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CSE 331

Software Design & Implementation

Summer 2024

Section-Debug – More Debugging

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# Administrivia

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- HW released late Thursday, due Wednesday at **11pm**
- NOTE: The autograder for this Homework will not check your code for correctness! It is up to *you* to ensure that your code works correctly using the heuristics we have learned throughout the quarter

# Client-Server Communication Debugging Steps

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- 1. Do you see the request in the Network tab?**
  - the client didn't make the request
- 2. Does the request show a 404 status code?**
  - the URL is wrong (doesn't match any `app.get` / `app.post`)  
**or**  
– the query parameters were not encoded properly
- 3. Does the request show a 400 status code?**
  - *your* server rejected the request as invalid
  - look at the body of the response for the error message **or** add `console.log`'s in the server to see what happened
  - the request itself is shown in the Network tab

# Client-Server Communication Debugging Steps

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- 4. Does the request show a 500 status code?**
  - the server crashed!
  - look in the terminal where you started the server for a stack trace
  
- 5. Does the request say “pending” forever?**
  - your server forgot to call `res.send` to deliver a response
  
- 6. Look for an error message in browser Console**
  - if 1-5 don't apply, then the client got back a response
  - client should print an error message if it doesn't like the response
  - client crashing will show a stack trace

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# sec-debug coding exercise

debugging practice !!

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# HW Debug Tips

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- **Design on paper first!**
  - Draw out UI & decide how to organize into components *before* coding anything
- **Don't reinvent the wheel!**
  - The auction example from lecture will be **very** helpful
  - Stick to the patterns we've taught
    - making requests, type checking, error/success responses
    - Feel free to copy helper functions (e.g. `isRecord`, etc)
- If you're running out of time, watch out for tips in spec for things you can skip and only lose a few points
  - (must complete entire app to get *full* points)

# HW Debug Tips

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- **Recommended implementation order:**
  1. Write the client UI with local data
    - No client/server interaction yet
  2. Write the server
    - Official store of data
      - design appropriate data structures
    - Only provide operations needed by the client
      - look at where state is updated in UI only version to determine what is needed
  3. Connect the client to the server
    - Use fetch to update data on server *before* updating in client
      - Client *always* asks server for data to display in UI
      - Client *always* asks server to perform updates to data