

Socially Constructed Flashcard System



Final Report

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1 Executive Summary

Initially born from the tedious task of creating dozens of flashcards to quiz oneself for an upcoming exam, our Socially Constructed Flashcards System was purely created for the purpose to give students quick accessibility to already made study content for their classes. With our initial target audience being only the students of UBCO we have expanded our system to accommodate for any other school. Currently we have added all the universities of Canada to the database but if the user enters a school that is not part of the database then the school they enter is added in for others to reference.

Anyone can visit our website and without signing up, they are free to view any deck created by anyone else. However if a user wants to create decks of their own or rate decks of other users then a little more commitment is needed. From the home page users have the choice of creating an account of their own. Once users have their own account then the full features of the system are at their disposal. Users can create decks of their own, which other people can see and rate. Users that create decks have full power of what the deck contains and what its properties. If they make a mistake in creating the deck they can go back to it later and alter deck information as well as any card they wish. Users can delete decks that they create but the deck will not be deleted from the database and only be deleted from the users list of created decks. We do this to keep decks that people find useful available to the community.

Users can mark decks that they like, creating a shortcut to make it easy for them to come back to the deck later. Users can also rate a deck if they feel strongly enough about it as well signaling to other users that the deck was effective . If a user comes across a deck that is not very useful or contains wrong answers then users can dislike that deck. If a deck contains

inappropriate content then users can flag this deck, a more drastic action than just disliking the deck, letting the administrators know that the deck should be removed.

There is a full search feature implemented to allow users to search through our potentially vast database of decks. Users can effectively find the deck they are looking for by specifying school name, subject, and course name, as well as some other pieces of information. Users can then sort the results from their search by several options including rating, author and date created just to make searching a little more user friendly. If a user finds a deck and likes it but they forget to save it, not to worry, the deck will appear in their “Recent Decks” page and they can access it and save it from there.

Users can alter account information in the “Account” page. From there (and on sign up) users can specify a school that they belong to. This information is used to fill in the “School” field when searching with their school as the default value, as usually students will generally want to search for deck within their own school. In the “Account” page users can also change their email along with their password. If a user finally makes it to that long awaited day of graduation and they no longer require their flashcards account then they can delete their account as well.

We were able to complete all the features for the website we set out to do and even add in a few extra ones on the side. Although our website is functional and live we still have some tweaks to perform and small bugs to work out if we were to continue the project after the course and turn it into an application for mobile platforms which we intend to do.

Some bugs we have encountered are sending emails to users and auto filling fields. We continue to come up with new features to add in as well. For the future we hope to allow professors to have an unique account that will display a special marker next to the decks that they create in hope that they will create decks for their students. Decks made by professors will hold a little more weight than other decks created by students. We hope to add in a clone feature. The idea is that if a user wants sees a deck that they like but they want to add to it then they can clone the deck, which will take them straight to the create a deck page with the deck completely cloned in and then the user is free to alter it in any way they chose. One last feature we wish to add is that we want to give users the option of being updated via email when a deck within a certain course reaches a high rating.

2 Walkthrough

Visit <https://scflashcards.herokuapp.com> to begin the walkthrough.

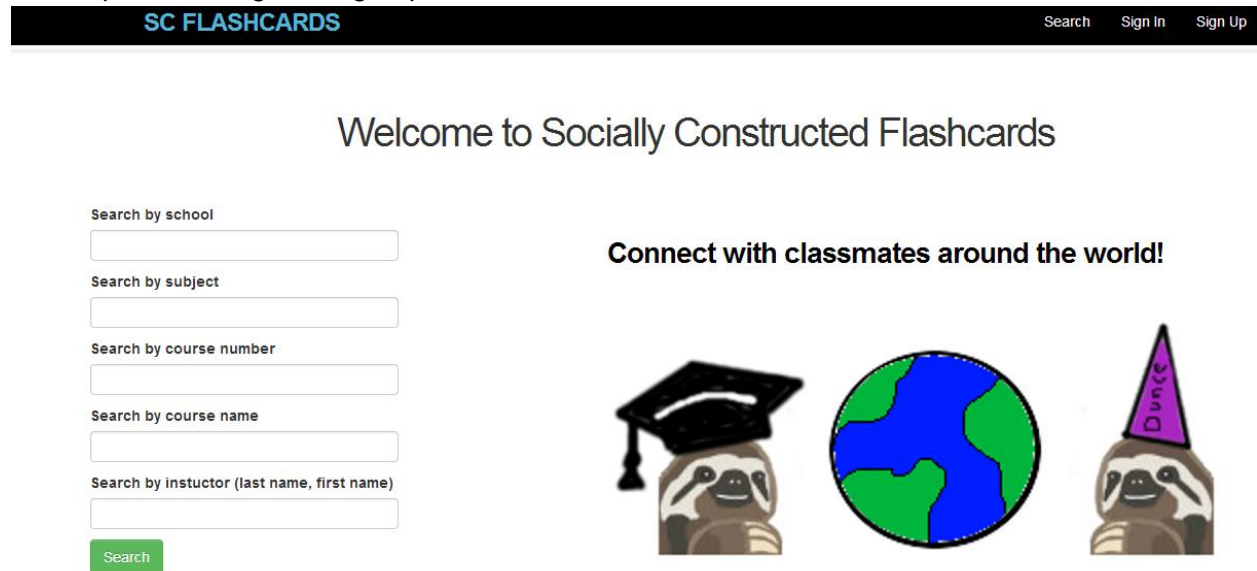
2.1 Unregistered Users Walkthrough

To use most features of the system a user needs an account but unregistered users are able to search through all the decks and view them as often as they wish. Users are required to have basic website navigation skills in order to accomplish this. All you need to do to get started

is to enter your search information into the corresponding fields or go to the search in the header. We advise you to jump to 2.4 and continue to 2.5.

2.2 Home Page

Upon visiting the site users are brought to the home page. Once here users only have three options; to sign in, sign up and search for decks.



2.3 Creating an Account

We will create a new account for the purpose of this walkthrough so let's click on the sign up button in the header. We see that we are brought to the sign up page. There are a few fields that need to be filled in. Give a School, say the "University of British Columbia-Okanagan", a valid email address, a username that will be present on all decks that are created and a password to keep the account private. Then all that has to be done is hit sign up.

SC FLASHCARDS

Fields marked with * are required

Email *

Username *

Password *

Password confirmation *

School name (optional)

2.4 Signed in and Creating a Deck

Once signed in you will be brought to the “Your Decks” page that hold all the decks that you have created. At this point this page should be empty as you have not created any decks. So lets create one. Click on the “Create a Deck”.

Your Decks

From the page in front of us we see that we have some information to fill in so give your deck a title and a subject. Say “Multiple Choice Q&A” and “Computer Science”. Also fill in the fields for Course Number and Course Name. Say “304” and “Introduction to Databases”. The Instructor field should be filled in as well so add in “Lawrence, Ramon”. Notice that the School field is already filled in for you. When the account was created you specified a school for it and the database will remember that for all school fields. All that is left is to pick a lovely background

for our cards and click on “Create Deck”.



Create a Deck

Fields marked with * are required

* Title

Multiple Choice Q&A

* Subject

Computer Science

School Name

University of British Columbia - Okanagan

Course Number

304

Course Name

Introduction to Databases

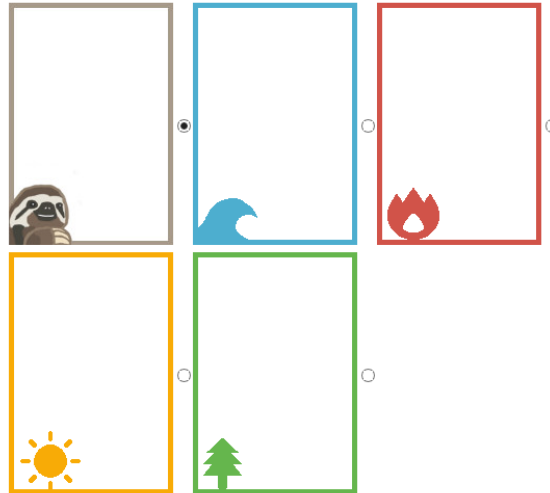
Instructor (Last name, first name)

lawrence, Ramon

Note: If either school, subject, and/or course name not found, a new entry will be created

Create Deck

Background image




You are now taken back to the “Your Decks” page and you can see that your Deck is shown now.



Deck created!

Your Decks

Create a Deck

Multiple Choice
Q&A
Computer Science -
304 -Introduction to
Databases
 No ratings



2.5 Adding a Card

To add a card all you have to do is click on the middle blue icon and you will be brought to the create a card page. All that has to be done is to enter a question with a corresponding answer and click on “Create Card”. We can see below that the card we just created has been added.

The screenshot shows the 'SC FLASHCARDS' interface. At the top, there is a black header with 'SC FLASHCARDS' in blue. Below the header is a green notification bar that says 'Card created!'. The main content area is titled 'Multiple Choice Q&A' by Jhon Doe, with a subtitle 'Computer Science - 304 - Introduction to Databases - University of British Columbia - Okanagan - lawrence, Ramon - Nov-26-2013'. Below this, there is a form with two input fields: '* Question' and '* Answer'. A green 'Create Card' button is located below the form. To the right of the form, there is a section titled 'Cards in this Deck'. Below this section, there is a table with two columns: 'Question:' and 'Answer:'. The first row of the table shows '2 + 2' under 'Question:' and '4' under 'Answer:'. To the right of the table, there are two buttons: 'Edit this Card' (blue) and 'Delete this Card' (red).

When you are done adding cards, click on “My Decks” in the nav bar.

2.6 Editing a Deck

If you make a mistake in the creation of a deck you can click on the edit deck icon that allows you to make changes to decks created by you. The decks name, subject, school, professor course name and number can be changed. You may change any information that you wish, when you are done, click on the “Save Changes” button.

SC FLASHCARDS

Multiple Choice Q&A by Jhon Doe

Computer Science - 304 - Introduction to Databases - University of British Columbia - Okanagan - lawrence, Ramon - Nov-26-2013

Fields marked with * are required

* Title

* Subject

School Name

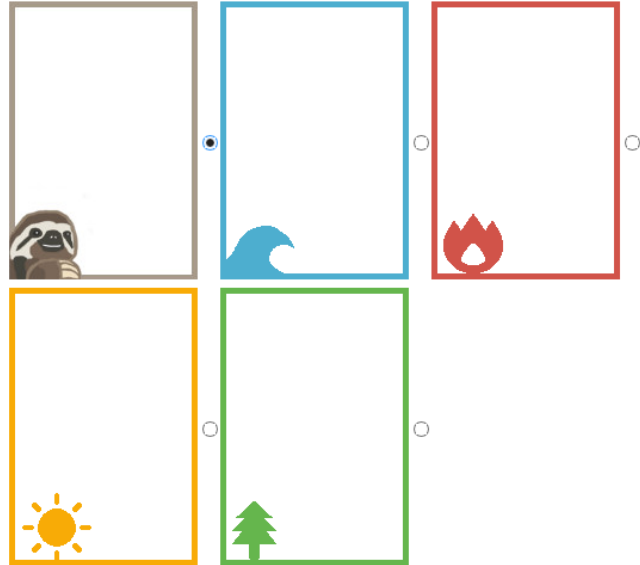
Course Number

Course Name

Instructor (Last name, first name)

Note: If either school, subject, and/or course name not found, a new entry will be created

Background image



2.7 Deleting a Deck

If you chose you may delete any deck you create by clicking on the red icon on the “Your Decks” page.

2.8 Searching for Decks

We will now explore how to find and use decks that other people have created. Clicking on the search button in the navigation bar will bring you to the search page. Once at the search page you can see that there is some information to fill in about the deck we are looking for. The school field is already filled in for us but we could change it if we wanted. Say you are looking for a Computer Science related deck so we enter “Computer Science” into the subject field and press the search button. You could enter more information to be more specific in your search but right now we only want all the decks dealing with Computer Science.

SC FLASHCARDS

Search

Search by school

Search by subject

Search by course number

Search by course name

Search by instructor (last name, first name)

Can't find what you're looking for?

[Sign Up](#) or [Sign In](#) and create a deck to study with specific to your school, subject, and course!




now that you have your search results you can sort them by a number of different options. Lets sort by rating since we only want the best rated decks. The page may not change as the search results may already be sorted by rating. Sort by another option and then resort by rating if you want.




3 Results




Sort results

Rating

Sort

Cosc Computer Science - 304 -Intro to Databases  100% liked	Created by test	Created on Nov-20-2013
	School University of British Columbia - Okanagan	
	Instructor Lawrence, R.	
		

Multiple Choice Q&A Computer Science - 304 -Introduction to Databases  No ratings	Created by Jhon Doe	Created on Nov-26-2013
	School University of British Columbia - Okanagan	
	Instructor lawrence, Ramon	
		

Multiple Choice Q&A Computer Science - 304 -Introduction to Databases  No ratings	Created on Nov-26-2013	
	School University of British Columbia - Okanagan	
	Instructor lawrence, Ramon	
		

Search Again

2.9 Viewing Decks

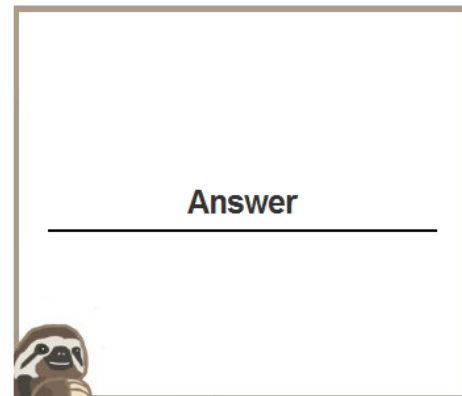
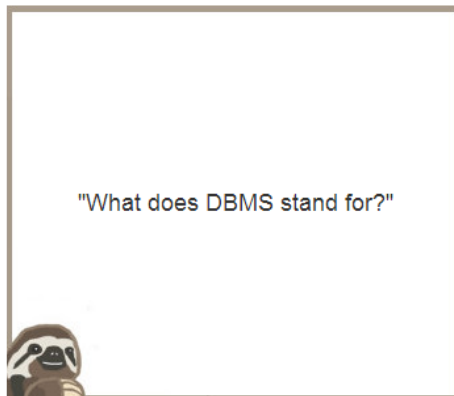
To view a deck you simply click on it. Then press the button under the question card, the start button to get started. The buttons have changed and from these new buttons you can go to the next or previous question with the arrows, you can see the answer to the current question and can chose to shuffle the decks contents in case you are getting a little used to the pattern. If you like or dislike a deck we can rate it using the buttons in the top left of the screen. You can share the deck on facebook as well with the facebook icon. If the deck contains inappropriate content then you can signal that as well by clicking on the flag button near the bottom left of the screen.

SC FLASHCARDS

Cosc by test

Computer Science - 304 - Intro to Databases - University of British Columbia - Okanagan - Lawrence, R. - Nov-20-2013

100% liked



Right Arrow - Next Left Arrow - Previous Enter - Show/hide answer Shift - Random

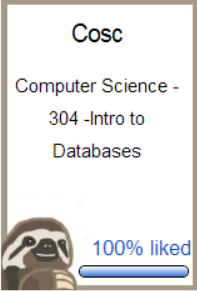



2.10 Saved and Recent Decks

If you decide that we really like this deck then we can click on the floppy disk icon that will save this deck to your "Saved Decks" page. Do that and navigate to the "Saved Decks" page to verify that it is there. If you go to your "Recent Decks" page you can see that the deck is there as well as you just viewed it.

SC FLASHCARDS

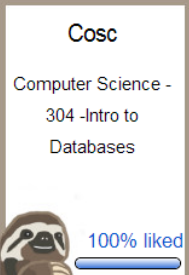
Saved Decks

	Created by	Created on
	test	Nov-20-2013
	School	
	University of British Columbia - Okanagan	
	Instructor	
	Lawrence, R.	
		

We can forget the deck by clicking on the orange icon beside the deck.

SC FLASHCARDS

Recent Decks

	Created by	Created on
	test	Nov-20-2013
	School	
	University of British Columbia - Okanagan	
	Instructor	
	Lawrence, R.	

2.11 Changing Account settings

If you want to change your account information then you can do that in your account page. Here you can change your email, password and school but you can not change our user name so when you sign up make sure to pick one you like. You can also delete your account to if you wish but you don't want to do that today so better not press that. Change the school for example to the "University of Alberta" and click on the save button. You can verify that the

school status has been changed by going to the search page and seeing that the school field is automatically filled in now with the “University of Alberta” instead of the “University of British Columbia-Okanagan”.

SC FLASHCARDS

[Edit User](#)

Email

Password *(leave blank if you don't want to change it)*

Password confirmation

Current password *(we need your current password to confirm your changes)*

School name (optional)

Unhappy?

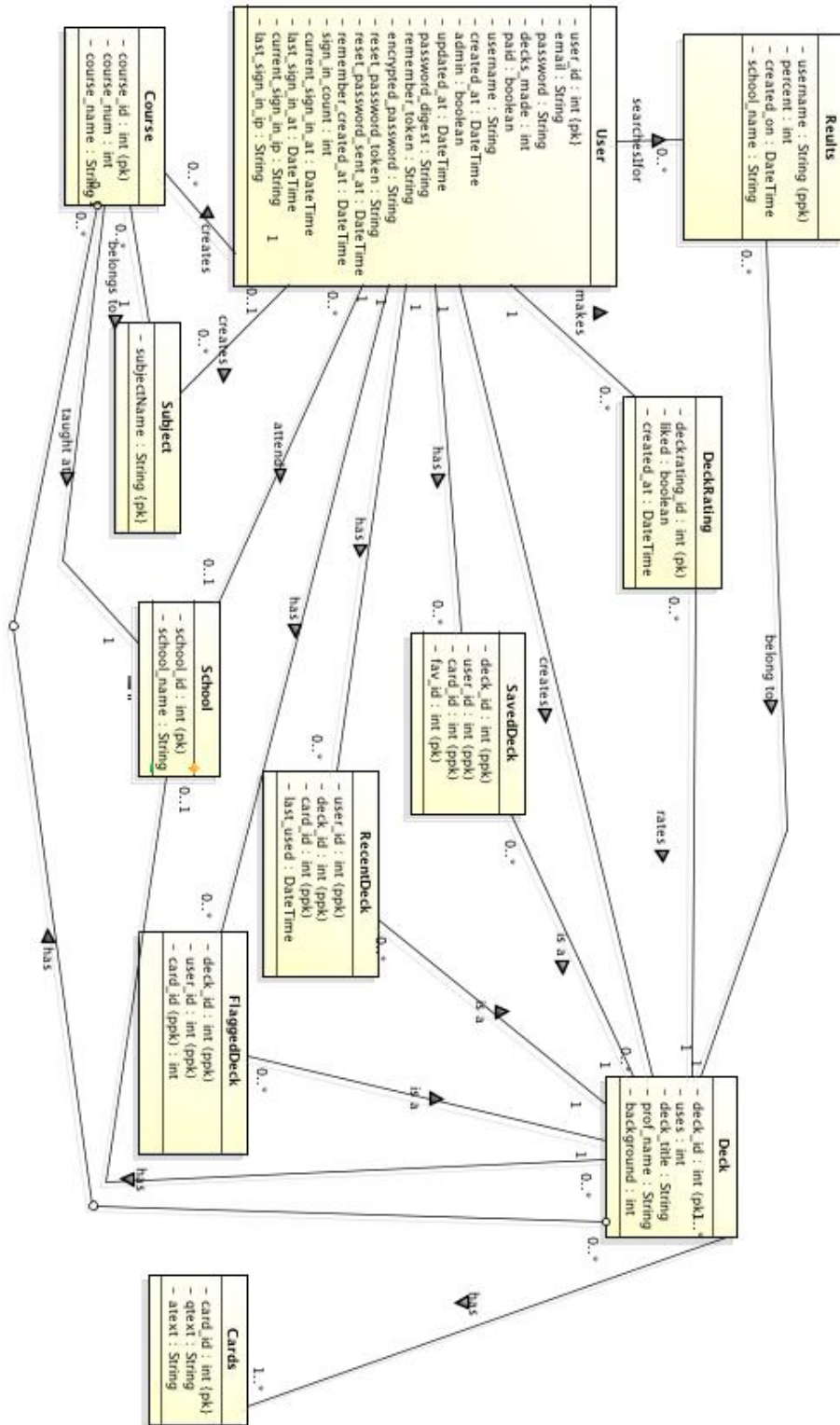
2.12 Explore and Sign Out

You have now explored almost all the features of the website. Feel free to revisit any part of the website. When you are ready hit the sign out button in the top right corner.

2.13 Sign in on an Existing Account

Upon signing out we will be back at the home page and from here you can experience the last feature by signing back into the account that you just created, by going to the sign in page and entering the login information.

3 ER Diagram



4 Implemented Features

4.1 Signing up/Signing in/Signing out

Users can create their own account or sign in to an already existing one, allowing them to save content, rate other peoples work and make content of their own. They can then sign out from their account

4.2 No Restrictions on Viewing Decks

All users, registered and non registered can view decks created by anyone.

4.3 Creating Decks/Cards

Registered users can create decks of their own that anyone can see and with these decks users can add cards to these decks as well.

4.4 Rating Decks

Registered and signed in user can rate other peoples decks using a like or dislike system.

4.5 Searching for Decks

There is a searching page with specific search parameters to help users find exactly what deck they are looking for.

4.6 Sorting Search Results

There is a sorting option to sort the results of a search to help you bring the deck you are looking for to the top of the page.

4.7 Autocomplete fields

Some fields like school and subject are auto completed (that is the system will try to guess what you are typing) due to the vastness of possibilities. This feature also helps to cut down on spelling mistakes.

4.8 Flag Decks for Inappropriate Content

Decks can now be flagged for inappropriate content. A deck that is flagged for inappropriate content will be removed if it receives enough flags. This process is done by administrators of the site and is currently done manually.

4.9 Users can alter Account Information

Users can change most account information such as school, password, and email but they can not change username.

4.10 Saved and Recent Decks

Users can mark decks that they like as “Saved” and a shortcut will be created for them in the “Saved Decks” page. The 5 most recent decks that a user views will be temporarily saved in the “Recent Decks” page.

4.11 Website now Accommodates for all Schools

The website now accommodates for all schools not just the University of British Columbia - Okanagan. Although only schools in Canada are currently added to the database if a user enters a school that is not in the database the school that the user entered will then be added for other users to reference.

4.12 Professional website

The website now has a cleaner, more professional look and feel to it as well as being able to scale to various desktop sizes and mobile devices.

5 Ruby File Layout

5.1 Model, View, Controller Layout

The Model, View, Controller layout is a software architecture plan that Ruby follows to create websites. Views are responsible for how the website looks on the physical screen. Every page has a view file associated with it and each file ends with a “.html.erb” extension. The “.erb” tells ruby that there is some ruby code mixed in with the html file and that it needs to do some magic conversion before it can be compiled. Most of our view files use another kind of file known as a partial file. Partial file contain code for displaying a particular element. For example there exists a partial for the layout of a deck so to display a deck all we have to do is call the partial.

Controllers are responsible for all the background calculation and communication with the database. They are the link from the database to the view. Each controller is linked to a single view file so that any information that is obtained by the page is sent right to a specific controller and handled accordingly. This is the same for any information that needs to be displayed as well. Controllers also hold the queries that request and pass information to the database.

Models are responsible for the structure of the database. This includes communication between tables, foreign keys and other database specifics. We have a model file for each table in our database and each file holds connections from the table that the model file is linked to; to any other table that the table needs to communicate with. This creates the final touches on our database to make it fully functional.

5.2 The Schema File

The Schema.db file is responsible for creating the core database structure. In this file is all our create table and attributed declarations. Ruby reads our file and then creates our database DBMS that we have specified, in this case is it Postgres.

6 Website Limitations

Our System is limited in the following ways:

- There will be a manual verification process to verify that a user is a professor
- There is a manual process to check and remove flagged decks
- Users can not make minor changes to already existing decks
- A user can enter a misspelled school and it will be in the database forever
- Content is made by peers and not 100% accurate
- The system will have a slow startup as we wait for users to begin using the system