

# **CS336 Project Submission**

December 13, 2017

## **Built by:**

Naeem Hossain - nh302

Hans Keistopholes - hmk61

Alexander Jia - ajj64

Chengguizi Han - ch710

## **Assignment description:**

“Please submit your code in a .zip, .tar, .war format. It should contain all the JSP/ HTML/ PHP pages, CSS (if any) and Javascripts. Make sure that there is only one submission per group.

I told you in the class I want to be able to login to your website and use different features of the database (e.g. search for reservation, write review etc.). Another important requirement is that you have to make a pdf file with explanations of the deployment of your project. Also the pdf file should include pictures of different parts of the website with a little note of what they do. This pdf file is very important and takes a large chunk of your grades.

As a final requirement, you have to write that which member has done what in the pdf file.”

## **Languages and tools:**

After much deliberation, the team settled on building the project through Flask and its associated libraries for maximum ease. As mentioned earlier, learning Flask was difficult for members of the group who had no prior Python experience, but it worked out in the end. Here is the full stack:

- HTML/CSS (front-end)
- Python - Flask (GET & POST)
- Flask-SQLAlchemy (back-end)
- Flask-Login (back-end)

- MySQL (back-end)

### **Problems:**

The hotel database system presents several complexities with a steep learning curve:

- Creating a CRUD (Create, Read, Update, Delete) application
- Learning Python and Flask
- Issues with POST and GET requests to send and receive data from the MySQL database
- Doing joins and managing relational tables - specifically foreign keys and primary keys
- Syncing database tables to allow for user sessions
- Connecting front-end html pages to the back-end MySQL database through Flask and its libraries
- Making the website look good since none of us are designers

### **Features:**

- User registration
- User login / logout
- Make reservations
- Check reservations
- Write reviews

### **How to run:**

NOTE: First install Python 3 (3.5~3.6 is what we used)

For Linux and other Debian based systems:

1. Unzip the submission, and open up a Terminal into that directory.
2. Set up a virtual environment with 'virtualenv -p python3 venv'
3. Activate the virtual environment with 'source venv/bin/activate'
4. Install dependencies with 'pip install flask', 'pip install flask-login' and 'pip install flask-sqlalchemy'
5. Run the app.py with 'python app.py'
6. Open up an internet browser like Google Chrome, and go to localhost:5000

For Windows:

1. Make a note of the file location of your python.exe, for whatever version of python 3 you have installed.
2. Unzip the submission, and open up a Command Prompt into that directory.
3. Activate the virtual environment with 'virtualenv --python=%PYTHON.EXE\_DIRECTORY\_LOCATION% venv'
4. Change directory into 'venv/Scripts/', and run 'activate' to start the virtual environment.
5. Install dependencies with 'pip install flask', 'pip install flask-login' and 'pip install flask-sqlalchemy'
6. Run the app.py file with 'python app.py'
7. Open up an internet browser like Google Chrome, and go to localhost:5000

For macOS/OSX:

1. Unzip the submission, and open up a Terminal into that directory  
(To open up a terminal, press '⌘ + Spacebar', type 'Terminal' or 'iTerm', and hit Enter).
2. Set up a virtual environment with 'virtualenv -p python3 venv'
3. Activate the virtual environment with 'source venv/bin/activate'
4. Install dependencies with 'pip3 install flask', 'pip3 install flask-login' and 'pip3 install flask-sqlalchemy'
5. Run the app.py with 'python3 app.py'
6. Open up an internet browser, like Chrome, Firefox or Safari, and go to localhost:5000

## Walkthrough:

Customer:

### 1. Login screen



## Login / Register

Log into your account, or Register.

Username:

Password:

Here is a login screen where you are both able to login as an existing user or register a new user. Logging in takes you to the home screen. Registering takes you to the same login page with the status up top, indicating either success or failure. That depends on whether the user exists or not.

These lines of code can do two things. Either, they can INSERT a new user with unique primary key into a "USER" database, or a SELECT -> FROM request from the "users" database that checks input information and calls Flask-Login to begin a new user session that carries throughout the database.

## 2. Home



### Make Reservation

[Make a Reservation](#)

### Check/Alter Reservation

[View/Alter your Reservation](#)

### Write Review

[Write a review](#)



At the home screen, you are able to make a reservation, check reservations and write reviews. “Make Reservation” uses both SQL and Flask-Login to remember the user who is logged-in, and allows them to make a reservation at a hotel by redirecting them to the specified page. “Check/Alter Reservation” allows the user to check their reservation and cancel it upon request. This is a simple call to the database that displays text in another webpage. “Write Review” navigates to the review page

### 3. Make reservation

- ☒ New York
- ☐ Chicago
- ☐ Los Angeles
- ☐ Seattle
- ☐ New Orleans

#### Booking & Contact Info

Hans Kiessler	Name
kiessler.hans@gmail.co	Email
9085071350	Phone
227 Longview Rd	Street
NJ	State
07933	ZIP Code
United States	Country

#### Details

12/14/2017	Check-In
12/26/2017	Check-out

1

#### Desired Services

- ☒ Breakfast
- ☐ Room Service
- ☐ Pay-Per-View

Single Bed

Please describe your needs e.g. Extra beds, toiletries, etc.

I would like to be treated like a fancy boy

Comments



On the make reservation page, you are able to make a reservation for the hotel located in any of the five cities listed. The form and underlying database will not work unless all of the fields (except for comments) are initialized with values, landing the user on the same page. Proper data input is checked in both the frontend HTML forms, and in the backend SQL database fields. Hitting “continue” populates the database with the relevant information, and navigates the user to the card entry page.

### 4. Credit card entry

Hans Kiessler

227 Longview Rd

Gillette

NJ

07933

0000123456789055

Visa

VALID THROUGH:

12 / 20

MasterCard VISA

111

Confirm

Here the user may enter a credit card of his or her choosing. Once again, all the fields must be initialized or the page loads again with a failure message. Like the "Make Reservation" it populates the database with data. The tricky part here is storing the information, using the Credit Card primary key as a foreign key in a relational table, and making a SQL call to join the Credit Card table with User table.

## 5. Check reservation

2017-12-14 2017-12-26 1 single 0 I would like to be treated like a fancy boy

We did not budget enough time to make this look nice, but it gets the job done. Basic  
SELECT -> FROM -> WHERE request from the SQL database.

## 6. Write review



**Write a breakfast review!**

**Write a room review!**

**Write a service review!**

**Admin / Stats for Nerds:**

1. Home page for administrator

localhost:5000/stats - Google Chrome

localhost:5000/stats

[Back to Login/Registration Page](#)

Username		Password																	
generic_username		generic_pass																	
ajj64		password123																	
cs336		is_the_best123																	
id		Street		State		zipCode		Country											
1		2 Saratoga Avenue		New Jersey		8805		United States											
id		Street		City		State		Zipcode											
1		2 Saratoga Avenue		Bound Brook		NJ		8805											
id		Month		Year															
1		11		23															
Card Number		Name		Billing Address		Security Code		Card Type		Expiration Month		Expiration Year							
4207670123830708		Alexander Jack Jia		2 Saratoga Avenue		939		Visa		11		23							
Location		startDate		endDate		No. People		breakfast service?		room service?		pay per view?		bedType		special			
New York		2017-12-01		2017-12-28		4		0		1		1		single		Can I have some extra bedsheets?			
id		Breakfast Text																	
1		Food was 'aight. Could've given us a little more coffee.																	
id		Room Text																	
1		Room was spacious, and not at all bad to stay in.																	
id		Service Text																	
1		Quick, prompt.																	

Purge DB

## Tests for the database:

1. Basic test
  - a. Add single user, make one reservation



## Login / Register

Log into your account, or Register.

Username:

Password:

[Login](#)[Register](#)[Stats for nerds](#)

## Make Reservation

[Make a Reservation](#)

## Check/Alter Reservation

[View/Alter your Reservation](#)

## Write Review

[Write a review](#)


- ☒ New York
- ☐ Chicago
- ☐ Los Angeles
- ☐ Seattle
- ☐ New Orleans

## Booking & Contact Info

Hans Kiessler	Name
kiessler.hans@gmail.com	Email
9082180001	Phone
227 Longview Rd	Street
New Jersey	State
07933	ZIP Code
United States	Country

## Details

12/14/2017	Check-In
12/27/2017	Check-out

1  People

### Desired Services

- ☒ Breakfast
- ☒ Room Service
- ☒ Pay-Per-View

Single Bed  Room

Please describe your needs e.g. Extra beds, toiletries, etc.

<input type="text"/>	Comments
----------------------	----------

Hans Kiessler

227 Longview Rd

Gillette

NJ

07933

0000123456789055

Visa

VALID THROUGH:

12

/

20



VISA

111

Confirm

[Back to Login/Registration Page](#)

Username		Password						
user1		pw						
1	id	Street	State	zipCode	Country			
		227 Longview Rd	New Jersey	7933	United States			
1	id	Street	City	State	Zipcode			
		227 Longview Rd	Gillette	NJ	7933			
1	id	Month	Year					
		12	20					
Card Number		Name	Billing Address	Security Code	Card Type	Expiration Month	Expiration Year	
0012345678905555		Hans Kiessler	227 Longview Rd 111		Visa	12	20	
Location		startDate	endDate	No. People	breakfast service?	room service?	pay per view?	bedType special
Chicago		2017-12-14	2017-12-27	1	1	1	1	single
id		Breakfast Text						
id		Room Text						
id		Service Text						

Purge DB

b. Add single user, make one reservation, write a review


- ☐ New York
- ☐ Chicago
- ☐ Los Angeles
- ☒ Seattle
- ☐ New Orleans

## Booking & Contact Info

Alex Jia	Name
alex@jia.com	Email
7325550988	Phone
227 Longview Rd	Street
NJ	State
07933	ZIP Code
USA	Country

## Details

12/15/2017	Check-In
01/02/2018	Check-out

1  People

### Desired Services

- ☒ Breakfast
- ☒ Room Service
- ☒ Pay-Per-View

Single Bed  Room

Please describe your needs e.g. Extra beds, toiletries, etc.

I demand the best treatment	Comments
-----------------------------	----------

Continue



Alex Jia

229 Longview Rd

Long Hill

NJ

07933

9999888877770001

Mastercard

VALID THROUGH:

12

/

21



VISA

222

Confirm



**Write a breakfast review!**

It was ok, needed more scrambled eggs

**Write a room review!**

The room was not soundproof

**Write a service review!**

Why do you bastards know my name?

Submit

localhost:5000/stats - Google Chrome

localhost:5000/stats

Back to Login/Registration Page

Username		Password	
generic_username	generic_pass		
ajj64	password123		
cs336	is_the_best123		

id	Street	State	zipCode	Country
1	2 Saratoga Avenue	New Jersey	8805	United States

id	Street	City	State	Zipcode
1	2 Saratoga Avenue	Bound Brook	NJ	8805

id	Month	Year
1	11	23

Card Number	Name	Billing Address	Security Code	Card Type	Expiration Month	Expiration Year
4207670123830708	Alexander Jack Jia	2 Saratoga Avenue	939	Visa	11	23

Location	startDate	endDate	No. People	breakfast service?	room service?	pay per view?	bedType	special
New York	2017-12-01	2017-12-28	4	0	1	1	single	Can I have some extra bedsheets?

id	Breakfast Text
1	Food was 'aight. Could've given us a little more coffee.

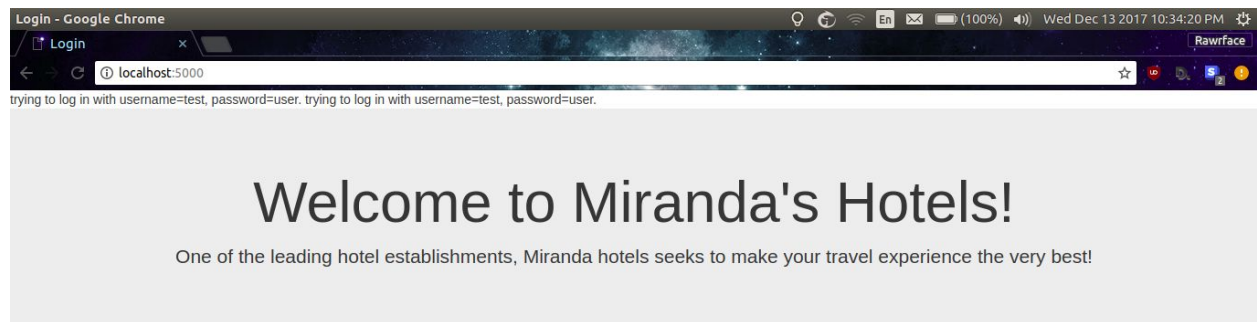
id	Room Text
1	Room was spacious, and not at all bad to stay in.

id	Service Text
1	Quick, prompt.

Purge DB

### c. Add multiple users, make reservations, write reviews



Bali

#### Login / Register

Log into your account, or Register.

Username:

Password:

localhost:5000/cardform - Google Chrome

localhost:5000/cardform

Name Jack Jia

Street 110 Frelinghuysen Rd

CityTown Piscataway

State NJ

ZIPcode 08854

Card Number 4207670190983434

CardType Visa

valid through:

Month 12 / Year 21

CVC 997

Confirm

Username		Password
nemoisafish	whereareyou	
user1	pw	
user2	pw2	
user99	luftballoons	
fourteen13	@13x4%	
id		Street
1	227 Longview Rd	
2	227 Longview Rd	
3	84 Joyce Kilmer Avenue	
id		Street
1	227 Longview Rd	
2	229 Longview Rd	
3	84 Joyce Kilmer Avenue	
id		Month
1	12	
2	12	
3	11	
Card Number		Name
0012345678905555	Hans Kiesler	
9999888877770001	Alex Jia	
4126540014379943	Naem Hossain	
Location		startDate
Chicago	2017-12-14	
Seattle	2017-12-15	
New Orleans	2017-12-22	
id		Breakfast Text
1	It was ok, needed more scrambled eggs	
2	Hash browns were lacking, and were a little cold	
3	They ran out of coffee midway through the breakfast service. What kind of hotel runs out of coffee??	
4	The food was decent, but we found a better breakfast deal across the street.	
id		Room Text
1	The room was not soundproof	
2	Fine, just your typical hotel room quality.	
3	Rooms were nice, though a little airy. Walls were also quite thin- we could easily hear our neighbors' nightly activities as though we were in the same room.	
4	The quality of the rooms were excellent!	

State	zipCode	Country
Gillette	7933	USA
NJ	7933	USA
New Jersey	8054	USA
City	State	Zipcode
Gillette	NJ	7933
Long Hill	NJ	7933
Piscataway	NJ	8854
Year		
20		
21		
19		

Billing Address	Security Code	Card Type	Expiration Month	Expiration Year
227 Longview Rd	111	Visa	12	20
229 Longview Rd	222	Mastercard	12	21
84 Joyce Kilmer Avenue	665	Visa	11	19

endDate	No. People	breakfast service?	room service?	pay per view?	bedType	special
2017-12-27	1	1	1	1	single	
2018-01-02	1	1	1	1	single	I demand the best treatment
2017-12-26	6	1	1	1	double	Please provide us with extra pillows, and towels.

## Contributions:

Chengguizi Han (ch710)

- Contributed nothing, ignored communication with team, did not write a single line of code.

Naeem Hossain (nh302)

- Wrote entirety of website front-end
- Designed database schema + primary key/foreign key infrastructure
- Wrote part of submission pdf
- Built and executed test scripts
- Drank lots of coffee

Alex Jia (ajj64)

- Set up database and table infrastructure
- Used flask to link database to front-end html pages
- Implemented user-sessions for login, viewing reservations, etc.
- Built security checks for database to protect against bad input, etc.
- Wrote part of submission pdf
- Took lots of naps

Hans Kiessler (hmk61)

- Populated and tested database
- Designed database ER-diagram + table layout
- Helped set up relations and foreign keys
- Wrote part of submission pdf
- Ate lots of pizza