

# Troubleshooting JavaScript

Crushing programming bugs

## Assignment Description

Use the in-class build files (the Puzzle Drag and Drop) and fix the bugs that were discovered in class. This is a research assignment - solve the problems outlined in the brief.

Create new branches (named appropriately) and update the functionality to improve the game UX.

## Assignment Requirements

In its current state, our puzzle game has at least a couple of bugs. You can drag and drop more than one puzzle piece into a drop zone - this shouldn't happen. There should only be one piece in one drop zone at a time.

The second bug is the problem with pieces appearing in the drop zones on reset / choosing a new puzzle. Those should be removed / reparented back to the drag zone as well, so that the player has a fresh board to drop onto.

Solve these two problems. You can use the original drop function to solve the first problem, and another function for the second. Try experimenting with calling one function from another - you might not need to add any event handling to solve these issues, just extend the functionality.

Write out your plan FIRST. You can't solve a problem - coding or otherwise - if you don't understand what you need to do. Reason about the problem - think it through. Articulating the solution first will be a great help in completing the assignment successfully.

Don't overthink it! When you're starting down a programming path, the trend is to overcomplicate the issues. Resist that - break it down into simple steps BEFORE you try writing code, and then do some research.

Start by looking here:

<https://developer.mozilla.org/en-US/docs/Web/API/ParentNode/children>

<https://www.geeksforgeeks.org/how-to-check-if-an-element-has-any-children-in-javascript/>

Here's another hint:

<https://developer.mozilla.org/en-US/docs/Web/API/Node/removeChild>

And a couple more:

<https://flaviocopes.com/how-to-exit-a-function-javascript>

<https://www.tutorialspoint.com/How-does-JavaScript-return-statement-work>

## Additional Requirements

1. Include a written plan / path with your submission. Analyze the problem and provide the solution.
2. Create a Readme.md document for the repo with detailed information about the project.
3. Create a branch for each bug and its solution. Provide the JS for each.
4. Merge everything to the master branch (keep all branches in your repo).

## Submission

Homework must be submitted by midnight on the **Saturday of Week 7 (Feb 18th)**

- Github repo: readme.md file, master branch, design branch and development branch
- correct structure for a web project (css, js, images and index.html)
- Name the dev branches appropriately per feature IE **des.tvr.artwork**, **dev.tvr.script**
- Submit the repo link via FOL dropbox

**ONLY THE MAIN BRANCH WILL BE GRADED. DO NOT SUBMIT ZIPPED FILES!**

## Additional Information

Missed tests/exams will not be rescheduled without some valid evidence of some important event over which the student has no control (e.g., Court appearance, death in the family).

Missed tests or exams, therefore, can receive a zero. The students are advised to notify the professor prior to missing the test.

Students are expected to hand in all assignments to the course instructor on the due date, and all assignments must be submitted in the format specified by the instructor (e.g., on FOL, in printed form, on a specific lab computer, etc.); assignments will not be accepted in any format other than that specified.

Late assignments will not be accepted, nor will make up test or assignments be permitted, without some valid evidence of some important event over which the student has no control (e.g., documented illness, death in the family). Missed tests or assignments, therefore, will receive a mark of zero. Late assignments and make-up tests will only be permitted following the submission of adequate documentation acceptable to the instructor (e.g., a doctor's note).

Students are advised to notify the instructor prior to missing an assignment due date or a scheduled test.

Immediately upon return from an illness/absence in which a test or assignment has been missed, the student is responsible for contacting the course instructor to discuss the problem. The instructor will make arrangements for any student deemed eligible. The alternative test/assignment will be of equal value to the one missed with no grade penalty. The timeline and due dates will be determined by the course instructor.

At mid-term, any unsatisfactory results will be reported to the student.

This course may be revised by the professor with suitable notification to the students. Students are responsible for making arrangements to pick up missed handouts, assignments and course announcements from classmates.

Plagiarism (e.g., failure to acknowledge sources used, submitting another student's work under your name, or producing work for another student to submit) is a serious academic offense that shall result in appropriate penalties, to be determined at the discretion of the course professor in consultation with the chairperson of the Communication Arts division. The penalties shall range from failure of an assignment to possible failure of the course. Students shall not make the assumption that any provision will be made by the professor to permit the student to rewrite or redo failed assignments.