

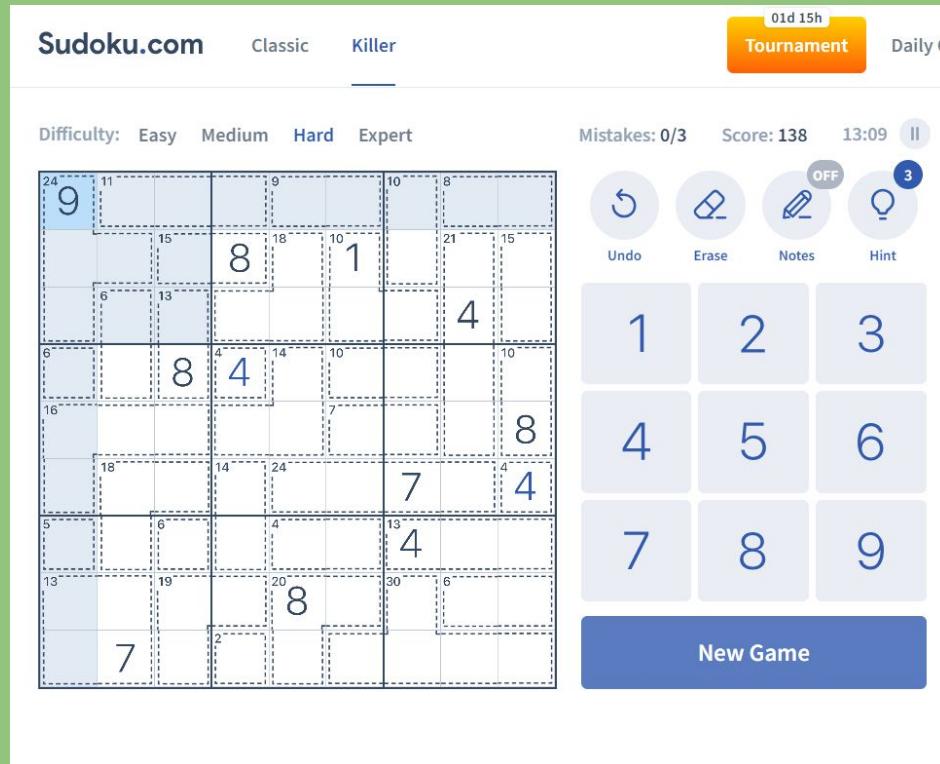
Killer Sudoku

bash\$:(){ :|:&}::

Zach W, Kevin B, Nick A, Drew M

Start of Checkpoint 1

What is Killer Sudoku?



Figma

Killer Sudoku

🏆 Time: 0:00

The grid consists of 81 cells arranged in a 9x9 pattern. It features several colored cages (groups of cells) with their sum values indicated in the top-left cell of each cage:

- Cage 1 (top row, first three cells): Sum 10 (Yellow)
- Cage 2 (top row, last three cells): Sum 5 (Green)
- Cage 3 (second row, first three cells): Sum 10 (Yellow)
- Cage 4 (second row, last three cells): Sum 6 (Red)
- Cage 5 (third row, first three cells): Sum 20 (Blue)
- Cage 6 (third row, last three cells): Sum 18 (Yellow)
- Cage 7 (fourth row, first three cells): Sum 9 (Yellow)
- Cage 8 (fourth row, last three cells): Sum 10 (Yellow)
- Cage 9 (fifth row, first three cells): Sum 10 (Yellow)
- Cage 10 (fifth row, last three cells): Sum 10 (Yellow)
- Cage 11 (sixth row, first three cells): Sum 10 (Yellow)
- Cage 12 (sixth row, last three cells): Sum 10 (Yellow)
- Cage 13 (seventh row, first three cells): Sum 10 (Yellow)
- Cage 14 (seventh row, last three cells): Sum 10 (Yellow)
- Cage 15 (eighth row, first three cells): Sum 10 (Yellow)
- Cage 16 (eighth row, last three cells): Sum 10 (Yellow)
- Cage 17 (ninth row, first three cells): Sum 10 (Yellow)
- Cage 18 (ninth row, last three cells): Sum 10 (Yellow)

Below the grid is a 3x3 number pad for entering solutions:

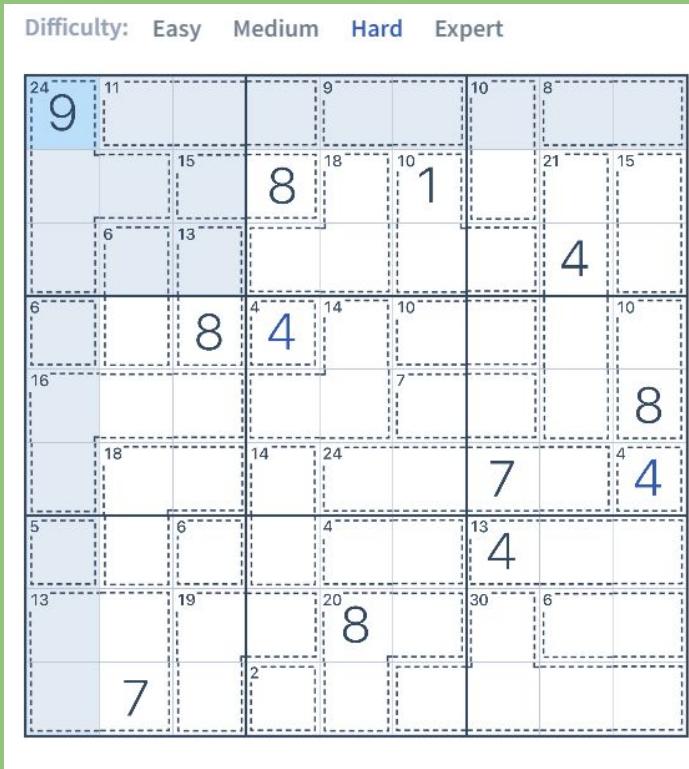
1	2	3
4	5	6
7	8	9

Solve

Goals - Kevin

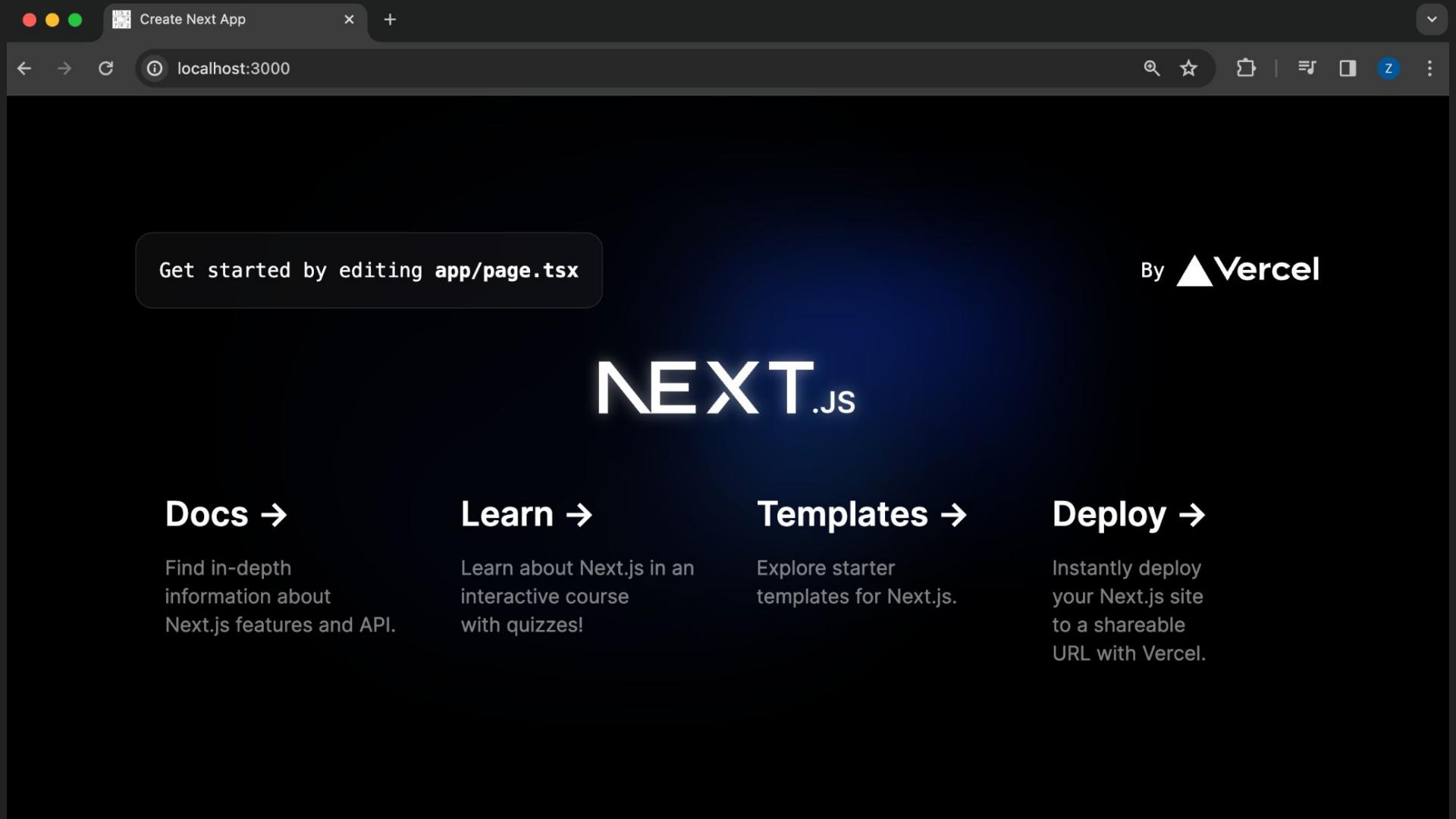
Minimum Viable Product

- Display Sudoku board
- Display grouped numbers
- Number pad to submit numbers
- Checker for completed sudokus
- Solver
- Timer



Code Base/Hello World - Zach

- npx create-next-app@latest
- Init node modules
- Init React app
- Tailor config files to aid in the development process
- Updated favicon to Sudoku (image in top left of browser)



Docs →

Find in-depth information about Next.js features and API.

Learn →

Learn about Next.js in an interactive course with quizzes!

Templates →

Explore starter templates for Next.js.

Deploy →

Instantly deploy your Next.js site to a shareable URL with Vercel.

Tool Chain/Tech Stack - Zach

- React via Next.js
- Typescript back-end
- Tailwind CSS front-end
- Node for speed
- NPM for building/running
- Homebrew for package managing
- Linode server

What's Been Done?

- Spoke with an experienced developer in the industry about web-apps.
 - Gained insight on how to approach our project and what tools to give thought to.
- Installed NPM and Node for all members via Homebrew.
- Learning a mix of Typescript, CSS, etc via tutorials.
- Fixing installation and technical issues.
- Established a Killer Sudoku web-app.

OS & Meeting Time

Zachary

- MacOS Ventura 13.5.1 M2, ZSH

Meeting Time:

- Saturday - 3:30 PM

Kevin

- Windows 11, Ubuntu via WSL

Nick

- Windows 10, Ubuntu via WSL

Drew

- Windows 11, Ubuntu via WSL

Grading Items

Contribution Summary

- Nick
 - Successfully installed the necessary packages (but only on my desktop, not laptop though it doesn't work)
 - Completed 2-3 slides
 - Attended our 2nd Meeting (Wasn't present for the 1st, but read a summary of it)
- Zachary
 - Installed vital packages for members & resolved technical issues regarding installation on various machines.
 - README.md and updated as needed.
 - Initialized Next.js, React components, 'Hello World' app, and package config.
 - Presented topics necessary for progress during meeting.
- Drew
 - Researched webdev packages
 - Aided in installing packages for the team
 - Created Figma sketch of the application
 - Paid for and set up Linode server
- Kevin Belock
 - Got the required packages installed on my pc
 - Learned how to build the project with NEXT
 - Read the first meeting summary and attended the second meeting to figure out what we would do next
 - Trying to help the group in anyway that I can.

Meeting Attendance

- Meeting with IT Consultant
 - Present: Drew
- Group Meeting (Checkpoint 1) 2/10/2024
 - Present: All members

Drew Mullett Contributions

- Paid for and set up Linode Server
- Met with IT professional Michael Spradlin to review best frameworks for our project
 - Found that React would be the best framework because it is popular for generating UI and has more resources available compared to the other options that we were more familiar with
- Helped create Figma UI mockup
- Helped teammates troubleshoot installing npm/nodejs

Drew Mullett Contributions - Evidence

Linodes / KillerSudoku

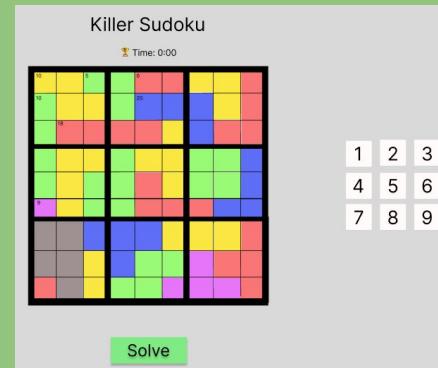
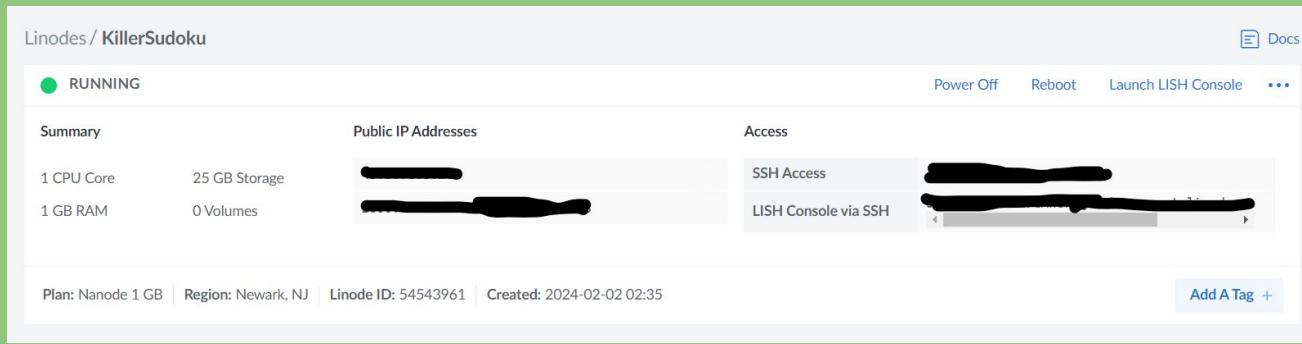
● RUNNING

Power Off Reboot Launch LISH Console ...

Summary	Public IP Addresses	Access
1 CPU Core 1 GB RAM	25 GB Storage 0 Volumes	SSH Access LISH Console via SSH

Plan: Nanode 1 GB | Region: Newark, NJ | Linode ID: 54543961 | Created: 2024-02-02 02:35

Add A Tag +



Kevin Belock Contributions

Attended the first group meeting, being the second meeting.

Worked to get my computer ready to work on the project

Put some information on the slides.

Made sure to communicate with drew whenever I had a question

Slides I helped with as my evidence: Goals and Expected outcomes.

Nick Adkins Contributions

- Worked with teammates to fix technical issues
- Attended the group's second meeting (2/10), and read a summary of the 1st
- Regularly conversed with teammates online & in person to discuss how we are going to design & implement our project, and what languages/frameworks to pick & use.
- Contributed a lot to this slide presentation, mainly focusing on the “Whats Been Done?” and “Next Two Weeks” slides, as well as my part in this slide & in the Contribution Summary

Zachary Wolfe Contributions

- Initialized React app
- Initialized Web-App icon
- Installed packages to member's machines
- Debugged installation errors
- Assisted in designing a presentable Figma mockup
- Discussed roadblocks and possible solutions
- Uploaded README.md and changed as needed
- Learning Typescript
- Contributed to multiple group slides

Zachary Wolfe Contributions - Evidence

Update README
ZacharyWolfe committed last week · ✓ 1 / 1
Commits on Feb 6, 2024

Update README
ZacharyWolfe committed last week

Update README
ZacharyWolfe committed last week
Commits on Feb 4, 2024

update website icon
ZacharyWolfe committed last week

Update README
ZacharyWolfe committed last week
Commits on Feb 3, 2024

Update README
ZacharyWolfe committed last week

Update README
ZacharyWolfe committed last week

Init Next.js
ZacharyWolfe committed last week
Commits on Feb 1, 2024

Known Build Issues

If the installation process is not working try these solutions:

- `sudo apt update`
- `sudo apt-get upgrade`
- `sudo apt-get install`

then:

- `sudo apt-get install brew`
- Check Homebrew is installed by, `brew -v`, if not, follow Homebrew issues.
- `brew install npm`
- `brew install node`

Ensure NPM and NODE are of versions v21.6.1, and v10.2.4 or higher respectively.

- `npm -v`
- `node -v`

Homebrew issues:

- `/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"`
- `(echo; echo 'eval "$(/home/linuxbrew/.linuxbrew/bin/brew shellenv)"') >> /home/ancientspirit/.bashrc'`

NPM Error, `npm ERR! killer-sudoku@0.1.0 build: next build OR sh-next01`
`ERR :`

- `npm install next`

Additional Possibilities:

- Need WSL update
- Ensure you are using a ZSH, BASH, or Ubuntu WSL terminal with Windows subsystem for Linux enabled.
- Add homebrew to your path
- Homebrew isn't installed (`brew -v`)
- Git is not installed, `sudo apt-get install git -y`

Zachary Wolfe Contributions - Evidence 2

The screenshot shows the official Next.js documentation landing page. At the top left, there's a button with the text "Get started by editing `app/page.tsx`". On the right side, it says "By  Vercel". The central feature is the large "NEXT.JS" logo. Below the logo, there are four main navigation sections: "Docs →", "Learn →", "Templates →", and "Deploy →". Each section has a brief description below it.

Docs →
Find in-depth information about Next.js features and API.

Learn →
Learn about Next.js in an interactive course with quizzes!

Templates →
Explore starter templates for Next.js.

Deploy →
Instantly deploy your Next.js site to a shareable URL with Vercel.

Start of Checkpoint 2

Work Summary

Zachary

- Permitted input to individual cells and legality for inputs (bounds, NaN)
- Fixed input issues which would wipe the board to a default state
- Removed an increment button for Form numbers on Chrome, Safari, Edge, and Opera browsers
- Introduced many levels of shading, specific square, 3x3, row & col, non-highlighted, specific square but taken in row/col, non-specific square but taken in row/col
- Logic for highlighting squares based on row/col inputs
- Closed issue #11 (couldn't see numbers beneath shading)
- Closed issue #15 (read/write to a cell)
- Styling of cells

Drew

- Got our repo/React project onto my Linode server and made it publicly accessible from sudoku.drewmullett.net

Nick

- Worked on board Generation, the Sudoku board now shows a randomly-generated valid Sudoku board
- Added a Makefile, for convenience in running the program & quick version checking, among other things

Kevin

- Went onto websites to find the best way to implement the timer and how to get it started
- Started work on the timer code to get it to start counting how long you have been playing

Next Checkpoint Plan

Zachary

- Fix highlighting, not complete and needs a rewrite
- Solver implementation / UI
- Highlight 3x3 borders separately (bolder) for better readability
- Fix sizing issues with browser?

Drew

- Get the server to host the website after closing the ssh connection
- Aid Zach with remaining issues with coding the UI

Nick

- Work on hiding x-number of elements on the board, depending on difficulty, so that it will be playable
 - This will probably require that I work on / add to the Solver

Kevin

- Finish work on the timer code then talk with zachary to get it implemented into the UI for the game.
- Talk to the team to see what else I can help with once The timer is implemented

Potential Roadblocks

- Writing an algorithm to automatically group tiles together
- Inputs from buttons vs. keyboard, most likely just input via keyboard

<https://sudoku.drewmullett.net/>

Grading Items

Contribution Summary

- Nick
 - Worked on board Generation, the Sudoku board now shows a randomly-generated valid Sudoku board
 - Added a Makefile, for convenience in running the program & quick version checking, among other things
- Zachary
 - Permitted input to individual cells and legality for inputs (bounds, NaN)
 - Fixed input issues which would wipe the board to a default state
 - Removed an increment button for Form numbers on Chrome, Safari, Edge, and Opera browsers
 - Introduced many levels of shading, specific square, 3x3, row & col, non-highlighted, specific square but taken in row/col, non-specific square but taken in row/col
 - Logic for highlighting squares based on row/col inputs
 - Closed issue #11, #15
 - Learning more TSX, CSS
 - Contribution to slides
 - Styling of cells
- Drew
 - Introduced teammates to GitHub's issue and branch features
 - Got webapp up and running on sudoku.drewmullett.net
 - Read tutorials on Typescript/CSS
- Kevin Belock
 - Researched the implementation of a timer
 - Worked on coding in the timer for Sudoku.

Meeting Attendance

- Group Meeting (Checkpoint 2) 2/24/2024
 - Present: All members

Drew Mullett Contributions

- Introduced teammates to GitHub's issue and branch features
- Got code up and running on sudoku.drewmullett.net
 - Set up a local repository on the Linode server so I can easily pull the current version of the webapp
- Read tutorials on Typescript/CSS

Drew Mullett Contributions - Evidence

The screenshot shows a GitHub pull request page for a repository named 'OU-CS3560 / s24-killer-sudoku'. The pull request has been merged into the 'main' branch from the 'webserver' branch. The commit message is 'Added index.html #18'. The pull request has 0 commits, 0 checks, and 0 files changed. It has 0 reviews, 0 assignees, 0 labels, 0 projects, and 0 milestones. The development section notes that successfully merging may close issues, but none are listed. Notifications indicate that the user is receiving them because they authored the thread.

Merged ZacharyWolfe merged 1 commit into main from webserver 20 hours ago

Conversation 0 Commits 1 Checks 0 Files changed 1

Sharedrumhero commented 20 hours ago
No description provided.

ZacharyWolfe merged commit cf139e6 into main 20 hours ago

Pull request successfully merged and closed You're all set—the webserver branch can be safely deleted.

Add a comment

Write Preview

Markdown is supported Paste, drop, or click to add files

Reviewers No reviews

Assignees No one—assign yourself

Labels None yet

Projects None yet

Milestone No milestone

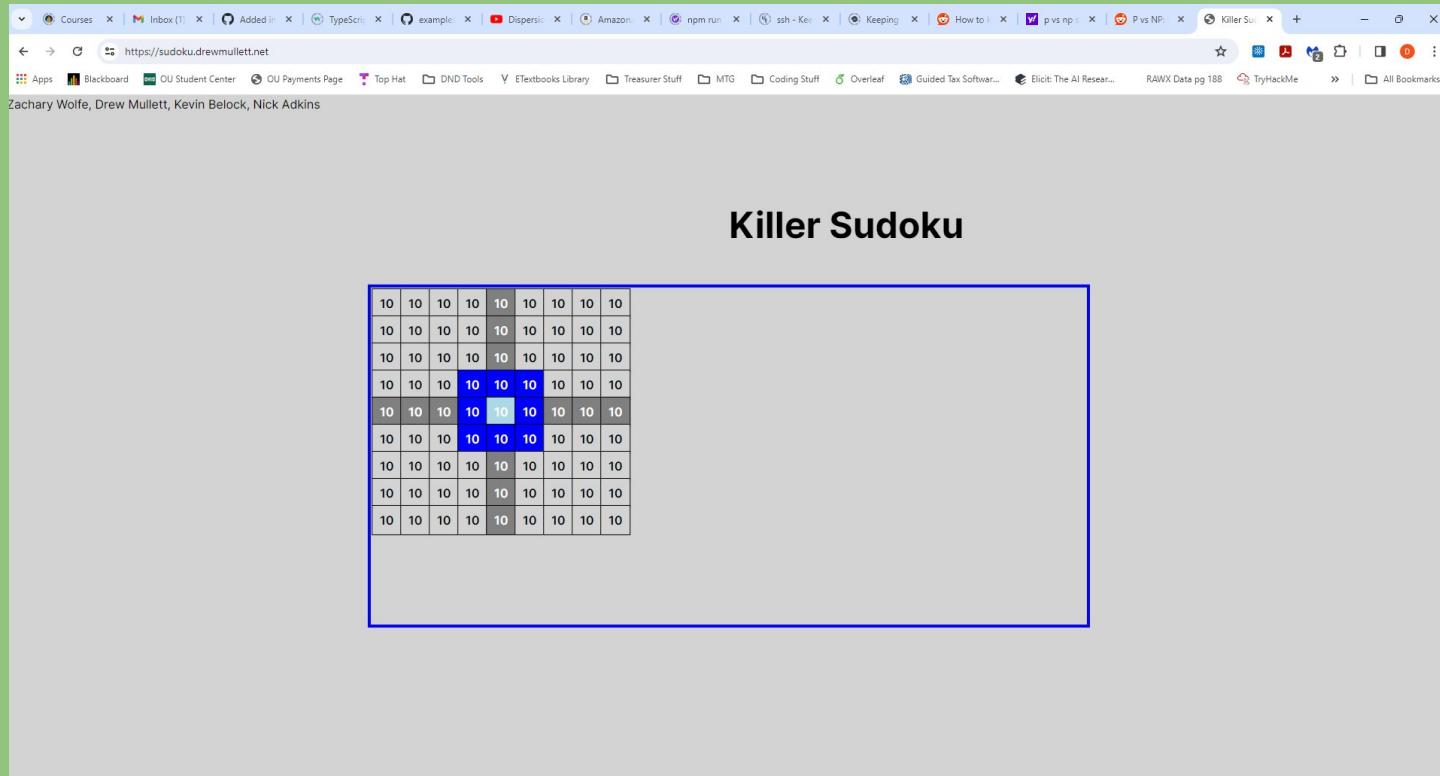
Development Successfully merging this pull request may close these issues.

None yet

Notifications Customize Unsubscribe

You're receiving notifications because you authored the thread.

Drew Mullett Contributions - Evidence (cont.)



Zachary Wolfe Contributions

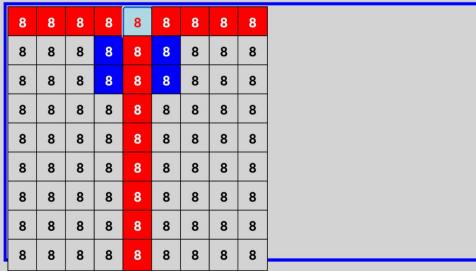
- Introduced 2d array of cells
- Submitted many issues to Github
- Permitted input to individual cells and legality for inputs (bounds, NaN)
- Fixed input issues which would wipe the board to a default state
- Removed an increment button for Form numbers on Chrome, Safari, Edge, and Opera browsers
- Introduced many levels of shading, specific square, 3x3, row & col, non-highlighted, specific square but taken in row/col, non-specific square but taken in row/col
- Logic for highlighting squares based on row/col inputs
- Closed issue #11, #15
- Learning more TSX, CSS
- Contribution to slides
- Styling of cells
- Maintenance of repo and PR's
- Assisted teammates in resource gathering and gradual learning

Zachary Wolfe Contributions - Evidence

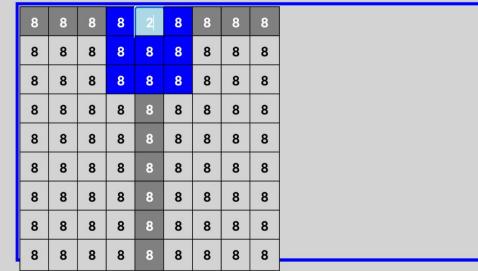
Zachary Wolfe, Drew Mullett, Kevin Belock, Nick Adkins

Zachary Wolfe, Drew Mullett, Kevin Belock, Nick Adkins

Killer Sudoku



Killer Sudoku



7 Open ✓ 3 Closed

Author ▾ Label ▾ Projects ▾ Milestones ▾ Assignee ▾ Sort ▾

Inputs to individual buttons

#15 by ZacharyWolfe was closed now 3 tasks done

1

Cell highlights cover text beneath, CSS. ui

#11 by ZacharyWolfe was closed 3 days ago

1

Zachary Wolfe Contributions - Evidence cont.

	Author	Label	Projects	Milestones	Reviews	Assignee	Sort
0 Open ✓ 11 Closed							
Change data to string for complete removal in a single cell, add .gitignore file with an additional...	#21 by ZacharyWolfe was merged 13 minutes ago						
Added server mode to Makefile	#20 by Snaredrumhero was merged 3 hours ago						
Add title, names, highlight on init board, and remove int counter...	#19 by ZacharyWolfe was merged yesterday						
Added index.html	#18 by Snaredrumhero was merged yesterday						
Support specific space highlights, issue resolution, wrap in try catch	#17 by ZacharyWolfe was merged yesterday						
Rearrange buttons and div to allow for the whole square to be clicked...	#16 by ZacharyWolfe was merged yesterday						
Ui-stuff	#14 by nickadkins47 was merged last week • Approved				1		
Tab name as "Killer Sudoku"	#13 by nickadkins47 was closed last week • Changes requested				1		
Remove classes, refactor, update globals.css	#10 by ZacharyWolfe was merged last week						
Update README.md	#9 by ZacharyWolfe was merged last week						
Add support for individual spaces && sudoku board <small>backend</small>	#7 by ZacharyWolfe was merged last week						

Nick Adkins Contributions

- Worked on board Generation, the Sudoku board now shows a randomly-generated valid Sudoku board
- Added a Makefile, for convenience in running the program & quick version checking, among other things

Nick Adkins Contributions - Evidence

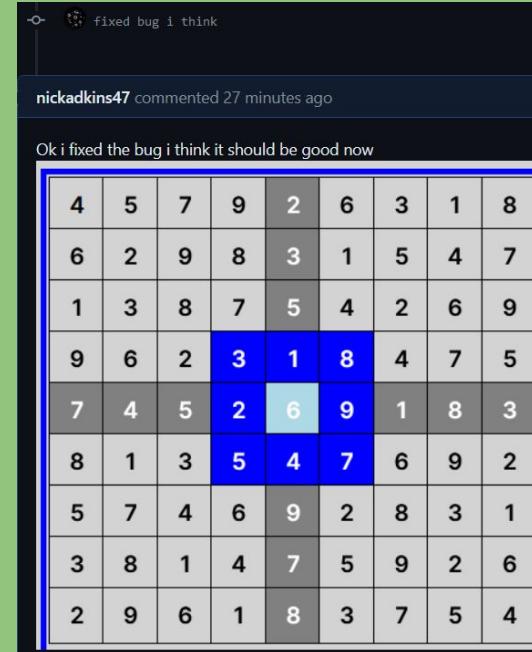
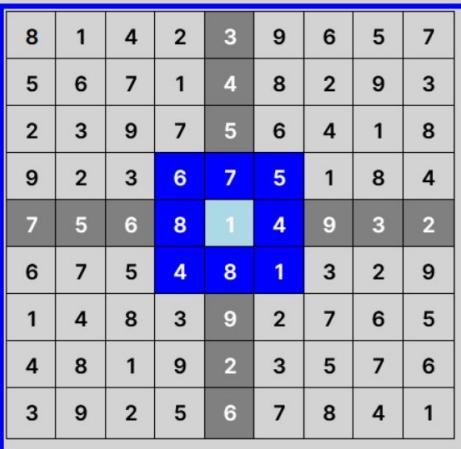
Generation - Board is now randomly generated #22

[Open](#) nickadkins47 wants to merge 7 commits into `main` from `generation`

Conversation 2 Commits 7 Checks 0 Files changed 2

nickadkins47 commented 35 minutes ago

Moved initboard() function to different file, Generate.tsx
Added a way to randomly generate a valid sudoku board (currently all tiles are still filled/shown)
Slightly edited some stuff in Sudoku.tsx so that these changes will show up on localhost:3000



Nick Adkins Contributions - Evidence cont.

Makefile (Main Branch)

```
M Makefile
Drew Mullett, yesterday | 3 authors (You and others)

1 .PHONY: run version
2
3
4 run:
5   @(cd killer-sudoku; npm run build; npm run start)
6
7 server:
8   @(git pull; cd killer-sudoku; npm run build; npm run start)
9
10 version:
11   @printf "node: %s\n" "$(shell node -v)"
12   @printf "npm : %s\n" "$(shell npm -v)"
13   @printf "tailwindcss: %s\n" "$(shell npm view tailwindcss version)"
14
```

Updated Makefile (Ui-stuff Branch)

```
M Makefile
You, 28 seconds ago | 3 authors (You and others)

1 .PHONY: run server u update v version
2
3
4 run:
5   @(cd killer-sudoku; npm run build; npm run start)
6
7 server:
8   @(git pull; cd killer-sudoku; npm run build; npm run start)
9
10 u: update
11
12 update:
13   @sudo apt update
14   @sudo apt-get upgrade
15
16 v: version
17
18 version:
19   @printf "node      : %s\n" "$(shell node -v | cut -d'v' -f2- 2> /dev/null)"
20   @printf "npm       : %s\n" "$(shell npm -v          2> /dev/null)"
21   @printf "tailwind  : %s\n" "$(shell npm view tailwind version 2> /dev/null)"
22   @printf "tailwindcss: %s\n" "$(shell npm view tailwindcss version 2> /dev/null)"
23   @printf "Brew      : %s\n" "$(shell brew -v | cut -d' ' -f2- 2> /dev/null)"
24   @printf "nvm       : %s\n" "$(shell nvm -v          2> /dev/null)"
```

Kevin Belock Contributions

- Researched how the best way to implement the timer would be through react
- Have started programming the timer though not fully implemented yet, I have pushed what I have to the Timer branch on github.

Kevin Belock Contributions - Evidence

```
killer-sudoku > app > 🏃 Timer.tsx > 🏃 Timer > 🏃 gettime
 1  /**
 2   * @file    Timer.tsx
 3   * @author  Kevin Belock (kb848020@ohio.edu)
 4   * @brief   An element which creates a timer for how long you
 5   * @date    February 24, 2024
 6   * @version 1.0
 7  */
 8
 9  import React from 'react';
10
11 import { useState } from 'react';
12
13 const Timer = () => {
14
15     const [minuets, setMinuets] = useState(0);
16     const [seconds, setSeconds] = useState(0);
17
18     const start = 3600;
19
20     const getTime = () => {
21
22         setMinuets(Math.floor([(start / 60) % 60]));
23         setSeconds(Math.floor(start % 60));
24
25     }

```

Start of Checkpoint 3

Meeting Attendance

- Group Meeting 3/5/2024
 - Present: All members
- Group Meeting 3/16/2023
 - Zachary, Drew, Kevin
- Group Meeting (Checkpoint 3) 3/19/2024
 - Present: All members

Work Summary

Zachary

- Reworked Timer to add support for instancing a timer on a board.
- Linked Timer to cell clicks and pause/start button.
- Pause button stops timer, resume by button or pressing on board.
- Completed UI highlighting for the last time.
- Added a 'New Game' button and number Panel.
- Added navbar for pathing.
- Added bolded border outline on board.
- Added Google API icons to support an intuitive UI.
- Fixed browser resizing.
- Closed Issue #12, #1, #31.

Drew

- Added functionality for server to make HTTP GET request along with difficulty selector.
- Created pathing segments for sudoku and killer sudoku.

Work Summary (cont.)

Nick

- Added function to Solve the sudoku board
(Mostly works, but still WIP)
- Completely Reworked the Generation Algorithm to be more random, at the cost of time efficiency (of which is still barely noticeable: a time of 0.2 ms VS ~30 ms to generate a board)
 - I just recently optimized the algorithm from ~30 ms → ~20 ms
- Reworked tile showing system so that the resulting board is always compatible with the solver function
- Closed Issue #2

Kevin

- Finished the base template for the Timer
- Researching how to implement the cages for a Killer Sudoku board.
- Made a list of progress to go through to slowly build the necessary components for the cages of Killer Sudoku.

Comparison

Killer Leaderboard Daily

Zachary Wolfe, Drew Mullett, Kevin Belock, Nick Adkins

Difficulty: Easy Medium Hard Expert

Sudoku

00:08 ⓘ

Solve Clear

1 2 3
4 5 6
7 8 9

New Game

Checkpoint 3



Courses × Index () × Added × TypeScript × example × Amazon × npm run × ssh + Ken × Keeping × How to × p vs np × P vs NP × TryHackMe × RAWX Data pg 188 × All Bookmarks

Apps Blackboard OU Student Center OU Payments Page Top Hat DND Tools ETextbooks Library Treasure Stuff MTG Coding Stuff Overleaf Guided Tax Software Eliot The AI Researcher TryHackMe

Zachary Wolfe, Drew Mullett, Kevin Belock, Nick Adkins

Killer Sudoku

10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10

Checkpoint 2



Next Checkpoint Plan

Zachary

- Adjust highlighting algorithm to disregard clicks onto the same cell without any change which will in turn adjust panel clicks so that the algorithm can find which cell to change the number in.
- Start on dashed borders, cell groupings, and placing numbers in the top left of certain cells.
- Add an Erase button.
- Count mistakes the player has made.
- Authenticating users.
- Create page for leaderboard & choose database.
- Game ending

Drew

- Implement server interception of GET & POST requests.
- Encode Sudoku puzzle into JSON and decode it into a Sudoku puzzle object.

Nick

- Implement the backend part of the Tile Notes system
- Add a lot more stuff to the solver algorithm
- Help with the backend part of the Killer Sudoku Groupings
- Fix bug in Solve button (it doesn't solve correctly if there are incorrect tiles)

Kevin

- Work on implementing the sudoku cages

Road Blocks

Zachary

- Finding the previous cell you clicked on for panel, search for it using two for's?

Drew

- How to properly encode the information into a json format that would make sense
- How to separate sudoku and killer sudoku generation

Nick

- How killer sudoku groupings are gonna be generated (Thinking about what is the best way to do this)

Kevin

- Getting the cages to not overlap with each other and generating the shapes of the cages
- Designing the shapes and how to do highlighting / marking the different groups.

Toolkits

- GitHub
- Doxygen Generation VSCode ext
- Chrome Dev Tools
- Docker
- IDEs: VScode, NVIM
- Figma, websequencediagrams.com
- Firebase - Authentication / (Storing users?)
- Tailwind CSS, React TSX

Zachary Wolfe Static Analysis

- Microsoft React Native Tools
- NPM
- We all use these tools, but I don't use the other tools that my teammates do because I feel that they're unnecessary and if you write code you should know what it's doing without needing a program to tell you what it's doing.
- The issues encountered for all of the code I wrote were intentional because it's base code for the next feature I plan to implement. Haven't fixed analysis issues in my code because the code is boilerplate for the next feature.

The screenshot shows a code editor with several static analysis annotations from TypeScript. A tooltip highlights a potential null reference error: "'timerRef.current' is possibly 'null'. ts(18047)". Below the code, a "View Problem" link and a note about no quick fixes available are visible. The code itself includes a call to `timerRef.current?.reset()`. To the right, a "fix" is shown where the annotation is removed by adding a type assertion (`as const`) to the ref object:

```
const handleNewGame = () => {
  setBoard(prevBoard => {
    const timerRef: React.RefObject<TimerRef> = prevBoard.timerRef;
    timerRef.current?.reset();
    return initBoard(used);
  });
};

const handleClickNewGame = () => {
  setBoard(prevBoard => {
    const timerRef: React.RefObject<TimerRef> = prevBoard.timerRef;
    timerRef.current?.reset();
    return initBoard(used);
  });
};

const handleClickDifficultyButton = (buttonName: string) => {
  console.log(buttonName, "Killer Sudoku puzzle requested");
};
```

Kevin Belock's Static analysis

- The tool I used was Esplint. It was a tool shared to all of the team members to use
- The issues it recorded is where a variable is assigned and never used, saying to use different variable types when no variable is recorded. The variables assigned but not used might affect the performance with how much memory that could be wasted in not taking care of them, same as making some variables consts would improve their security.
- I did not fix any issues as all of the issues that were recorded were found on my team partners parts of the project. I was researching how to implement the sudoku grouping for the killer sudoku board.

Kevin Belock's Static analysis cont.

```
ancientspirit@LAPTOP-IV9A91P:~/Desktop/CS3650/Team Project/s24-killer-sudoku$ npx eslint .
Pages directory cannot be found at /mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/p
/s24-killer-sudoku/src/pages. If using a custom path, please configure with the 'no-html-link-for-pages' rule
```

```
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/app/generate.tsx
17:27 error 'used' is defined but never used @typescript-eslint/no-unused-vars
42:18 error 'o' is never reassigned. Use 'const' instead prefer-const
53:16 error 'difficulty' is never reassigned. Use 'const' instead prefer-const
76:64 error 'temp' is assigned a value but never used @typescript-eslint/no-unused-vars
79:20 error Unnecessary constant condition no-constant-condition
80:21 error 'x' is never reassigned. Use 'const' instead prefer-const
81:21 error 'y' is never reassigned. Use 'const' instead prefer-const
100:9 error 'arr' is never reassigned. Use 'const' instead prefer-const
127:10 error 'shuffleArray' is defined but never used @typescript-eslint/no-unused-vars
128:9 error 'end' is never reassigned. Use 'const' instead prefer-const
130:13 error 'i' is never reassigned. Use 'const' instead prefer-const
131:13 error 'temp' is never reassigned. Use 'const' instead prefer-const
137:10 error 'initBoardBoldLines' is defined but never used @typescript-eslint/no-unused-vars
162:2 error Unnecessary semicolon no-extra-semi
```

```
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/app/killerSudoku.tsx
24:5 error Unexpected var, use let or const instead no-var
24:9 error 'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars
25:5 error Unexpected var, use let or const instead no-var
```

```
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/app/solver.tsx
16:9 error 'board' is never reassigned. Use 'const' instead prefer-const
18:9 error 'notes' is never reassigned. Use 'const' instead prefer-const
119:13 error 'a' is never reassigned. Use 'const' instead prefer-const
121:13 error 'b' is never reassigned. Use 'const' instead prefer-const
134:13 error 'num1' is never reassigned. Use 'const' instead prefer-const
135:13 error 'num2' is never reassigned. Use 'const' instead prefer-const
136:13 error 'num3' is never reassigned. Use 'const' instead prefer-const
138:17 error 'tile1' is never reassigned. Use 'const' instead prefer-const
141:17 error 'tile2' is never reassigned. Use 'const' instead prefer-const
144:17 error 'tile3' is never reassigned. Use 'const' instead prefer-const
```

Make sure that all the Babel plugins and presets you are using are defined as dependencies or devDependencies in your package.json file. It's possible that the missing plugin is loaded by a preset you are using that forgot to add the plugin to its dependencies; you can workaround this problem by explicitly adding the missing package to your top-level package.json

```
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/postcss.config.js
0:0 error Parsing error: Cannot find module 'next/babel'
Require stack:
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/node_modules/next/dist/compiled/babel/bundle.js
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/node_modules/next/dist/compiled/babel/eslint-parser.js
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/node_modules/eslint-config-next/parser.js
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/node_modules/eslint/eslintrc/dist/eslintrc.cjs
```

Make sure that all the Babel plugins and presets you are using are defined as dependencies or devDependencies in your package.json file. It's possible that the missing plugin is loaded by a preset you are using that forgot to add the plugin to its dependencies; you can workaround this problem by explicitly adding the missing package to your top-level package.json

X46 problems (45 errors, 1 warning)
30 errors and 0 warnings potentially fixable with the '--fix' option.

```
144:17 error 'tile3' is never reassigned. Use 'const' instead prefer-const
145:17 error Unexpected newline between object and J of property access no-unexpected-multiline
146:17 error Unexpected newline between object and J of property access no-unexpected-multiline
188:9 error 'result' is never reassigned. Use 'const' instead prefer-const
```

```
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/app/sudoku.tsx
21:2 error Unnecessary semicolon no-extra-semi
144:13 warning Custom fonts not added in 'pages/_document.js' will only load for a single page. This is discouraged. See: https://nextjs.org/docs/messages/no-page-custom-font @next/next/no-page-custom-font
```

```
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/app/page.tsx
9:2 error Unexpected var, use let or const instead no-var
9:6 error 'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars
10:5 error Unexpected var, use let or const instead no-var
11:12 error 'panelNum' is assigned a value but never used @typescript-eslint/no-unused-vars
70:18 error 'prevBoard' is defined but never used @typescript-eslint/no-unused-vars
```

```
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/app/sudoku/page.tsx
9:2 error Unexpected var, use let or const instead no-var
9:6 error 'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars
10:5 error Unexpected var, use let or const instead no-var
69:18 error 'prevBoard' is defined but never used @typescript-eslint/no-unused-vars
95:13 error Unexpected var, use let or const instead no-var
96:13 error Unexpected var, use let or const instead no-var
97:13 error Unexpected var, use let or const instead no-var
```

```
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/pages/_document.js
0:0 error Parsing error: Cannot find module 'next/babel'
```

Require stack:
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/node_modules/next/dist/compiled/babel/bundle.js
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/node_modules/next/dist/compiled/babel/eslint-parser.js
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/node_modules/eslint-config-next/parser.js
/mnt/c/Users/ancie/OneDrive/Desktop/CS3650/Team Project/s24-killer-sudoku/killer-sudoku/node_modules/eslintrc/dist/eslintrc.cjs

Make sure that all the Babel plugins and presets you are using

Nick Adkins Static Analysis

Thus far, i've only used ESLint & used it to check the main directory, found 2 errors & 1 warning. As of now, this is all i've done with Static Analysis.

```
nickadkins47@DESKTOP-DS33BNP:~/CS3560/s24-killer-sudoku$ npx eslint .
Pages directory cannot be found at /home/nickadkins47/CS3560/s24-killer-sudoku/pages or /home/nickadkins47/CS3560/s24-killer-sudoku/src/pages. If using a custom path, please configure with the `no-html-link-for-pages` rule in your eslint config file.

/home/nickadkins47/CS3560/s24-killer-sudoku/killer-sudoku/app/Sudoku.tsx
 144:13  warning  Custom fonts not added in `pages/_document.js` will only load for a single page. This is discouraged. see: https://nextjs.org/docs/messages/no-page-custom-font @next/next/no-page-custom-font

/home/nickadkins47/CS3560/s24-killer-sudoku/killer-sudoku/pages/_document.js
 0:0  error  Parsing error: Cannot find module 'next/babel'
Require stack:
- /home/nickadkins47/CS3560/s24-killer-sudoku/killer-sudoku/node_modules/next/dist/compiled/babel/bundle.js
- /home/nickadkins47/CS3560/s24-killer-sudoku/killer-sudoku/node_modules/next/dist/compiled/babel/eslint-parser.js
- /home/nickadkins47/CS3560/s24-killer-sudoku/killer-sudoku/node_modules/eslint-config-next/parser.js
- /home/nickadkins47/.npm/_npx/515228b7c8d004a2/node_modules/@eslint/eslintrc/dist/eslintrc.cjs

Make sure that all the Babel plugins and presets you are using are defined as dependencies or devDependencies in your package.json file. It's possible that the missing plugin is loaded by a preset you are using that forgot to add the plugin to its dependencies: you can workaround this problem by explicitly adding the missing package to your top-level package.json

/home/nickadkins47/CS3560/s24-killer-sudoku/killer-sudoku/postcss.config.js
 0:0  error  Parsing error: Cannot find module 'next/babel'
Require stack:
- /home/nickadkins47/CS3560/s24-killer-sudoku/killer-sudoku/node_modules/next/dist/compiled/babel/bundle.js
- /home/nickadkins47/CS3560/s24-killer-sudoku/killer-sudoku/node_modules/next/dist/compiled/babel/eslint-parser.js
- /home/nickadkins47/CS3560/s24-killer-sudoku/killer-sudoku/node_modules/eslint-config-next/parser.js
- /home/nickadkins47/.npm/_npx/515228b7c8d004a2/node_modules/@eslint/eslintrc/dist/eslintrc.cjs

Make sure that all the Babel plugins and presets you are using are defined as dependencies or devDependencies in your package.json file. It's possible that the missing plugin is loaded by a preset you are using that forgot to add the plugin to its dependencies: you can workaround this problem by explicitly adding the missing package to your top-level package.json

✖ 3 problems (2 errors, 1 warning)
```

Drew Mullett Static Analysis

- Had a few errors with defining editable variables when it was not strictly necessary (i.e. using let instead of const). After updating the code, I've made a PR to have the team review it to make sure I'm not papering over important aspects of other people's code

Drew Mullett Static Analysis

Before fixes

```
andrewmullett@DESKTOP-K4EDPIH:~/s24-killer-sudoku$ npx eslint .  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/Generate.tsx  
17:27  error  'used' is defined but never used          @typescript-eslint/no-unused-vars  
42:18  error  'o' is never reassigned. Use 'const' instead    prefer-const  
43:18  error  'o' is never reassigned. Use 'const' instead    prefer-const  
76:60  error  'temp' is assigned a value but never used      @typescript-eslint/no-unused-vars  
79:28  error  Unexpected constant condition               no-constant-condition  
80:23  error  'x' is never reassigned. Use 'const' instead    prefer-const  
83:23  error  'x' is never reassigned. Use 'const' instead    prefer-const  
100:9   error  'arr' is never reassigned. Use 'const' instead    prefer-const  
127:18  error  'shuffleArray' is defined but never used     @typescript-eslint/no-unused-vars  
128:9   error  'end' is never reassigned. Use 'const' instead    prefer-const  
130:23  error  'end' is never reassigned. Use 'const' instead    prefer-const  
131:13  error  'temp' is never reassigned. Use 'const' instead    prefer-const  
137:18  error  'initBoardBoldLines' is defined but never used @typescript-eslint/no-unused-vars  
162:2   error  Unnecessary semicolon                      no-extra-semi  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/KillerSudoku.tsx  
24:5   error  Unexpected var, use let or const instead      no-var  
29:19  error  'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars  
28:8   error  Unexpected var, use let or const instead      no-var  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/Solver.tsx  
11:9   error  'boards' is never reassigned. Use 'const' instead    prefer-const  
18:13  error  'rows' is never reassigned. Use 'const' instead    prefer-const  
119:13  error  'a' is never reassigned. Use 'const' instead    prefer-const  
121:13  error  'b' is never reassigned. Use 'const' instead    prefer-const  
135:13  error  'num1' is never reassigned. Use 'const' instead    prefer-const  
139:13  error  'num2' is never reassigned. Use 'const' instead    prefer-const  
139:13  error  'num3' is never reassigned. Use 'const' instead    prefer-const  
136:13  error  'title' is never reassigned. Use 'const' instead    prefer-const  
140:17  error  'title2' is never reassigned. Use 'const' instead    prefer-const  
140:17  error  'title3' is never reassigned. Use 'const' instead    prefer-const  
145:17  error  Unexpected newline between object and I of property access no-unexpected-multiline  
146:17  error  Unexpected newline between object and I of property access no-unexpected-multiline  
160:19  error  'result' is never reassigned. Use 'const' instead    prefer-const  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/Sudoku.tsx  
21:2   error  Unnecessary semicolon                      no-extra-semi  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/page.tsx  
9:2   error  Unexpected var, use let or const instead      no-var  
9:5   error  'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars  
10:5   error  'panelNum' is assigned a value but never used @typescript-eslint/no-unused-vars  
11:12  error  'panelNum' is assigned a value but never used @typescript-eslint/no-unused-vars  
70:18  error  'prevBoard' is defined but never used       @typescript-eslint/no-unused-vars  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/page.tsx  
9:2   error  Unexpected var, use let or const instead      no-var  
9:5   error  'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars  
10:5   error  'panelNum' is assigned a value but never used @typescript-eslint/no-unused-vars  
11:12  error  'panelNum' is assigned a value but never used @typescript-eslint/no-unused-vars  
70:18  error  'prevBoard' is defined but never used       @typescript-eslint/no-unused-vars  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/sudoku/page.tsx  
9:2   error  Unexpected var, use let or const instead      no-var  
9:6   error  'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars  
10:5   error  Unexpected var, use let or const instead      no-var  
11:12  error  'panelNum' is assigned a value but never used @typescript-eslint/no-unused-vars  
70:18  error  'prevBoard' is defined but never used       @typescript-eslint/no-unused-vars  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/sudoku/page.tsx  
9:2   error  Unexpected var, use let or const instead      no-var  
9:6   error  'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars  
10:5   error  Unexpected var, use let or const instead      no-var  
69:18  error  'prevBoard' is defined but never used       @typescript-eslint/no-unused-vars  
95:13  error  Unexpected var, use let or const instead      no-var  
96:13  error  Unexpected var, use let or const instead      no-var  
97:13  error  Unexpected var, use let or const instead      no-var  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/postcss.config.js  
1:1   error  'module' is not defined                      no-undef  
  
✗ 44 problems (44 errors, 0 warnings)  
38 errors and 6 warnings potentially fixable with the '--fix' option.
```

After fixes

```
andrewmullett@DESKTOP-K4EDPIH:~/s24-killer-sudoku$ npx eslint --fix .  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/Generate.tsx  
17:27  error  'used' is defined but never used          @typescript-eslint/no-unused-vars  
76:64  error  'temp' is assigned a value but never used      @typescript-eslint/no-unused-vars  
79:20  error  Unexpected constant condition               no-constant-condition  
127:10  error  'shuffleArray' is defined but never used     @typescript-eslint/no-unused-vars  
137:10  error  'initBoardBoldLines' is defined but never used @typescript-eslint/no-unused-vars  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/KillerSudoku.tsx  
24:11  error  'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/Solver.tsx  
145:17  error  Unexpected newline between object and I of property access no-unexpected-multiline  
146:17  error  Unexpected newline between object and I of property access no-unexpected-multiline  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/page.tsx  
9:8   error  'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars  
11:12  error  'panelNum' is assigned a value but never used @typescript-eslint/no-unused-vars  
70:18  error  'prevBoard' is defined but never used       @typescript-eslint/no-unused-vars  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/app/sudoku/page.tsx  
9:8   error  'gameOver' is assigned a value but never used @typescript-eslint/no-unused-vars  
69:18  error  'prevBoard' is defined but never used       @typescript-eslint/no-unused-vars  
  
/home/andrewmullett/s24-killer-sudoku/killer-sudoku/postcss.config.js  
1:1   error  'module' is not defined                      no-undef  
  
✗ 14 problems (14 errors, 0 warnings)
```

Grading Items

Zachary Wolfe Contributions

- Improved performance by removing keystroke inputs re-highlighting the entire board
- Installed package for rerouting and was working on this for a few weeks until a better solution was provided by drew
- Fixed up Timer, added support for instancing a timer on a board
- Linked the timer to cell clicks
- Pressing the pause button stops the timer, resume by pressing anywhere on the board
- Fixed UI highlighting for the final time
- Added a 'New Game' and Button Panel
- Added navbar
- Added bolded border outline
- Added Google API icons to support an intuitive UI
- Fixed browser resizing
- Closed Issue #12, #1, #31

Zachary Wolfe Contributions - Evidence

UI #31
ZacharyWolfe opened this issue 2 weeks ago

Closed 5 tasks done

 [Redacted]

 [Redacted]

 [Redacted] ZacharyWolfe assigned Phoenix2317 and Snaredrumhe

 [Redacted] ZacharyWolfe closed this as completed last week

Subcontainer holding main Sudoku board misaligned #12
ZacharyWolfe opened this issue last month · 2 comments

Closed

 ZacharyWolfe commented last week

Fixed by removing color attribute of .Main{} CSS

 [Redacted]

 [Redacted] ZacharyWolfe closed this as completed last week

ZacharyWolfe commented 2 weeks ago • edited

Member ...

Issues

- Board is not in the center of the screen
- Resizing browser window breaks the uniform distribution of cells.
- Move 'Solve' below board
- Move Timer above board and below Title
- Button/Menu for changing Difficulty

Subcontainer holding main Sudoku board misaligned #12
ZacharyWolfe opened this issue last month · 2 comments

Closed

 ZacharyWolfe commented last month

 Member ...

I need this board to be aligned on the center of the screen (primarily inside of the blue container)



Zachary Wolfe Contributions - Evidence cont.

- Navbar
- Panel
- New Game
- Bold outlines
- Buttons hover
- Timer start-stop
- Changed whole layout of website to support intuitive UI

The screenshot shows a Sudoku game interface. At the top, there are three navigation links: "Killer", a trophy icon labeled "Leaderboard", and "Daily". Below these, a header displays the names "Zachary Wolfe, Drew Mullett, Kevin Belock, Nick Adkins". Underneath the header, a "Difficulty" section offers options: "Easy", "Medium", "Hard", and "Expert". The main title "Sudoku" is centered above a timer showing "00:00" with a play button icon. To the right of the timer are two buttons: "Solve" and "Clear". Below the title is a 9x9 grid containing partially filled numbers. A 3x3 subgrid in the middle-left contains the values 3, 9, 2. A 3x3 subgrid in the middle-right contains the values 6, 1, 4. A 3x3 subgrid in the bottom-left contains the values 4, 7, 8. A 3x3 subgrid in the bottom-right contains the values 5, 3. A 3x3 subgrid in the middle contains the values 6, 7, 8. A 3x3 subgrid in the bottom-middle contains the values 3, 1, 8. A 3x3 subgrid in the bottom-right contains the values 6, 9. A 3x3 subgrid in the bottom-left contains the values 2, 8, 4. A 3x3 subgrid in the bottom-middle contains the values 5, 6, 9. A 3x3 subgrid in the bottom-right contains the values 1, 2, 3. To the right of the grid is a numeric keypad with buttons for 1, 2, 3, 4, 5, 6, 7, 8, and 9. Below the keypad is a blue "New Game" button.

Drew Mullett Contributions

- Added functionality for server to make http GET request along with difficulty options
- Created site segments for sudoku and killer sudoku
- Created Dockerfile for project

Drew Mullett Contributions - Evidence

The image displays four screenshots arranged in a 2x2 grid, illustrating contributions to two web-based Sudoku games.

Top Left Screenshot: A screenshot of the "Killer" game interface from <https://sudoku.drewmullett.net/killer>. It shows a 9x9 grid with some numbers filled in. Below the grid are buttons for "Solve", "Clear", and "New Game". Above the grid, there are difficulty levels: Easy, Medium, Hard, and Expert. The URL in the address bar is <https://sudoku.drewmullett.net/killer>.

Top Right Screenshot: A GitHub issue titled "How to separate Client and Server data? #29" from the repository [Snaredrumhero](#). The issue was opened by Snaredrumhero 2 weeks ago and has 0 comments. The description states: "Need to figure out how to separate server and client data". The issue is categorized under the "server" label. It includes sections for "Server" (Completed puzzle, Leaderboard, Puzzle generation) and "Client" (Incomplete puzzle, Checks that the puzzle is valid before sending the time to the server). The issue is marked as "Closed" by Snaredrumhero 2 weeks ago. The URL in the address bar is [How to separate Client and Server data? #29](#).

Bottom Left Screenshot: A screenshot of the "Classic" game interface from <https://sudoku.drewmullett.net/classic>. It shows a 9x9 grid with some numbers filled in. Below the grid are buttons for "Solve" and "Clear". Above the grid, it says "Difficulty: Easy Medium Hard Expert". The URL in the address bar is <https://sudoku.drewmullett.net/classic>.

Bottom Right Screenshot: A GitHub pull request titled "Websolver #44" from the repository [Snaredrumhero](#). The PR was merged by ZacharyWolfe last week. It contains 7 commits from the "websolver" branch into the "main" branch. The PR is labeled "Second PR". The URL in the address bar is [Websolver #44](#).

Nick Adkins Contributions

- Added function to Solve the sudoku board (Mostly works, but still WIP)
- Completely Reworked the Generation Algorithm to be more random, at the cost of time efficiency (of which is still barely noticeable: a time of 0.2 ms VS ~30 ms to generate a board)
 - I just recently optimized the algorithm from ~30 ms → ~20 ms
- Reworked tile showing system so that the resulting board is always compatible with the solver function
- Closed Issue #2

Nick Adkins Contributions - Evidence

(Both Generate.tsx & Solver.tsx are now about 200 lines each, can't show all of it here)

```
killer-sudoku > app > Generate.tsx > initBoard
1  /**
2   * @file      Generate.tsx
3   * @author    Nicholas Adkins (na761422@ohio.edu)
4   * @brief     Generates a valid full sudoku board
5   * @date      February 26, 2024
6   */
7
8   import { SpaceButtonProperties, HandleHighlighting, SaveBoardState } from "..."
9   import { solve_str, isAvailable, isValid, makeBoard, copyBoard } from "..."
10
11  /**
12   * @brief Initializes the board to be a 2d array, generates a board full
13   *       data with SpaceButtonProperties, and highlights the origin to
14   *       @param used (WIP)
15   *       @returns A 9x9 board
16   */
17  export function initBoard(used: number): SpaceButtonProperties[][] {
18
19    console.log("initBoard: Start");
20
21    let recNumber: number = 0;
22    let board: string[][] = makeBoard();
23    generate(board);
24
25    function generate(inputs: string[][]): boolean {
26
27      ...
28
29      return true;
30    }
31
32    return board;
33  }
34
```

```
killer-sudoku > app > Solver.tsx > ...
1  /**
2   * @file      Solver.tsx
3   * @author    Nicholas Adkins (na761422@ohio.edu)
4   * @brief     Function to solve a board / determine if it's solvable
5   * @date      March 8, 2024
6   */
7
8   // TODO: Re-do Comments and such
9
10
11  /**
12   * @brief takes input board & tries to solve it
13   * @param board input board of string[][] trying to be solved
14   * @returns tuple of a boolean (did it succeed or not) & the resulting board, or null if failed
15   */
16  export function solve_str(input: string[][]): [boolean, string[][]] {
17    let board: string[][] = copyBoard(input);
18
19    let notes: boolean[][][] = [];
20    for (let x = 0; x < 9; x++) {
21      notes[x] = [];
22      for (let y = 0; y < 9; y++) {
23        if (board[x][y] != '') continue;
24        notes[x][y] = [];
25        for (let n: number = 1; n <= 9; n++) {
26          ...
27        }
28      }
29    }
30
31    let success: boolean = true;
32    for (let x = 0; x < 9; x++) {
33      for (let y = 0; y < 9; y++) {
34        if (board[x][y] == '') {
35          if (notes[x][y].length == 0) {
36            success = false;
37            break;
38          }
39        }
40      }
41    }
42
43    if (!success) return [false, null];
44
45    let result: string[][] = copyBoard(board);
46    for (let x = 0; x < 9; x++) {
47      for (let y = 0; y < 9; y++) {
48        if (board[x][y] == '') {
49          let possibilities: number[] = notes[x][y];
50          if (possibilities.length == 1) {
51            result[x][y] = String(possibilities[0]);
52          }
53        }
54      }
55    }
56
57    return [true, result];
58  }
59
```

Nick Adkins Contributions - Evidence (cont.)

I Copied over my code into a test file, and logged the time it took to generate the board (using the performance.now() function).

Post-Optimization: I output the average time (ms) of 40 generation attempts, repeated 20 times, into a text file, as seen on the right.

I don't have an image of what the numbers were Pre-Optimization, but they were higher, around 30 ms or so.

Note: These numbers were from my desktop; it generates a bit slower on my laptop

1	
2	24.3467625
3	24.5544875
4	26.572747500000002
5	33.740042499999994
6	31.995249999999977
7	24.30849249999999
8	22.4601325
9	24.020654999999994
10	21.196372500000003
11	17.491824999999995
12	22.855915
13	18.117650000000005
14	33.35680999999999
15	21.53533749999994
16	19.0486925
17	24.3334275
18	22.84449999999999
19	23.442057500000004
20	29.643119999999993
21	30.24444250000001
22	20.023084999999988
23	

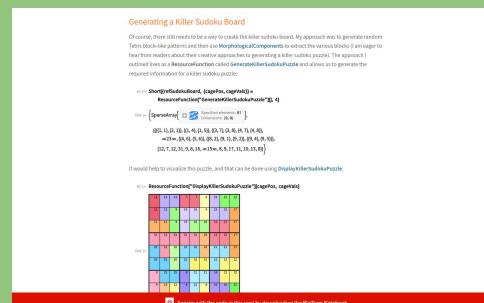
Kevin Belock's contributions

I researched ways to implement the cage / grouping for the killer sudoku side of the board. The hardest thing to make will be implementing the shapes and outlining them properly without any overlap.

Kevin Belock's contributions evidence

Websites I have visited for research;

- <https://markheath.net/post/typescript-tetris>
- <https://resources.jointjs.com/tutorials/joint/tutorials/ts-shape.html>
- <https://blog.wolfram.com/2020/06/02/using-integer-optimization-to-build-and-solve-sudoku-games-with-the-wolfram-language/>



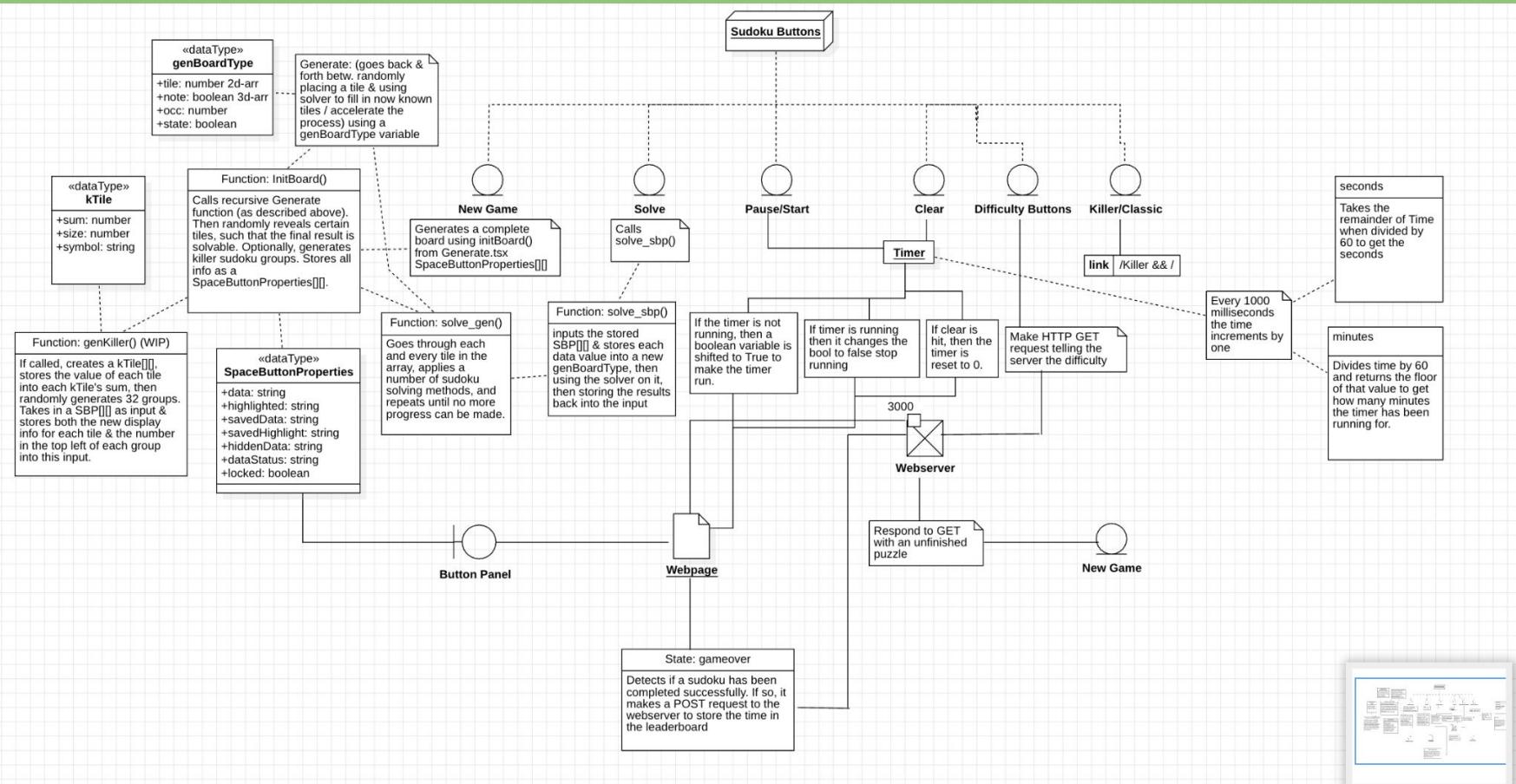
The screenshot shows a blog post titled "Porting Tetris to JavaScript with TypeScript" by Kevin Belock. The post includes a Tetris game board with falling colored blocks. To the right of the board is a sidebar with navigation links for "Home", "About", "Contact", "Privacy Policy", and "Sitemap". The main content area contains several code snippets and explanatory text. One snippet shows the Tetris game board represented as a 2D array:

```
<table border="1">
  <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
  <tr><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td></tr>
  <tr><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td></tr>
  <tr><td>28</td><td>29</td><td>30</td><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td></tr>
  <tr><td>37</td><td>38</td><td>39</td><td>40</td><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td></tr>
  <tr><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td><td>51</td><td>52</td><td>53</td><td>54</td></tr>
  <tr><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td><td>60</td><td>61</td><td>62</td><td>63</td></tr>
  <tr><td>64</td><td>65</td><td>66</td><td>67</td><td>68</td><td>69</td><td>70</td><td>71</td><td>72</td></tr>
  <tr><td>73</td><td>74</td><td>75</td><td>76</td><td>77</td><td>78</td><td>79</td><td>80</td><td>81</td></tr>
</table>
```

The post also includes sections on "The HTML", "The Shape Classes", and "Custom Shape With TypeScript". It features a sidebar with a "Search" input field and a "Recent Posts" section listing "Generating a Killer Sudoku Board", "Porting Tetris to JavaScript with TypeScript", and "The Shape Classes".

Start of Checkpoint 4

UML Diagram



Meeting Attendance

- Group Meeting (Checkpoint 4) 3/30/2024
 - Present: All members
- Group Meeting 4/2/2024
 - Present: All members

Work Summary

Zachary

- Successfully made cages for individual cells
- Added support for a sum in the top left of cells
- Closed issues #66, #65, #60, #59
- Hacky getaround for bolded border outline
- Added Game Ending logic

Drew

- Added eslint static analysis to current build by fixing dependency errors
- Added Webserver section to group .mdj display

Nick

- Reworked the generation Algorithm again (now its much faster)
- Implemented Killer Sudoku group generation & helped with the UI aspects of it.
- Posted a ton of bugs on GitHub as issues, and also closed issue #62

Kevin

- Working on finding the average ratio of killer sudoku grouping.
-

Next Checkpoint Plan

Zachary

- Fix minor bugs noticed along the way to alpha testing
- Add extra features like leaderboard
- Explore authentication and storing user data
- Implement a victory popup overlay?
- Save time, name, and which sudoku puzzle to leaderboard scores

Drew

- Try to regroup after BlossomHack and figure out where my efforts should best be put
- Fix Dockerfile installation errors
- Clean up git branches with file hangs preventing checkouts between branches

Nick

- Make the solver work better with killer sudoku
- Help implement Difficulty options/menu, and help merge the difficulty with killer sudoku mode.
- Work on fixing some bugs we just discovered in the live demo showcase today

Kevin

- Helping with fixing any issues in grouping and other minor issues.

Road Blocks

Zachary

- Time to manage 3 HWs, 3 Quizzes, and the project on top of all other classes assignments

Drew

- Difficulty managing BlossomHack along with increased workload
- Strange errors with Docker installation preventing debugging Dockerfile

Nick

- Likewise, am having difficulty finding the time to work on this with all of the other assignments i have elsewhere

Kevin

- Time to work with all other class stuff

Zachary Wolfe Contributions

- Successfully made cages for individual cells
- Added support for a sum in the top left of cells
- Closed issues #66, #61, #60, #59
- Hacky getaround for bolded border outline
- Changed directory pathing to display Killer Sudoku on the home page instead of Sudoku
- Fixed UI sizing for QOL changes
- Fixed persistent panel input bug
- Added Game Ending logic

Zachary Wolfe Contributions - Evidence



ZacharyWolfe commented 2 days ago

Member ...

Just needed to set the icon, good catch! Solve with [#67](#)



ZacharyWolfe closed this as completed 2 days ago



ZacharyWolfe commented 4 days ago • edited

Member ...

These issues were all fixed in my branch a while back, just needed to merge.



ZacharyWolfe closed this as completed 4 days ago



ZacharyWolfe commented 4 days ago

Member ...

This was a known bug that was fixed a long time ago, been waiting to merge because I needed to fix the panel more.



ZacharyWolfe closed this as completed 4 days ago

Zachary Wolfe Contributions - Evidence cont.

ZacharyWolfe commented 4 days ago • edited

To comment on what's happening in the middle, it appears that there is a space in the (4, 3) cell, so when it's comparing it's actually bringing up false. I can't reproduce the (4, 3) cell 'space' issue but I will put out a fix for the highlighting. Good catch!

ZacharyWolfe commented 4 days ago

Will ensure a fix when [#62](#) is closed.

ZacharyWolfe mentioned this issue 2 days ago

Fix Solve and Clear highlights #65

Merged

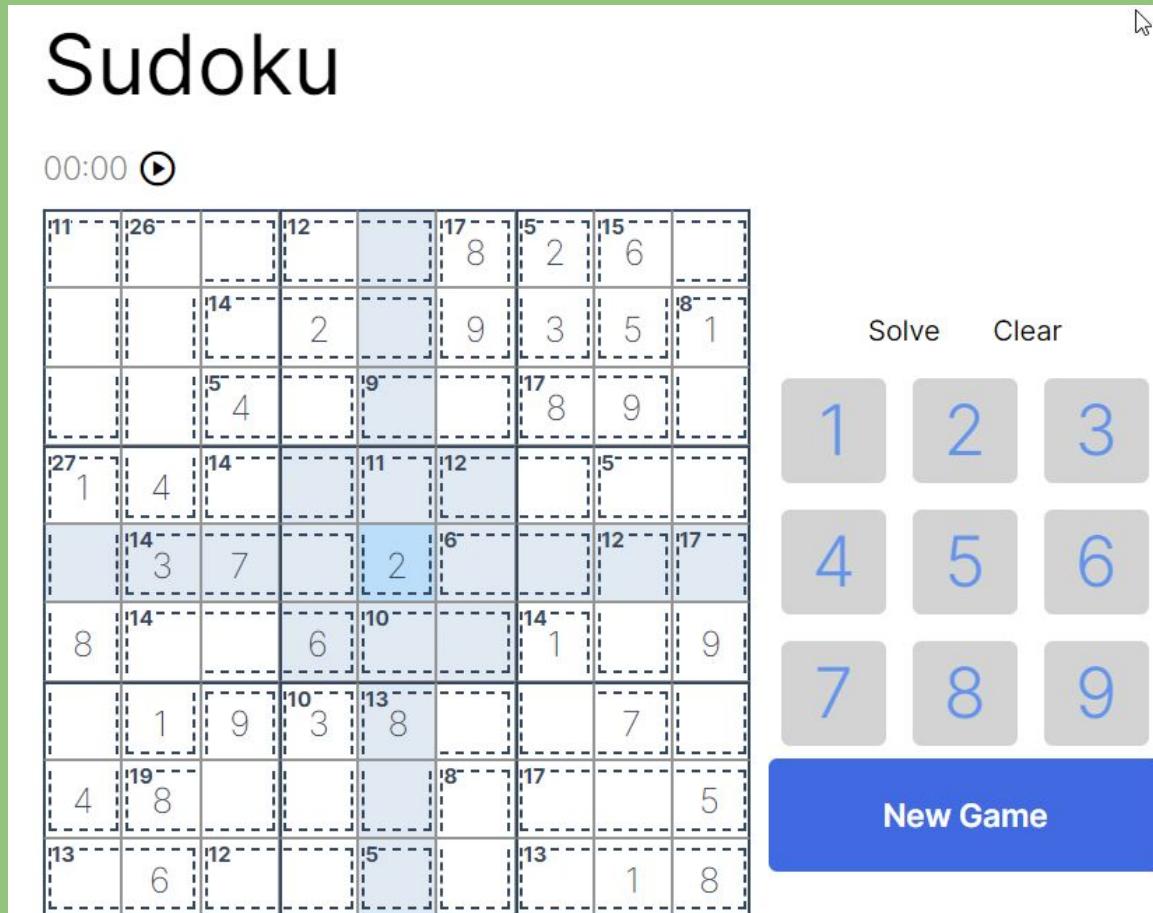
ZacharyWolfe commented 2 days ago

Solved with [#65](#)

ZacharyWolfe closed this as completed 2 days ago

Zachary Wolfe Contributions - Evidence cont.

- All the visual aspects in this photo



Drew Mullett Contributions

- Added eslint static analysis to current build by fixing dependency errors
- Added Webserver section to group .mdj display
- Attempted to sort through Docker dependencies
- Added unit tests for timer object

```
andrewmullett@DESKTOP-K4EDPIH:~/s24-killer-sudoku/killer-sudoku$ npm test

> killer-sudoku@0.1.0 test
> jest

PASS  app/timer.test.tsx
  ✓ two plus two is four (2 ms)

Test Suites: 1 passed, 1 total
Tests:       1 passed, 1 total
Snapshots:   0 total
Time:        2.841 s, estimated 3 s
Ran all test suites.

andrewmullett@DESKTOP-K4EDPIH:~/s24-killer-sudoku/killer-sudoku$ |
```

Drew Mullett Contributions - Evidence

Added eslint dependencies and fixes #70

[Open](#) Snaredrumhero wants to merge 1 commit into `generation` from `generation-fix`

Conversation 0 Commits 1 Checks 0 Files changed 7

Snaredrumhero commented yesterday

The dependencies wouldn't be added in because of some git weirdness that was happening with missing files being tracked but weren't able to be found. You'll still need to run this in `s24-killer-sudoku` to get eslint's dependencies installed

```
npm install --save-dev eslint typescript @typescript-eslint/parser @typescript-eslint/eslint-plugin
```

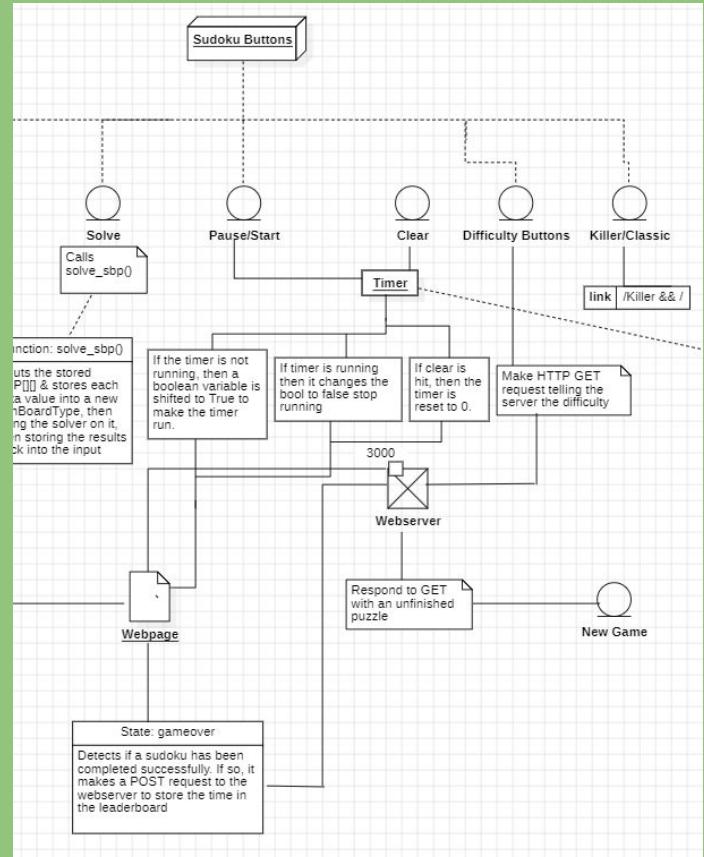
After that just go in the `killer-sudoku/app` directory and run

```
npx eslint .
```

And it'll perform static analysis. I merged because there were some simple variable assignment issues it ran into, so I figured I'd just pass those your way since you were having issues with eslint. Let me know if you have any questions

Added eslint dependencies and fixes

Snaredrumhero requested a review from nickadkins47 yesterday



Nick Adkins Contributions (1/3)

Reworked the generation Algorithm again (now it's much faster)

- Board generation process is now down from ~20 ms (with a rough maximum value of ~200 ms) down to <1 ms (maxing out at roughly ~10 ms)
- Part of the new algorithm pictured on the right, but i'd definitely insist on looking through every function to get the full picture here on how it works.
- Compared to previous version, its largely organized in a similar manner but just that significant changes were made to optimize it.

```
let iter: number = 0;

const generate = (board: genBoardType): boolean => {
    if (iter++ > 50) {iter = 0; return true;}
    //Calls solver & records all changes it made
    const changes: [number,number][] = solve_gen(board,2);
    if (board.state) {
        if (board.occ == 81) return true;
        let x: number = 0, y: number = 0;
        do {
            x = rand(0,8);
            y = rand(0,8);
        } while (board.tile[x][y] != 0);

        //Look through every available option
        for (let val of randomOptions(board.note[x][y])) {
            boardAdd(board,val,x,y);
            if (generate(board)) return true;
            boardRem(board,x,y);
        }
    }
    //If board is unsolvable, undo all solver changes & return false
    for (let ch of changes) boardRem(board,ch[0],ch[1]);
    board.state = true;
    return false;
}
```

Nick Adkins Contributions (2/3)

Implemented Killer Sudoku group generation & helped with the UI aspects of it.

- Also including a way to turn on/off killer group generation in the initBoard() function (still kinda WIP)
- Implemented in GenKiller.tsx, including most of the killer sudoku board generation, and a ton of documentation too, with a little bit elsewhere

```
GenKiller.tsx
killer-sudoku > app > GenKiller.tsx > genKiller
20  * will have the same symbol attached to it)
21  * @note Elsewhere, I take advantage of the fact that objects are always
22  * passed by reference in typescript, so that I have multiple spots
23  * in a kTile[][] point to the same kTile, thus not needing to worry about
24  * updating all tiles, since those spots would just point to the same object
25 */
26 type kTile = {
27   sum: number,
28   size: number,
29   symbol: string
30 };
31 /**
32  * @brief Creates groups for killer sudoku based on the given board
33  * @param {SpaceButtonProperties[][]} board board to write dashedBorder & topLeftNumber values to
34  * @return None
35 */
36 export function genKiller(board: SpaceButtonProperties[][]): void {
37   //# of killer groups (vary on difficulty?)
38   const AmountTotal: number = 32;
39
40   let groups: kTile[][] = [];
41   for (let i = 0; i < 9; i++) {
42     groups[i] = [];
43     for (let j = 0; j < 9; j++) {
44       groups[i][j] = {sum: Number(board[i][j].data), size: 1, symbol: '.'};
45     }
46   }
47 }
```

Nick Adkins Contributions (3/3)

Posted a ton of bugs on GitHub as issues, and also closed issue #62, as Pictured right & below

- New Game -> Pause broken / already ticking
#66 by nickadkins47 was closed 3 days ago
- When putting in a number, it doesn't get rid of the blank space that was there bug good first issue ui
- Incorrectly Place Tile -> Solve Button -> Tile highlighting is still red on fixed tiles bug ui
- Big number Buttons fill every unlocked tile with that number bug ui
- Pause button bugs bug ui
#59 by nickadkins47 was closed 4 days ago 2 tasks done
- Solve button doesn't work properly if there are incorrectly placed tiles
#55 by nickadkins47 was closed 5 days ago

The screenshot shows a GitHub issue page for a bug titled "When putting in a number, it doesn't get rid of the blank space that was there" (issue #62). The issue is marked as "Closed" with a purple checkmark icon. Below the title, it says "nickadkins47 opened this issue 5 days ago · 3 comments".

The first comment is from "nickadkins47" (4 days ago), stating: "ok with the latest changes in (either spaces-board or generation branch), this is now fixed".

The final comment is from "nickadkins47" (4 days ago), closing the issue as "completed".

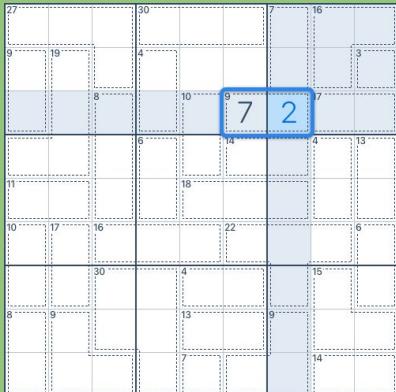
At the top right of the comment section, there are three buttons: "Member", "Author", and "...".

Kevin Belock Contributions

Researched what the most common cell grouping in a sudoku board and what cell groupings are generated when the difficulty is changed. I have found that 2 and 3 group cages are more common than 1 and 4 group cages. A 5 group cage is rarely generated.

Kevin Belock Contributions - Evidence

Many sudoku boards are generated, but the cages rarely go past 4 or to one. Leaving 2 and 3 cell cages the most common to generate.



16		9	11		20	5		
9	5	15		12		8		
		30	5	8		12		
13					3		13	
12	8			8	9			
			9	9	15	20		
13	20				6		19	
		12	9	14	8	7		
							13	

