Lesson 21: Project - App Presentation

Overview

Question of the Day: How can I present the steps in our design process to people outside of our team?

At this point, teams have researched a topic of personal and social importance, developed and tested both a paper prototype and a digital prototype, and iterated on the initial app to incorporate new features and bug fixes. Now is the time for them to review what they have done and pull together a coherent presentation to demonstrate their process of creation. Using the provided presentation template, teams prepare to present about their process of app development, including the problem they set out to solve, the ways in which they've incorporated feedback from testing, and their plans for the future.

Purpose

This lesson is the culmination of the last several weeks of project work. In preparing to present their work, it's important that students see this as more than just the programming element of their app - the goal of the presentation is to acknowledge the research, design, testing, and iteration that teams have gone through.

Assessment Opportunities

Use the project rubric attached to this lesson to assess student mastery of learning goals of this chapter. You may also choose to assign the post-project test through Code Studio.

Standards

Full Course Alignment

CSTA K-12 Computer Science Standards (2017)

- **AP** - Algorithms & Programming
- **CS** - Computing Systems
- **DA** - Data & Analysis
- **IC** - Impacts of Computing

Agenda

Warm Up (5 minutes)

Getting Prepared

Objectives

Students will be able to:

- Present technical information clearly to non-technical users
- Reflect on the development of an ongoing project

Preparation

- Determine how much time each group has to present. Typically this is 8-10 minutes per team, but remember to leave time for transitioning between teams
- Create a copy of the presentation template slide deck for each team
- Print one copy of the rubric for each team.

Links

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

For the teachers

- **CSD Unit 4 - The Design Process** - Slides

For the students

- **App Presentation** - Rubric
- **App Presentation** - Exemplar
- **App Presentation - Student Checklist**
- **App Presentation Template** - Slide Deck
- **Computer Science Practices** - Reflection

Journal

Days 1 and 2 (150 minutes)
Inspecting the Exemplar
Wrap Up Day 1 and 2 (5 minutes)

Days 3 and 4 (20 minutes)
Warm Up
Presentations

Wrap Up (5 minutes)
End of Course Survey

Extension Activities
App Celebration Night
Submit to Competitions

Teaching Guide

Warm Up (5 minutes)

Getting Prepared

Distribute: Make sure each team has all of their materials available from the entire unit.

Journal

Prompt: Look through all of the activity guides and materials you've created throughout this unit. Make a list of all the things you've completed while working to create your team app.

Discuss: Have students write individually, then share with their team to create a team list. Ask each team to share one thing on their list with the class, keeping a class list at the front of the room. Continue to have teams share until there is nothing left on their lists.

Discussion Goal

Goal: This has been a large project, and students may not fully realize how much they have accomplished so far. Use this as a moment to celebrate everything they've created, starting from their initial brainstorms to their completed app they worked on in previous lessons. Emphasize the planning steps that they completed as well, such as tracking their bugs and features or performing market research.

Remarks

> This has been a serious project, and we've come a long way from our initial brainstorming to having a working app that you can send to someone's phone - very exciting! To celebrate these accomplishments and help explain the problems we were trying to solve, we're going to present our apps to the class and highlight all the steps we've taken to build this app.

Question of the Day: How can I present the steps in our design process to people outside of our team?

Days 1 and 2 (150 minutes)

Inspecting the Exemplar

Distribute: Hand out the rubric to each team. Use the rubric as a reference while going through the Exemplar project below.

Display: Show the Exemplar project for the What's For Lunch app. These resources are provided in a separate slide deck based on the template that students will use. Go through each slide in the deck with students, highlighting each piece of the project. This is the same structure that teams will use when presenting their app. Remind students that they have already completed the majority of this work throughout the unit in their activity guides - they only need to apply it to the presentation. Let students know that presentations should be no longer than 10 minutes.

Do This: Provide a digital copy of the App Presentation Template for teams to build their presentation in. Most of the content of this slide deck should have already been completed in previous parts of this project. The last few slides (particularly Future Work and Reflection) will require more group thought or group work.

Presentation Template

Create Your Slides: The directions below are also available in the App Presentation Template slide deck, either on the slide itself or in the Speaker Notes at the bottom of the screen.

Teaching Tip

Who Is The Audience? This presentation is framed as informational to let other students in the class know about the progress each team has made in their app. Optionally, there are a few other ways this presentation could be framed for different audiences that you could choose to adopt:

- **Target Users:** Teams could imagine they were hired by their target users from the beginning of the projet and they are reporting back on the app they have developed for them. Their goal would be to highlight how the app will fit the needs of their community.
- **Investors:** There are several popular programs where inventors "pitch" an app idea to an investor. Teams could pretend they are on one of these shows and are "pitching" their app. Their goal would be to get the audience to invest in their app and help fund future development.

Slide 1: Application name and team roster

Slide 2: A brief Introduction of the problem the app is intended to address, core requirements of the solution, how the solution meets those requirements, and the social impact of this app

Slide 3: Describe the market research that was done, including specific apps that were used as inspiration and their strengths and weaknesses in meeting user needs

Slide 4: Show images of the paper prototype and describe the state of the app during paper prototyping

Slide 5: Show images of the digital prototype and describe changes introduced in this iteration

Slide 6: Demo the app, attempting to address all major functionality. Teams may choose to focus on the most functional version of their app, or they could demonstrate functionality across multiple app versions.

Teaching Tip

Polishing Up The App Even though teams should be focusing on their presentation, they can also devote some time to adding finishing touches to the app they decide to present. If a team finishes the presentation preparation early, they can also practice demoing and presenting the app to their peers.

Slide 7: List out the key feedback found in each round of user testing. Encourage students to focus on the feedback that most directly affected following iterations.

Slide 8: Describe what the next 3-5 changes would be if the team were to pursue an additional iteration. These changes should be driven by user feedback that the team didn't have time to address.

Slide 9: Reflect on the process as a whole. What went well? What didn't? What did you learn and what would you do differently?

Teaching Tip

If students are “stuck” about what went right or wrong in the project, prompt them to think about the communication between team members, or the lack of time to complete the task. Usually these are the two major things that can be problematic on a project.

Slide 10: Document any resources used during this project, including the apps found during market research, the source of any pictures used, and any other resources or websites used.

Circulate: As teams work on developing their presentations, push them to write in a way that is accessible to a non-technical audience. It often helps to "play dumb" while asking them to present slides to you in order to point out where their presentation may be difficult to understand for some audiences.

(Optional) Practice: If time, pair teams up to practice giving their presentations. Remind teams that their goal is to keep their presentation no longer than 10 minutes.

Wrap Up Day 1 and 2 (5 minutes)

Collect: Collect all the materials from each team in a safe storage location. Make sure teams know where to find their slides ahead of tomorrow’s presentation.

Days 3 and 4 (20 minutes)

Warm Up

Distribute: Make sure each team has all of their materials available from the entire unit. Allow students to load their presentations ahead of time. Consider letting students rehearse and practice in their teams for 5 minutes before beginning formal presentations.

Presentations

Transition: Remind each team how many minutes they have for their presentation. Decide ahead of time how you will be keeping time and how you will load their presentations so everyone can see.

Do This: Call up each team individually and allow them to present their work. Each team should allow some time (30 seconds) for questions from the other students.

Teaching Tip

Individual Presentations: It is important to keep the class on time with the presentations not only so all of the presentations can get done, but also so the students can see the value of presentation preparation.

1 Day Or 2 Days? Depending on how many teams you have, you may end up having presentations end during awkward times on your second day or presentations, or you may not even need a second day of presentations. Plan ahead of time how long you think these presentations will take and plan short enrichment or extension activities for any extra time you may have after the presentation.

Wrap Up (5 minutes)

Code Studio: Have students log into Code Studio and complete their reflection on their attitudes toward computer science. Although their answers are anonymous, the aggregated data will be available to you once at least five students have completed the survey.

Reflection

(Optional) Extension Activities: Depending on how long presentations take, you may have extra time with students during class. Consider if you would like to offer any enrichment or extension opportunities for students during this time.

End of Course Survey

If this is the last unit of CS Discoveries that you are teaching, also have students take the end-of-course survey. See the **CSD Instructions resource** for more information about the End-of-Course survey and how to assign and see the results.

Extension Activities

App Celebration Night

Invite parents, other members of the school, and anyone who was interviewed outside of class to come in for a celebration night. Teams can set up booths where they can present their apps and talk about the experience.

Submit to Competitions

Look into having students submit their creations into one of the many youth app competitions. National competitions such as the **Verizon App Challenge** and the **Congressional App Challenge** are available to pretty much everyone, but if you look around you may also find smaller local competetitions to participate in.