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**SOFTDEV1 PD1**

## **PROGRAM COMPONENTS:**

### **BASIC DESCRIPTION**

This is a collaborative storytelling website called FoldOver.io. Users must log in to join this exclusive game. Once in session, users can choose to create a new story (with unlimited text length) or add to an existing story (10 words minimum, 50 words maximum). If they want to add to an existing story, they may only see the latest edit in order to keep the thrill of the game. Once their addition to the story is submitted, they will be able to read the full story.

Stories can be found by searching the website for keywords or tags (i.e. horror, fantasy, romance). Users can have existing tags or create their own tags to add to a story that they've created or edited. All the stories a user has created or edited will be listed on their homepage after they log in.

### **FRONT END**

- Login:
  - Enter username + password (stored in DB)
  - Wrong password redirects back to start with printed error message
- Sign up
  - Enter password and username
  - Check DB for existing username. If the username already exists, prompt the user for a new, different username
- Search
  - After login
  - Hyperlink tags (list of stories under page)
  - Keywords search (using in through database), results hyperlinked
  - If keyword doesn't exist, make a story for it (links to creating a new story)
  - Link to all stories
- Access to Stories
  - My stories → can view
  - Edited stories → can view
- Editing
  - New story: title, words, add tags

- Existing story: latest edit, one minute timer, 50 words, submit and routes to full story
- Edited story is added to list of stories you edited
- If story is currently being edited:
  - Queue is displayed to next person that presses edit, with expected wait time and former stories list to pass the time

## **BACK END**

- SQL DB with a table timestamps, stories, editors of last edit, and tags
  - One column is timestamp and the other is the story itself, stored in HTML with the bold, headers, etc. and tags
  - DB is constantly updated when the line is submitted (appends to existing story)
- Second table in the DB with user login and password and edited stories list
  - Admin log in
    - Admins can view the story without editing for profanity and civility check, and can make tags in accordance with the story (we <3 jesu here)
- A server monitoring system, that tracks when people view the story and webpage
  - With a queue that is constantly being modified to account for new user visits and expected wait times
    - Because each user has a cap of one minute to update the story, the expected wait time physically could not be more than the length of the queue in minutes

## **SEARCH MECHANISM**

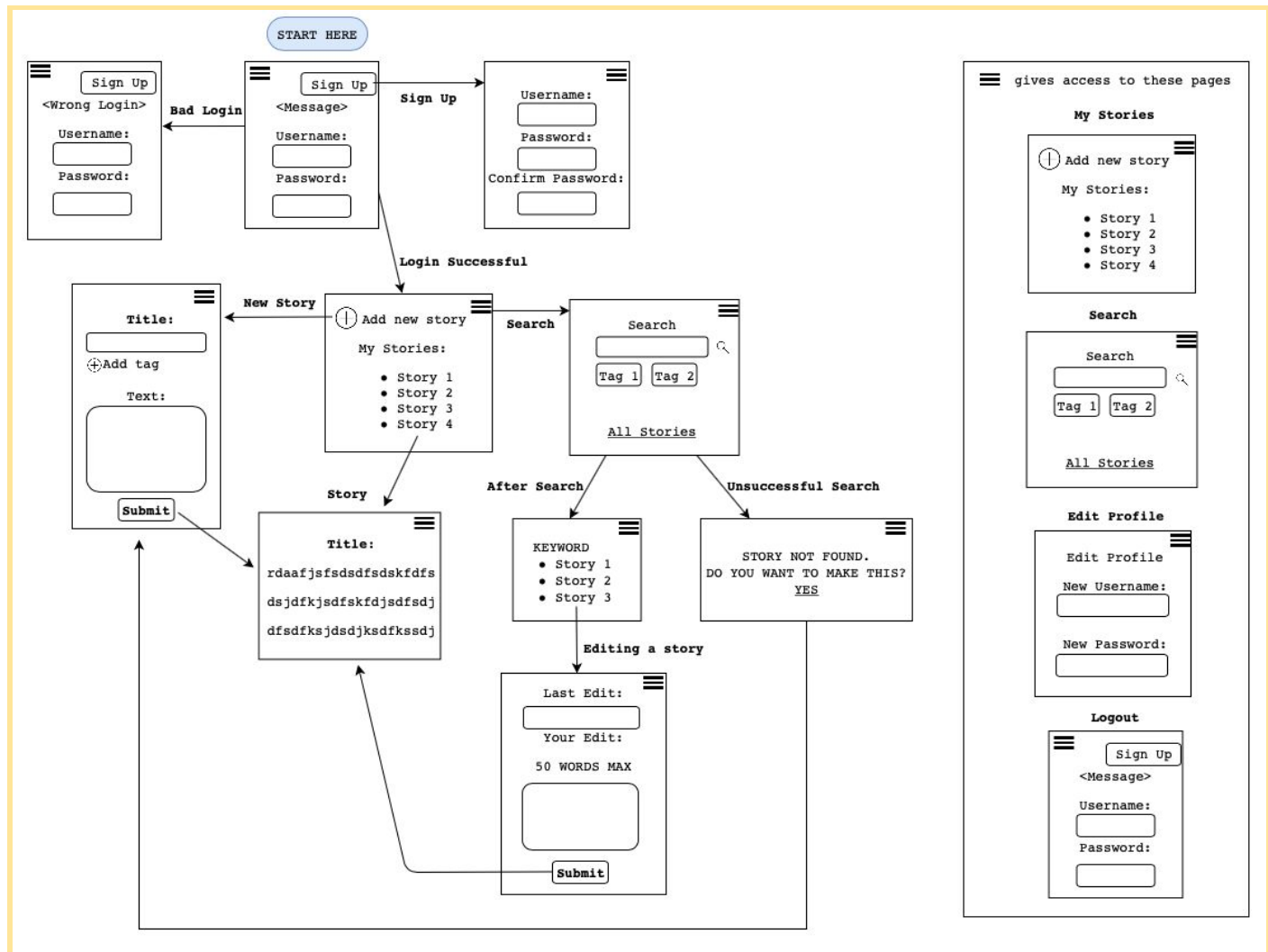
- Compile the stories with the searched tag in list into one array
  - We sort it alphabetically by tag
  - We search for it with a linear search that compares the first letter of the search to decide what direction to search from.
    - Ex: searching for the “fun” tag, we compare the first char ‘f’ with the alphabet, to see that ‘f’ is closer to ‘a’ than it is to ‘z’
      - Therefore, we start from position 0 and go linearly toward f, and repeat for the next char in the tag

## **RELATIONSHIP BETWEEN COMPONENTS:**

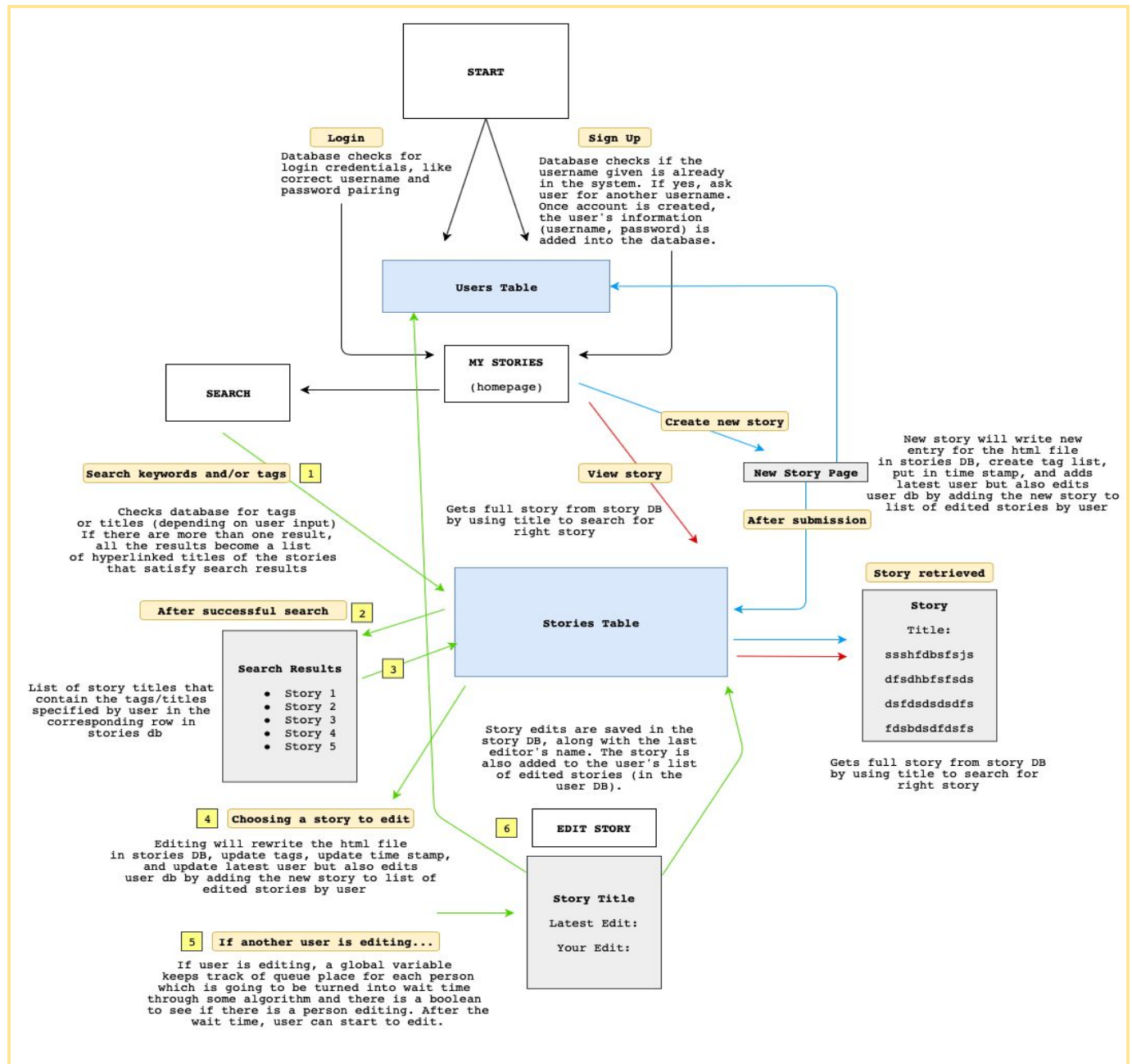
- Accounts from the front end can be created by users. User information is stored in the backend database for login. Users should be allowed to change their account information and, in doing so, updating the database.

- Admin accounts can not be created, unless done from another admin account, and are stored in the same DB
- The “My Stories” tab will reference directly from my stories DB, where it prints out the contents of the database, formatted all pretty like
- The server monitoring system gets repeatedly updated by new IP logs, and modifies the queue accordingly

## SITE MAP:



# COMPONENT MAP:



## DATABASE ORGANIZATION:

(Main) Database Story Attribute:

(Story Title TEXT, Time Stamp TIME, Last Editor TEXT, Tags TEXT, Story BLOB)

Story Title	Time Stamp	Last Editor	Tags	Story
Ayham's Bedtime	10--18--2019:10:30:51	Mandy8871	<Sophmore> <No Friend> <Realistic Fiction>	<b>I HAVE NO LIFE UNLESS I HAVE REDBULL!<b>
Getting Into College	10--31--2019:11:59:59	aalnasser00	<Fantasy> <Tragedy> <Comedy>	<h2>For i in range(0,15): print("Rejected!")</h2>
Actually Saving the Turtles	10--30--2019:00:00:01	vscojesse	<dark humor>	<p>The turtles feel misrepresented by the VSCO girls and sksksk their limited reptilian vocal cords to death.</p>

Account Database:

(user TEXT, password TEXT, stories\_edited BLOB, is\_admin BOOLEAN)

User	Password	Stories Edited	Is_admin
laffytaffy00	hejfdncfd	Willy Wonka, Major Mario	1
azhengerrrr	yawnASMR	Ayham's Bedtime, Mandy's Stature Problems	1
vscojesse	hydroFLASKapp	Null	0
eeeeeeeeeeeeee	#!/usr/send_help	College Help, Mental Help, CS Help, Design Help	0