# A close up of a device Description automatically generatedGeneral Reference:

Assessment Structure

**2 hours**

Mixture of multiple choice (15-20) and VSCode (3-5) problems.

Coding problems will have specs to run (npm test) and check your work against

Part of the assessment will include writing tests using either assert or chai.expect (our tests will test your tests... meta)

Standard assessment procedures

You will be in an individual breakout room

Use a single monitor and share your screen

Only have open those resources needed to complete the assessment:

Zoom

VSCode

Browser with AAO and Progress Tracker (to ask questions)

Approved Resources for this assessment:

MDN: <https://developer.mozilla.org/en-US/docs/Web/JavaScript>

Node.js Documentation: <https://nodejs.org/docs/latest-v12.x/api/assert.html>

Chai Documentation: <https://www.chaijs.com/api/bdd/>

Testing With Chai:

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JS ErrorsFlash Cards:



Q: **When is a JavaScript Error Object thrown**?

A: The Error object is how JavaScript deals with runtime errors - so at code runtime!



Q: **How do you halt program execution with an instance of an error object in JavaScript?**

A: Using the keyword throw you can throw your own runtime errors that will stop program execution.



**Q: What type of block will allow you to run an erroring function then continue the execution of code after that function is run?**

A: We can use try...catch blocks with functions that might throw an error to catch that error and continue code execution after that error was thrown

**Q: When kind of error is thrown when the JavaScript engine attempts to parse code that does not conform to the syntax of the JavaScript language?**

A: A SyntaxError is thrown when there is an error in the syntax of the executed code.

**Q: What kind of error is thrown when a variable or parameter is not of a valid type?**

A: A TypeError is thrown when an operation cannot be performed because the operand is a value of the wrong type.

**Q: What type of error is thrown when a non-existent variable is referenced?**

A: The ReferenceError object represents an error when a non-existent variable is referenced.

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Description automatically generated**Q: What kind of error will be thrown when the below code is executed?**

|  |  |
| --- | --- |
| 1  2  3  4  5  6 | **function** callPuppy() {  **const** puppy = "puppy";  console.log(pupy);  }  callPuppy(); |

A: ReferenceError: pupy is not defined

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**Q: What kind of error will the below code throw when executed?**

|  |  |
| --- | --- |
| 1  2  3 | **let** dog;  dog(); |

A: TypeError: dog is not a function

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Description automatically generated**Q: What kind of error will the below code throw when executed?**

|  |  |
| --- | --- |
| 1  2  3 | **const** puppy = "puppy";  puppy = "apple"; |

A: TypeError: Assignment to constant variable.

**Q: What kind of error will be thrown when the below code is run?**

|  |  |
| --- | --- |
| 1  2  3 | **function** broken () {  console.log("I'm broke")  }} |

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Description automatically generatedA: SyntaxError: Unexpected token **}**

TTD Flash Cards

**Q: Identify at least two reasons why developers use TDD.**

1. Writing tests before code ensures that the code written *works*.
   * Code written to pass specs is guaranteed to be testable.
   * Code with pre-written tests easily allows other developers to add and test new code while ensuring nothing else breaks along the way.
2. Only required code is written.
   * In the face of having to write tests for every piece of added functionality TDD can help reduce bloated un-needed functionality.
   * TDD and YAGNI ("you ain't gonna need it") go hand in hand!
3. TDD helps enforce code modularity.
   * A TDD developer is forced to think about their application in small, testable chunks - this ensures the developer will write each chunk to be modular and capable of individual testing.
4. Better understanding of *what* the code should be doing.
   * Writing tests for a piece of code ensures that the developer writing that code knows what the piece of code is trying to achieve.

A:

1. Writing tests before code ensures that the code written works.

2. Only required code is written.

3. TDD helps enforce code modularity.

4. Better understanding of what the code should be doing.



**Q: What does TDD stand for?**

A: Test-driven Development



**Q: What are the three steps of the TDD workflow?**

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Description automatically generatedA: Red, Green, Refactor

1. **Red**: Write the tests and watch them fail (a failing test is red). It's important to ensure the tests initially fail so that you don't have false positives.
2. **Green**: Write the minimum amount of code to ensure the tests pass (a passing test will be green).
3. **Refactor**: Refactor the code you just wrote. Your job is not over when the tests pass! One of the most important things you do as a software developer is to ensure the code you write is easy to maintain and read.

**Q:** What does a developer do in the **Red** step in the TDD workflow?

A: Write the tests and watch them fail (a failing test is red). It's important to ensure the tests initially fail so that you don't have false positives.

**Q:** What does a developer do in the **Green** step in the TDD workflow?

A: Write the minimum amount of code to ensure the tests pass (a passing test will be green).

**Q: What does a developer do in the Refactor step in the TDD workflow?**

A: Refactor the code you just wrote. Your job is not over when the tests pass! One of the most important things you do as a software developer is to ensure the code you write is easy to maintain and read.

HTTP HEADERS Flash Cards

**Q: Host**

A: Specifies the domain name of the server.



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Description automatically generated**Q: User-Agent**

A: A string that identifies the operating system, software vendor or version of the requester.



**Q: Referer (NOT A TYPO)**

A: The address of the previous web page from which a link to the currently requested page was followed.

**Q: Accept**

A: Informs the server about the types of data that can be sent back.

**Q: Content-Type**

A: Indicates the media type found in the body of the HTTP message.

HTTP Verbs Flash Cards



**Q: GET**

A: A request to retrieve data. It will never have a body.



**Q: POST**

A: Sends data to the server creating a new resource.

**Q: PUT**

A: Updates a resource on the server.

**Q: PATCH**

A: Similar to PUT, but it applies partial modifications to a resource

**Q: DELETE**

A: Deletes the specified resource.

HTTP Status Codes Flash Cards



**Q: 200**

A: OK. The request has succeeded.

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**Q: 302**

A: Found. The URI of the requested source has been changed temporarily.

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**Q: 400**

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Description automatically generatedA: Bad Request. The server could not understand the request due to invalid syntax.

**Q: 401**

A: Unauthorized. The client must authenticate itself to get the requested response.

**Q: 402**

A: Payment Required

**Q: 403**

A: Forbidden. The client does not have access rights to the content­-­­

**Q: 404**

A: Not found. The server cannot find the requested resource.

**Q: 500**

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Description automatically generatedA: Internal Server Error. The range from 500-599 indicate server errors.

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**A picture containing screenshot

Description automatically generatedQuizzes**:

**TDD WORKFLOWS:**

**Writing Tests:**A screenshot of a cell phone

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