

Lesson 14: Project Decision Maker App

Part 3

Overview

The final lesson in the Practice PT progression is devoted to feedback and improvements to the Decision Maker App. Students work with classmates to review and update the functionality of their apps before submitting the final project.

Purpose

The Practice PT gives students the opportunity to design and program an app from scratch. Welcome to The Decision Maker App! Students demonstrate mastery of variables, conditionals, and functions by combining these elements into a useful program designed to solve the problem of making a decision.

Standards

Full Course Alignment

CSTA K-12 Computer Science Standards (2017)

- **AP** - Algorithms & Programming

Agenda

Lesson Modifications

Warm Up (2 minutes)

Intro the Project

Activity (33 minutes)

Test the Decision Maker App

Wrap Up (10 minutes)

Assessment: Practice PT Decision Maker Project

Objectives

Students will be able to:

- See rubric for guidance in measuring student learning

Preparation

- Make sure students will have access to their project guides

Links

Heads Up! Please make a copy of any documents you plan to share with students.

For the teachers

- **CSP Unit 4 - Variables, Conditionals, and Functions** - Slides

For the students

- **CSP U4 Practice PT Planning Guide**
- **CSP U4 Practice PT Rubric** - Rubric

Teaching Guide

Lesson Modifications



Attention, teachers! If you are teaching virtually or in a socially-distanced classroom, please read the full lesson plan below, then click **here** to access the modifications.

Warm Up (2 minutes)

Intro the Project

💡 Teaching Tip

Short Intro: The Warm Up today is short and light. Students should spend the maximum amount of time working on their projects.

🎤 Remarks

For the past few days we've been working on an app to help users make a decision. Now you will share that app with others, get feedback, make improvements, and submit for your final project.

Activity (33 minutes)

Test the Decision Maker App

💡 Teaching Tip

Supporting students in Practice PT Lessons

This is the final lesson where students complete their projects. The classroom energy will likely increase when students begin Step 8 and collect feedback from classmates. Encourage students to work productively during the testing phase so they have enough time to finish their projects.

What should you expect?

- It's ok to start the testing phase even if the apps aren't finished. Students should be able to explain to each other what they want their app to do when fully operational.
- Students should have their Planning Guides out again to record feedback and plans for implementing changes
- Frustration may be higher today if students feel rushed to debug and fix their projects for final submission. Make sure students have debugging partners and are actively making use of their debugging skills.
- If students are inspired to continue working on their projects or add additional features, you may need to extend the project an extra day or allow students to work outside of class.

📋 **Group:** Put students in groups of 3-4.

📋 **Do This:** Direct students to Level 1 in Code Studio. They should pull out their Planning Guides and with their group complete Step 8: Testing.

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Test Your Decision Maker App

📋 Step 8: Testing

- Each app is tested by at least two students.
- The creator of the app watches these students use the app and records feedback from the testers and things the creator noticed while observing someone else using the app. For example, the

creator may notice that the user has difficulty figuring out which button to click on the app to make it run. The creator notes this down in the Planning Guide.

Step 9: Pick Improvements

- In the Planning Guide, students pick at least one improvement that they can make based on feedback from their peers.

Step 10: Complete Your app

- Students use the feedback to update their app on Level 1.

Step 11: Record Video

- Students make a screen capture of their app being used.

Submit: Students complete a final check of their completed projects on Level 2. The rubric is displayed in the instruction box.



Submit Your Decision Maker App

Wrap Up (10 minutes)

Remarks

Congratulations! You built an app completely from scratch.

Reflection: Complete the two reflection questions in the Planning Guide

- **Question 1:** Provide a written response that:
 - describes the overall purpose of the program
 - describes the functionality of your app
 - describes the input and outputs of your app (Approx 150 words)
- **Question 2:** This project was created using a development process that required you to incorporate the ideas of your partner and feedback from your classmates. Provide a written response that describes one part of your app that was improved through input from EITHER your partner or feedback you received from classmates. Include:
 - Who specifically provided the idea or recommendation
 - What their idea or recommendation was
 - The specific change you made to your app's user interface or functionality in response to the recommendation
 - How you believe this change improved your app (Approx 150 words)

Assessment: Practice PT Decision Maker Project

Use the **CSP U4 Practice PT Rubric** provided with the project to assess student work.