

Lesson 16: Project Hackathon Part 4

Overview

This is the fourth day of a five-day unit project. Students continue to build their apps.

Purpose

Students will demonstrate their app design and programming skills throughout this five day project. In addition, students work with a dataset as this ensures students will be using the types of programming constructs required for the Create Performance Task, which this project is designed as a practice for. Students complete the project by individually filling out a Written Response, modeled after the Create PT.

This project can be used as a unit project, or as an end cap to the first semester of the course.

Standards

Full Course Alignment

CSTA K-12 Computer Science Standards (2017)

- **AP** - Algorithms & Programming

Agenda

Lesson Modifications

Warm Up

Activity (40 minutes) Hackathon Project

Wrap Up (5 minutes) Assessment: Optional

Objectives

Students will be able to:

- Continue programming an app which uses a database
- Translate a paper prototype to screens

Preparation

- Read through the Planning Guide
 - Pay particular focus to the Scoring Guidelines

Links

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

For the teachers

- **CSP Unit 5 - Lists Loops, and Traversals** - Slides

For the students

- **CSP U5 Hackathon Project Planning Guide** - Activity Guide

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

Do This: Move quickly to the activity portion of the lesson.

Activity (40 minutes)

Hackathon Project

 **Step 6 (continued):** Students work on building their apps, guided by their roles.


- Programmers: Use the table to guide you in adding programming statements to your project.
- Designers: Use the chart to guide you in adding screen elements to your program. You can work on a separate computer from your partner.

Teaching Tip

If the designer finishes their screens early, they can start pair programming with the programmer.

Do This: When the designer is ready to share their screens with the programmer, there are specific steps that must be followed after the designer clicks share and copies the link to their app. The programmer:


1. Add a blank screen.
2. Delete the old project screens.
3. Click the screen dropdown, then click "Import screen"
4. Paste in the link from the designer.
5. Select to import all of the screens.
6. Delete the blank screen.
7. Set the home screen to be the default screen (Hint: Go to design mode and click on the screen)

 **Do This:** Take some time around the midpoint of the activity for students to check the Overall Project section of the Scoring Guidelines (final page of the Planning Guide).

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Hackathon Project

Wrap Up (5 minutes)

 **Do This:** Remind students that they will be completing the Written Response portion of the project *individually* during the next lesson. Both students need to fully understand how the program works and have access to the final project.

Assessment: Optional

Planning Guide: As an optional completion assessment, you can look at the table in Step 4 of the Planning Guide.