

Lesson 14: FRQ Practice

45 minutes

Overview

How will I use what I know about `ArrayList`s and standard algorithms to answer a Free Response Question?

Students practice developing solutions to AP CSA FRQs on a mock Arrays FRQ. Students apply decomposition and annotation strategies to identify the key components of the problem and validate their solutions using Scoring Guidelines.

Agenda

Warm Up (5 minutes)

Exam Structure

Activity (30 minutes)

Exam Setup

Free Response Question

Wrap Up (10 minutes)

Give One, Get One

Assessment (Optional)

Objectives

Students will be able to:

- Implement methods based on a given set of specifications
- Plan an algorithm using pseudocode

Preparation

- Print copies of the MusicQueue FRQ handout (one for each student)
- Print copies of the Java Quick Reference (one for each student)
- Print copies of the MusicQueue FRQ Scoring Guidelines (one for each student)
- Gather several sharpened pencils and scratch paper
- Check the **Teacher's Lounge** for verified teachers on the CSA Forum to find additional strategies or resources shared by fellow teachers

Links

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

For the students

- **Java Quick Reference** - Resource
- **MusicQueue FRQ** - Handout
- **MusicQueue FRQ Scoring Guidelines** - Handout

Teaching Guide

Warm Up (5 minutes)

Exam Structure

Remarks

Today, you will independently complete an FRQ called `MusicQueue`.

Today's FRQ will be conducted similarly to the AP Exam to prepare you for exam day. The strategies we have been using are the same, but the classroom setup will be more formal.

 **Do This:** Click through an animated slide to explain the exam structure.

 **Do This:** Have students participate in one of the breathing exercises.

Activity (30 minutes)

Exam Setup (5 minutes)


Remarks

For this section of the exam, you will use a No. 2 pencil to write your responses. Please raise your hand if you need a No. 2 pencil.

 **Distribute:** Give a sharpened No. 2 pencil to students who raised their hands.

Remarks

I will now distribute the exam materials. Please do not turn over any materials until you are told to do so.

 **Distribute:** Place a copy of the MusicQueue FRQ handout, Java Quick Reference, and a sheet of scratch paper faced down on each student's desk.


Remarks

In front of you, you should have a copy of the MusicQueue FRQ handout, Java Quick Reference handout, and a sheet of scratch paper. Please raise your hand if you are missing any exam materials.

 **Distribute:** Give any missing exam materials to students who raised their hands.

Remarks

On the cover of the MusicQueue FRQ handout, print your name and today's date where indicated.

 **Do This:** Direct students to fill in their names and the current date on the cover of the MusicQueue FRQ handout.

Free Response Question (25 minutes)

Remarks

You now have 25 minutes to complete the free response question. You are responsible for pacing yourself and may proceed freely from Part A to Part D. Show all necessary work and final solutions on

yourself and may proceed freely from Part A to Part B. Show all necessary work and final solutions on the MusicQueue FRQ. Solutions written on scratch paper will not be considered.

Good luck! You may now begin the exam.

Do This: Have students complete the free-response question on the MusicQueueFRQ. On the board, write the start and end times.

💡 Teaching Tip

If there is not a visible clock in the room, consider displaying a 25-minute timer.

During the AP Exam, students must sit quietly until the allotted testing time has elapsed. If you decide to adhere to this rule closely, encourage students that finish early to:

- Continue to work on their FRQ.
- Trace their code to ensure it is correct.
- Check their solution to ensure it aligns with their pseudocode solution.

Wrap Up (10 minutes)

Give One, Get One

🎤 Remarks

On the cover of the MusicQueue FRQ handout, print your name and today's date where indicated.

Do This: Collect the MusicQueue FRQ handout, Java Quick Reference, and scrap paper from each student.

Distribute: Give each student a copy of the MusicQueue FRQ Scoring Guidelines and one sticky note or scrap piece of paper.

Do This: Have students respond to the prompt on their sticky note or scrap piece of paper.

Do This: Play the music clip to cue the Give One, Get One activity and direct students to participate in a Give One, Get One.

Assessment (Optional)

MusicQueue FRQ: The MusicQueue FRQ handout can be used as an optional formative assessment.



This curriculum is available under a
Creative Commons License (CC BY-NC-SA 4.0).

If you are interested in licensing Code.org materials for commercial purposes **contact us**.