washing Machine	2 Years
KHWM8199912	CombiSpin + Dry Washing Machine	2 Years
KHMW789991	CombiGrill Microwave	1 Year
KHWP890001	K5 Water Pump	5 Years
KHWP890002	K5 Heated Water Pump	5 Years
KHSS988881	Smart Switch Lite	2 Years
KHSS988882	Smart Switch Pro	2 Years
KHSS988883	Smart Switch Pro V2	2 Years
KHHM89762	Smart Heated Mug	1 Year
KHSB0001	Smart Bulb 001	1 Year

User Stories

Your system should implement the following user stories.

Story 1: Register Product

1. Customer creates an account, or logs into an existing account.
2. Customer chooses the register option and enters a serial number from the list shown in the scenario above.
3. System associates the product with the customer, and starts warranty period, calculated from current date. The purchase date is automatically set to the current date.
4. A product (i.e. serial number) can only be associated with a single customer.

Story 2: View Product Details

1. Customer creates an account, or logs into an existing account.
2. Customer goes to the “My Products” page.
3. Customer can see a grid of products they have previously registered.
4. Customer clicks on a product.
5. System displays product name, serial number, whether the product is still under warranty, and the warranty time left.

Story 3: Submit Ticket

1. Customer creates an account, or logs into an existing account.
2. Customer goes to the “My Products” page.
3. Customer can see a grid of products they have previously registered.
4. Customer clicks on a product.
5. Customer can now submit a ticket, as long as the product is still under warranty.

Story 4: Create Product

1. Agent logs into an existing account.
2. Agent taken to administrative dashboard.
3. Agent can create a new product, requiring serial number, name, and warranty length (in years).

Story 5: Reply to Ticket

1. Agent logs into an existing account.
2. Agent taken to administrative dashboard.
3. Agent can view tickets and reply to them.

Story 6: Use API

1. External program logs into REST API via agent account.
2. External program given secure token.
3. External program can now view products, add products, view tickets and submit reply to tickets.

Deliverables

For this project, you will need to deliver:

1. A REST API backend, written in PHP. This should allow agents to:
    a. Login.
    b. Create products.
    c. View products.
    d. Reply to support tickets.
    e. View support tickets.
2. An HTML/CSS frontend, which allows a user and agent to carry out all the user stories mentioned in the previous section.
3. A database, including designs (ERD), with populated data.
4. A collection and environment for testing the API with Postman.
5. Instructions on setting up and running your project.

Architecture

The architecture of this project is up to you. It is recommended to create a REST API backend using PHP, and then create a purely HTML/CSS/JavaScript front-end. This, however, is up to you. You are free to use any additional or different technologies for your project.

Working Environment

A working environment has been set-up for you to get started with your project. You can clone it from the following URL:

https://github.com/icemaltacode/sc-bed-finalproject-env

Using this working environment is entirely optional, but recommended if this is your first solo project.

Marking Scheme

Marks for this project are allocated as follows. **The pass mark is 50/100.**

#	Item	Marks
1	Kahuna Control backend REST API, written in PHP: • Code efficiency and structure [5]. • Separation of model and view [5]. • Routing of requests [10]. • JSON-formatted responses [5]. • HTTP success/error codes [5]. • Well-structured model with namespaces [5]. • Fully-working code [5].	40
2	HTML/CSS frontend: • Use of a templating language or JavaScript partials [10]. • Aesthetically pleasing [5]. • Well-structured separation between HTML, CSS, and JavaScript [5]. • Fully-working code (see user stories) [10].	30
3	Test suite created with Postman: • Well-organised collection with complete API coverage [5]. • Use of variables to automate testing [5].	10
4	Database design and implemented database. • Well-structured logical and physical ERDs [5]. • Database implementation matching ERD [5].	10
5	Instructions for setting up and running your project. • Code available on a public repository such as GitHub [5]. • README file, ideally using Markdown [5].	10

Submission

- Your project must be made available on a public code repository, such as GitHub or GitLab.
- The deadline for your project will be given by your Educator.
- Projects which fail to run will be graded based on source code only.

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