PLTW COMPUTER SCIENCE

Problem 3.3.1

Web Development: Creating Your Own Website

goals

- Decompose a project into smaller parts
- Apply coding fundamentals and iterative processes
- Identify a need and develop a website as part of a Scrum team with entrepreneurial intent

description of web page

Develop and create your own website based on a need.

Essential Questions

1. Why is it important to become a creator and not just a user?
2. Why are diverse perspectives and user stories so important when developing an app?
3. How do I communicate the way algorithms in my program function?
4. How do my algorithms integrate mathematical and/or logical concepts?
5. How is abstraction in the programming language I am using managing complexity in my program?
6. How am I applying independent, cooperative, and collaborative strategies to find my own answers?

essential Concepts

- Computer Science Practices, Computational Thinking, User-centered Design, Iterative Design

and Testing
- Decomposition and Agile
- Algorithms, Variables, Arguments, Procedures, Operators, Data Types, Logic, Loops, and Strings

Resources

Interpreted Performance Guide

Problem Introduction

Website App

You have already made quite a few types of apps for a website. Some apps were fun and allowed you to be creative. Some apps have a business application or represent the types of apps someone might even pay for to have on a professional website. Some apps could solve problems for people or give them a desired web presence. In each case, you were given the purpose of the app and website with an outline to follow for the creation of specific features. For the first time using the Django framework, you will define what you will create and determine what features need to be included in the website you develop.

The Process

This problem is limited to website development. Your teacher will help you get started by forming development teams and can provide guidance as to whether the idea you want to pursue can be done in the time given. You should target completion of this problem in 10 days. Suggested timeline might be:

Problem Timeline

Day 1	Brainstorm: Find an Idea to Pursue Document Your Development Milestones
Day 2	Prepare, Investigate, and Plan
Days 3–8	Design, Create, and Test
Day 9	Evaluate and Reflect
Day 10	Present

Assessing the Effectiveness of Your Team

How will you and your team evaluate the effectiveness in this development process? Before you begin, take a moment to review the Interpreted Performance Guide. In it, you will find the criteria and milestones that will be asked for at the end of the project.

Essential Development Questions

- Can you describe the stated purpose of the program?
- Can you describe difficulties and/or opportunities you encountered and how you dealt with them?
- Can you describe two algorithms working independently and in combination in your program?
- Can you describe an abstraction that helps manage complexity in your program?

PLTW DEVELOPER'S JOURNAL Document all problem work in your PLTW Developer's Journal.

The Development Process

Part A: Find an Idea to Pursue

Part B: Document Your Development Milestones

Part C: Prepare, Investigate, and Plan

Part D: Design, Create, and Test

Part E: Evaluate and Reflect

Part F: Present

Conclusion

1. How did you interpret and respond to the **essential questions**? Capture your thoughts for future conversations.