

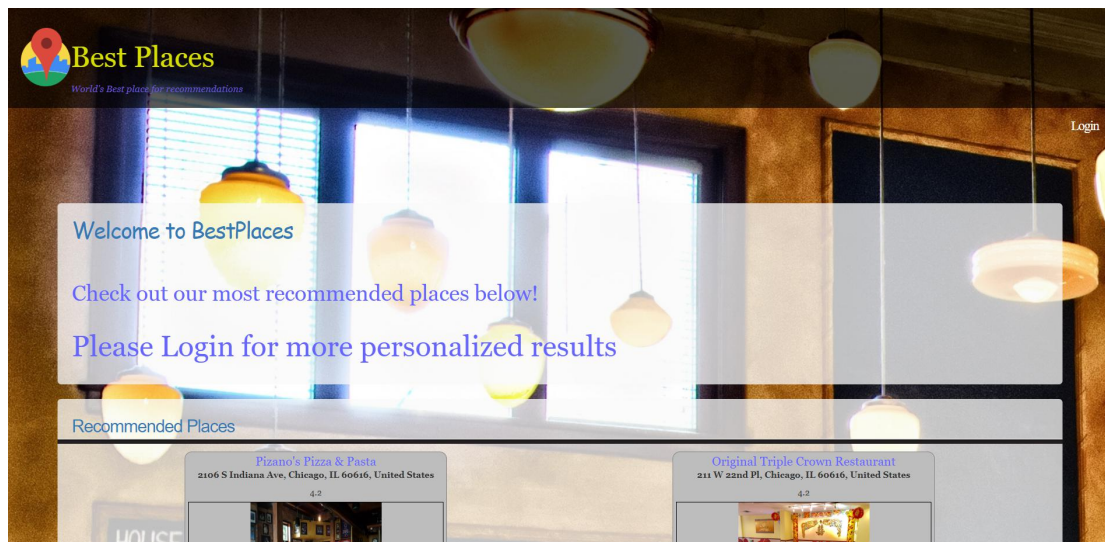
TEAM 30 - Social Places Recommendation

Rangaswamy, Puneeth

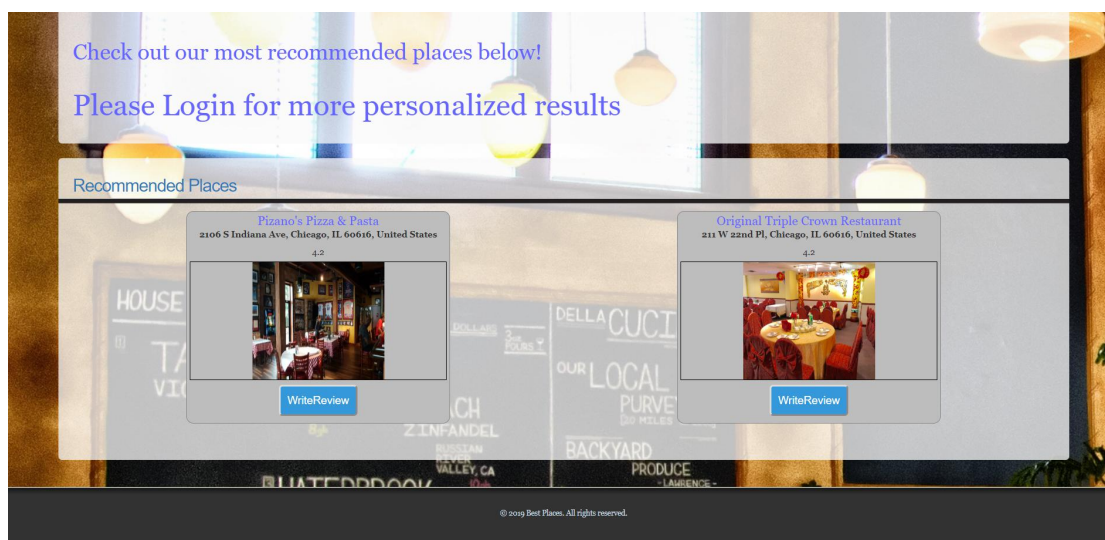
prangaswamy@hawk.iit.edu

Vasudevan,Udit Kalyanasundaram

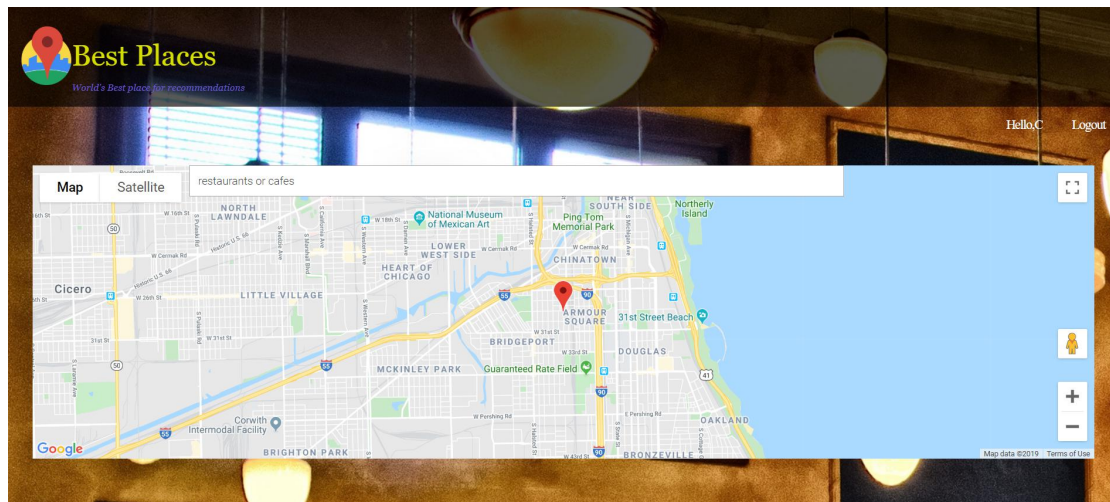
ukalyanasundaramvasu@hawk.iit.edu



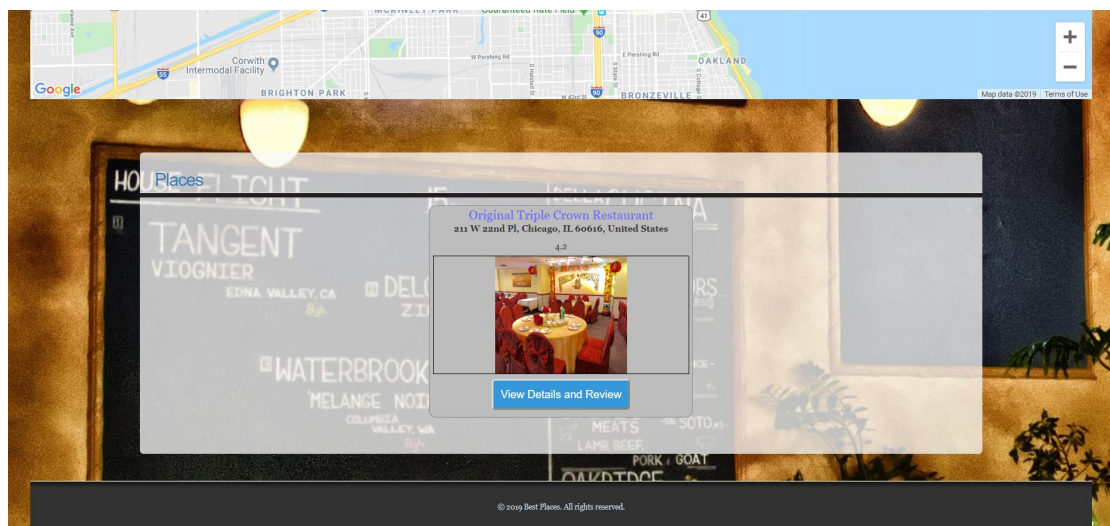
Home page asking user to login to show recommendation to individual users.



Home page shows most recommended places to all users.


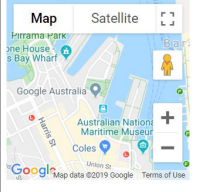


User C has logged in. Logged in page shows search bar, his current location on the map.





User C has been recommended this place from his reviews and collective reviews of all users.

Review


Name:	Original Triple Crown Restaurant
	
Address:	211 W 22nd Pl, Chicago, IL 60616, United States
Rating:	4.2
Review Rating: <input type="text" value="1"/>	
Retailer Zip Code: <input type="text"/>	
Retailer City: <input type="text"/>	
Review Date: mm/dd/yyyy <input type="text"/>	
Review Text: <input type="text"/>	
<input type="button" value="SubmitReview"/>	

The recommended place could be clicked to view details and write review. This page shows name, address, rating, map location of the place. It also has fields to write review.

Review

Name:	Original Triple Crown Restaurant
	
Address:	211 W 22nd Pl, Chicago, IL 60616, United States
Rating:	4.2
Review Rating: 5	
Retailer Zip Code: 560043	
Retailer City: Bengaluru	
Review Date: 11/25/2019	
Review Text: good	
<input type="button" value="SubmitReview"/>	

This page shows filled review by the user. The reviews are stored in MongoDB.

 **Best Places**
World's Best place for recommendations

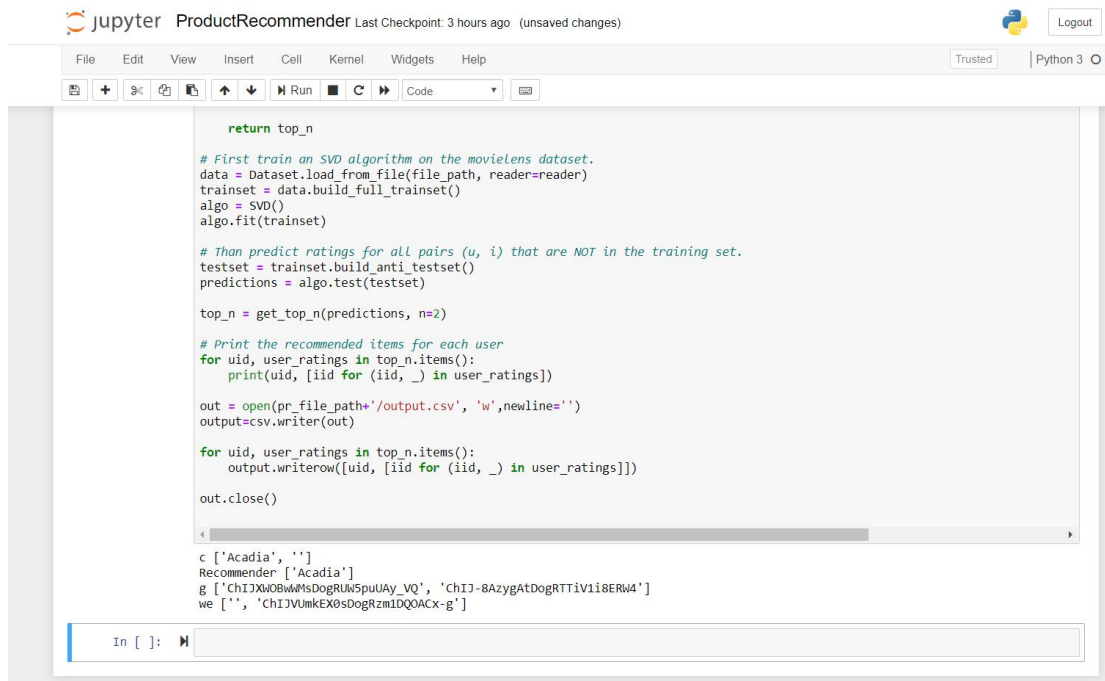
Hello, C Logout

Review

Review for ChIJXWOBwWMsDogRUW5puUAy_VQ Stored

© 2019 Best Places. All rights reserved.

The review stored is acknowledged. Place ID is used to store the reviews.



The image shows a Jupyter Notebook interface with the title "ProductRecommender". The top bar indicates "Last Checkpoint: 3 hours ago (unsaved changes)" and includes a "Logout" button. The notebook has a standard menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help) and a toolbar with icons for file operations, running, and code execution. The main area contains a Python script that implements an SVD-based recommendation system. The script loads data from a file, builds a trainset, fits an SVD model, predicts ratings for all pairs of users and items not in the training set, and then prints the top 2 recommended items for each user. The output of the script is displayed at the bottom of the notebook, showing the recommended items for a user named "Acadia".

```
return top_n

# First train an SVD algorithm on the movielens dataset.
data = Dataset.load_from_file(file_path, reader=reader)
trainset = data.build_full_trainset()
algo = SVD()
algo.fit(trainset)

# Then predict ratings for all pairs (u, i) that are NOT in the training set.
testset = trainset.build_anti_testset()
predictions = algo.test(testset)

top_n = get_top_n(predictions, n=2)

# Print the recommended items for each user
for uid, user_ratings in top_n.items():
    print(uid, [iid for (iid, _) in user_ratings])

out = open(pr_file_path+'output.csv', 'w', newline='')
output = csv.writer(out)

for uid, user_ratings in top_n.items():
    output.writerow([uid, [iid for (iid, _) in user_ratings]])

out.close()

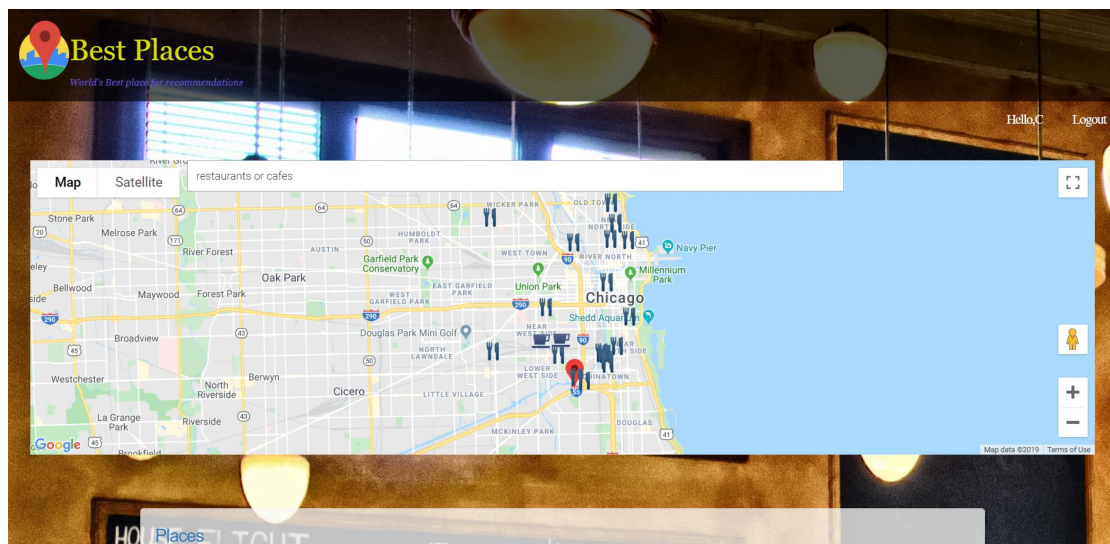
c ['Acadia', '']
Recommender ['Acadia']
g ['ChIJXwOBwMsDogRUN5puUAY_VQ', 'ChIJ-8AzygATDogRTTIV1i8ERW4']
we ['', 'ChIJVumkEX0sDogRzm1DQOACX-g']
```

In []:

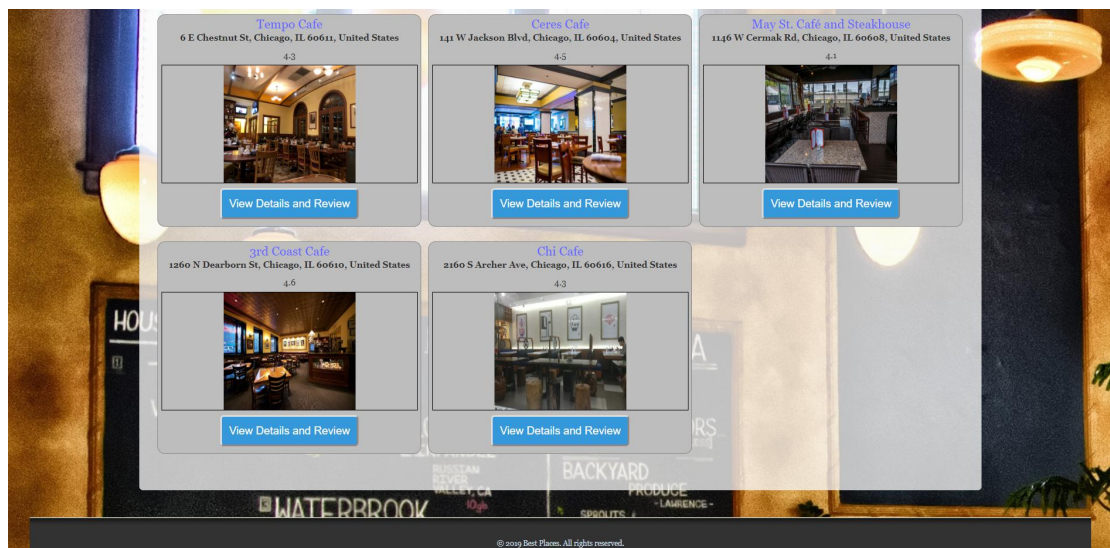
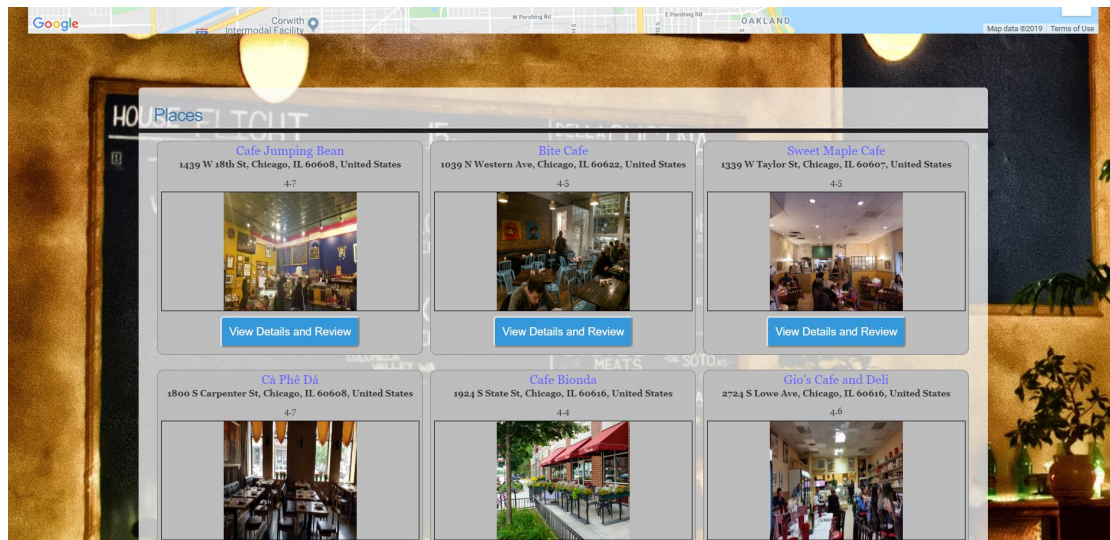
The above code is run to recommend places.

S Spreadsheets															
Home Insert Page Layout Formulas Data Review View Cloud															
<div> <div> <div>Cut</div> <div>Copy</div> <div>Format Painter</div> </div> <div> <div>Paste</div> <div>WPS Cloud</div> <div>output.csv</div> </div> </div> <div> <div>Calibri</div> <div>11</div> <div>A</div> <div>A</div> <div>General</div> <div>Conditional Formatting</div> <div>Format as Table</div> <div>AutoSum</div> <div>AutoFilter</div> <div>Sort</div> <div>Format</div> <div>Rows at Column</div> </div>															
A1	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1	C	['Acadia', 'ChIJXWOBwWMsDogRUW5puUAY_VQ']													
2	Recommend	['Acadia']													
3	we	['ChIJXWOBwWMsDogRUW5puUAY_VQ', 'ChIJ5W3aQX4sDogRIQDrvhFedFY']													
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															

The result is written in output file, which is read from java servlets and places are recommended.

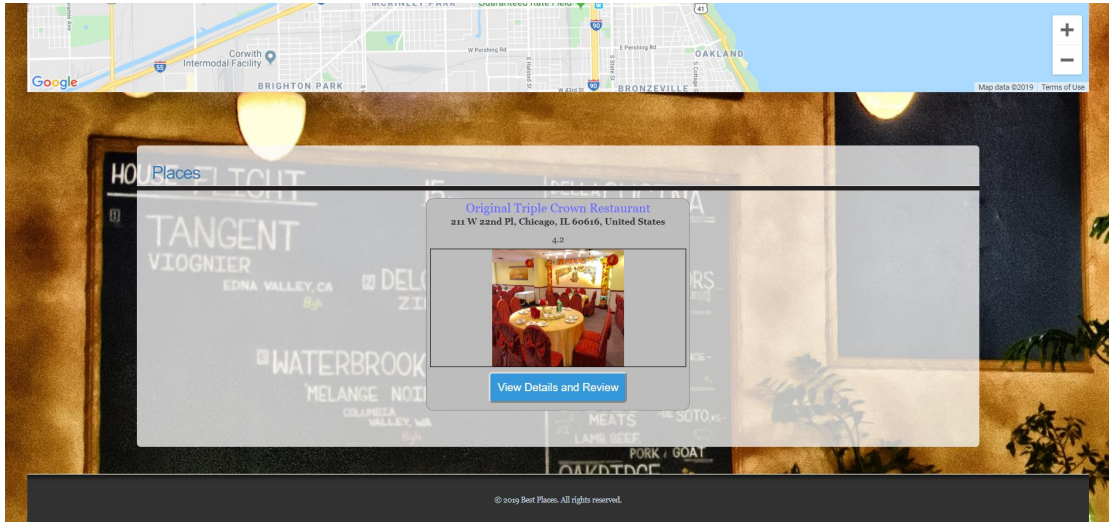


Another feature is the search of places. When a user searches for places, the places are plotted on map and search results are displayed.



The following are the search results provided to user, the results are obtained from google api and written to db and processed for recommendation using surprise package of python.

Click based Recommendation Feature Implemented

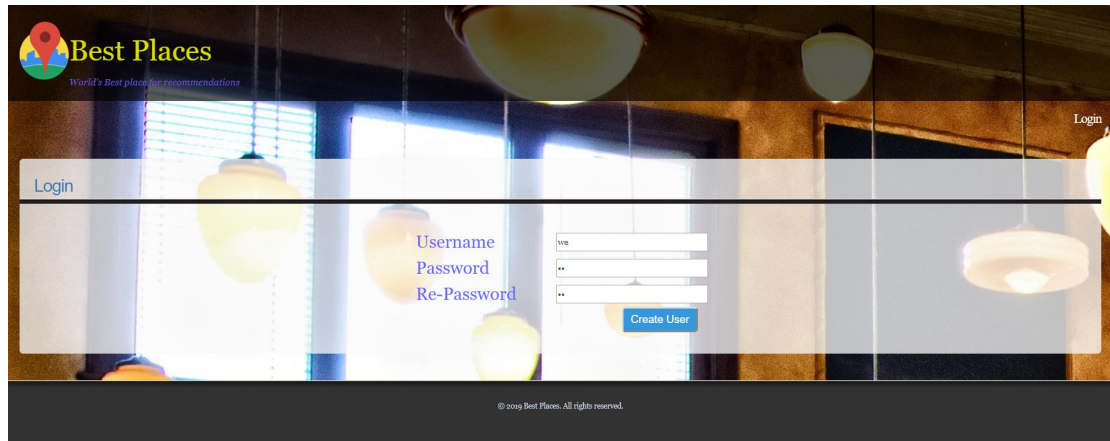


Whenever a user clicks on viewing a place, a review for that place is given. A default user increases the rating for that place.

[illegible]

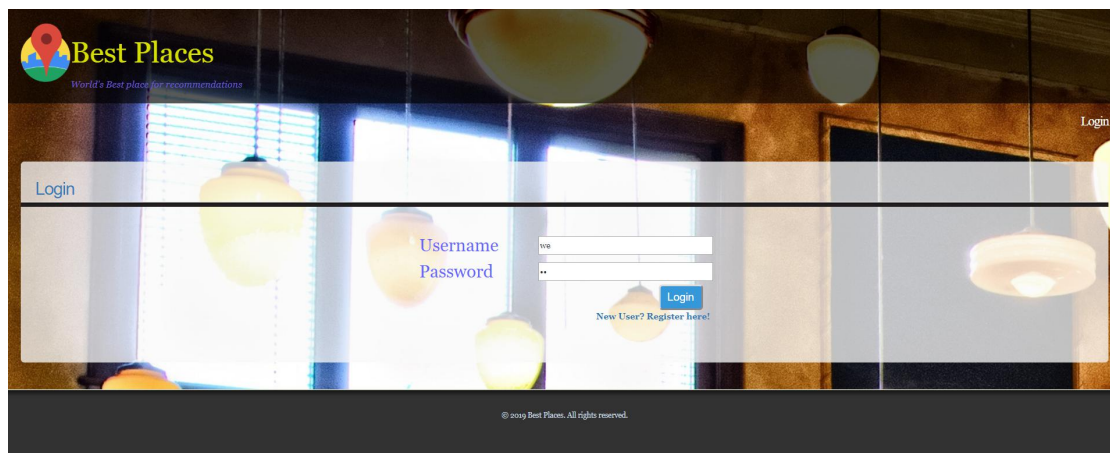
The rating given by default user is shown in this mongo database.

Flow of Recommendation



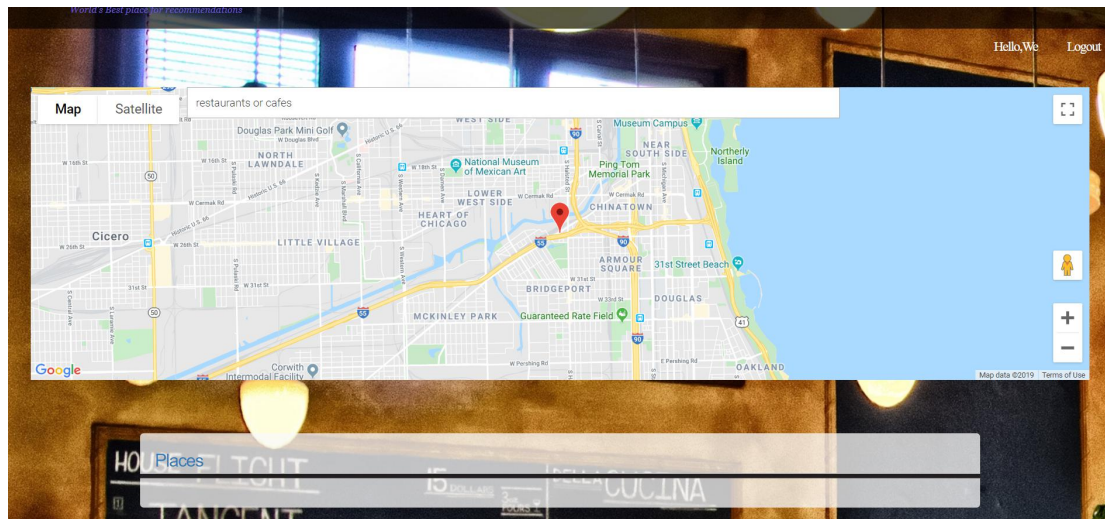
The screenshot shows the 'Best Places' website's registration interface. The header features the 'Best Places' logo with the tagline 'World's Best place for recommendations'. A 'Login' link is in the top right. The main content area has a 'Login' button on the left and a registration form on the right. The form includes labels for 'Username', 'Password', and 'Re-Password', each followed by an input field. The 'Username' field contains the text 'we'. A 'Create User' button is at the bottom of the form. A copyright notice '© 2019 Best Places. All rights reserved.' is at the bottom of the page.

A new user named we registers.

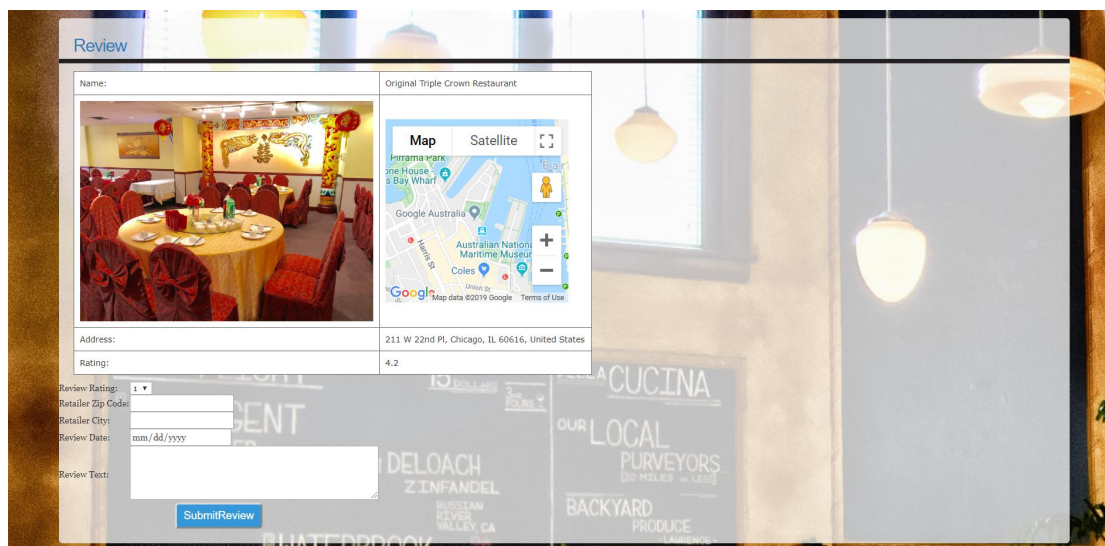


This screenshot shows the 'Best Places' website's login interface. The header and footer are identical to the previous screenshot. The main content area features a 'Login' button on the left and a login form on the right. The form has labels for 'Username' and 'Password', each with an input field. The 'Username' field contains the text 'we'. A 'Login' button is positioned below the password field. A link that reads 'New User? Register here!' is located below the login button. The copyright notice '© 2019 Best Places. All rights reserved.' is at the bottom.

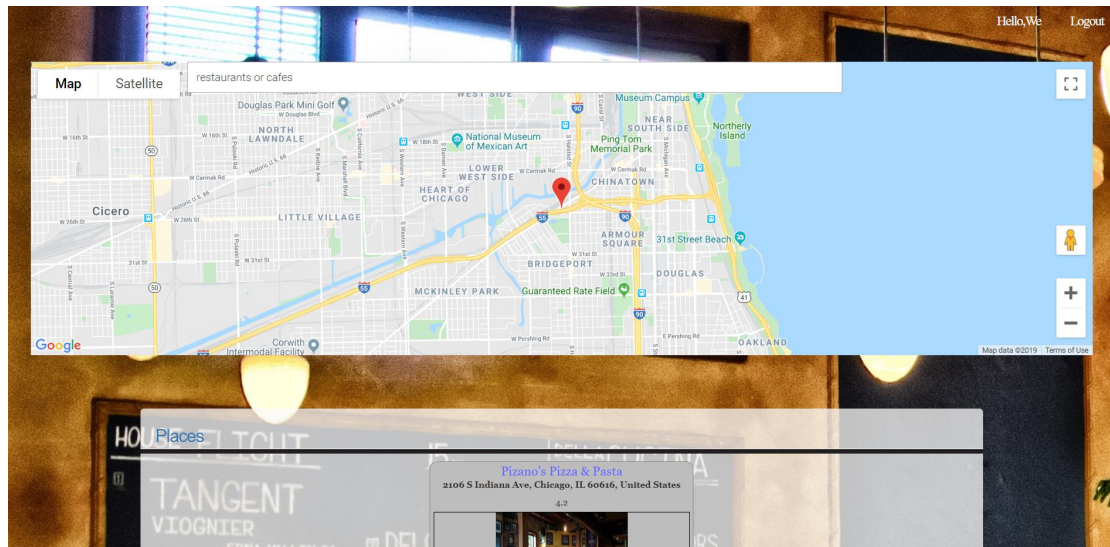
User 'we' logs in



When new user logs in he has no recommendation as he hasn't reviewed any place.

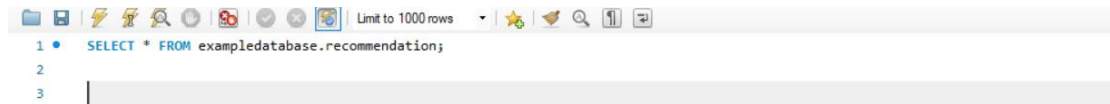


He must search a place and write review.



After reviewing a place and running the python code, the places are recommended.

Databases



id	name	image	address	rating	user
ChIJ3W3aQX4sDogRIQDrvhFEdFY	Pizano's Pizza & Pasta	https://maps.googleapis.com/maps/api/place/js...	2106 S Indiana Ave, Chicago, IL 60616, United ...	4.2	g
ChIJ3W3aQX4sDogRIQDrvhFEdFY	Pizano's Pizza & Pasta	https://maps.googleapis.com/maps/api/place/js...	2106 S Indiana Ave, Chicago, IL 60616, United ...	4.2	we
ChIXJW0bWMSdogRUW5puUaJ_VQ	Original Triple Crown Restaurant	https://maps.googleapis.com/maps/api/place/js...	211 W 22nd Pl, Chicago, IL 60616, United States	4.2	c
ChIXJW0bWMSdogRUW5puUaJ_VQ	Original Triple Crown Restaurant	https://maps.googleapis.com/maps/api/place/js...	211 W 22nd Pl, Chicago, IL 60616, United States	4.2	g
ChIXJW0bWMSdogRUW5puUaJ_VQ	Original Triple Crown Restaurant	https://maps.googleapis.com/maps/api/place/js...	211 W 22nd Pl, Chicago, IL 60616, United States	4.2	we

The recommendation table, stores places with users obtained from running python code.

Limit to 1000 rows

```

1 • SELECT * FROM exampledatabase.recommend;
2
3

```

id	name	image	address	rating
ChIJK9F2jYQsDogR8GawAw26JRM	Victory Tap	https://maps.googleapis.com/maps/api/...	1416 S Michigan Ave, Chicago, IL 60605, United States	4.5
ChIJSTIuK4UsDogRiwtT4Kplo7w	Flo & Santos	https://maps.googleapis.com/maps/api/...	1310 S Wabash Ave, Chicago, IL 60605, United States	4.5
ChIJxVjCGassDogROayz_ZoQJaM	Hotel EMC2, Autograph Collection	https://maps.googleapis.com/maps/api/...	228 E Ontario St, Chicago, IL 60611, United States	4.7
ChIJR3RYJKsDogR72dJV-gaDIg	Hyatt Regency Chicago	https://maps.googleapis.com/maps/api/...	151 E Wacker Dr, Chicago, IL 60601, United States	4.4
ChIJ_SVY6pksDogR2r6ff6s1J4o	Taco Maya	https://maps.googleapis.com/maps/api/...	823 S State St, Chicago, IL 60605, United States	4.4
ChIJA-GddWQsDogR_UqYkvTJ1A	Seven Treasures Cantonese Re...	https://maps.googleapis.com/maps/api/...	2312 S Wentworth Ave, Chicago, IL 60616, United States	4.1
ChIJ4RP6uZMsDogR72Gc20GjBN0	Triple Crown Restaurant	https://maps.googleapis.com/maps/api/...	2217 S Wentworth Ave, Chicago, IL 60616, United States	4.2
ChIJ4RP6uZMsDogR72Gc20GjBN0	Triple Crown Restaurant	https://maps.googleapis.com/maps/api/...	2217 S Wentworth Ave, Chicago, IL 60616, United States	4.2
ChIJSW3aQX4sDogRIQDrvhFEdFY	Pizano's Pizza & Pasta	https://maps.googleapis.com/maps/api/...	2106 S Indiana Ave, Chicago, IL 60616, United States	4.2
ChIJAQAAAOQrDogRWOIc1g7EnkE	Pier 31 Restaurant	https://maps.googleapis.com/maps/api/...	3101 S Lake Shore Dr, Chicago, IL 60616, United States	4.3
ChIJAQAAAOQrDogRWOIc1g7EnkE	Pier 31 Restaurant	https://maps.googleapis.com/maps/api/...	3101 S Lake Shore Dr, Chicago, IL 60616, United States	4.3
ChIJDxveqn0sDogR8ervJbCHIK0	White Castle	https://maps.googleapis.com/maps/api/...	2140 S Wabash Ave, Chicago, IL 60616, United States	3.8
ChIJDxveqn0sDogR8ervJbCHIK0	White Castle	https://maps.googleapis.com/maps/api/...	2140 S Wabash Ave, Chicago, IL 60616, United States	3.8
ChIJDxveqn0sDogR8ervJbCHIK0	White Castle	https://maps.googleapis.com/maps/api/...	2140 S Wabash Ave, Chicago, IL 60616, United States	3.8

recommend 7 x

Read Only

This table has the details of all places which were previously searched.

Limit to 1000 rows

```
1 SELECT * FROM exempladatabase.places;
```

2

3

id	name	image	address	rating
ChIJ-8AzygAtDogRTTIV18ERW4	Cafe Jumping Bean	https://maps.googleapis.com/maps/api/place/js...	1439 W 18th St, Chicago, IL 60608, United States	4.7
ChIJ-23_7M0sDogRbXcUg7Q25Y	Iguana Cafe	https://maps.googleapis.com/maps/api/place/js...	517 N Halsted St, Chicago, IL 60642, United St...	4.5
ChIJ1-eTjIcsDogRGvS3W12g0-c	Cafe Bionda	https://maps.googleapis.com/maps/api/place/js...	1924 S State St, Chicago, IL 60616, United States	4.4
ChIJ40MUyrosDogREgNEQ3gIdQa	Ceres Cafe	https://maps.googleapis.com/maps/api/place/js...	141 W Jackson Blvd, Chicago, IL 60604, United ...	4.5
ChIJ4enFQ1QsDogR26boF5I2S1I	May St. Café and Steakhouse	https://maps.googleapis.com/maps/api/place/js...	1146 W Cermak Rd, Chicago, IL 60608, United ...	4.1
ChIJ4uNfM8sDogR--A-7WnaG_0	Gio's Cafe and Deli	https://maps.googleapis.com/maps/api/place/js...	2724 S Lowe Ave, Chicago, IL 60616, United St...	4.6
ChIJAxAs5pwsDogRXCDOL7adbA	Little Branch Cafe	https://maps.googleapis.com/maps/api/place/js...	1251 S Prairie Ave, Chicago, IL 60605, United S...	4.3
ChIJdX6WIOUsDogRgM8YKYTe-pI	Taipei Cafe	https://maps.googleapis.com/maps/api/place/js...	2609 S Halsted St, Chicago, IL 60608, United St...	4.3
ChIJ3TMGcmQsDogR92cmBqgW5qk	Happy Cafe	https://maps.googleapis.com/maps/api/place/js...	2351 S Wentworth Ave, Chicago, IL 60616, Uni...	4
ChIJDXB1EBLSd4gRIQ9Zl8IoidQ	Bite Cafe	https://maps.googleapis.com/maps/api/place/js...	1039 N Western Ave, Chicago, IL 60622, Unite...	4.5
ChIJ3yHqMf8sDogRFI7fBDolC_w	Cà Phê Dá	https://maps.googleapis.com/maps/api/place/js...	1800 S Carpenter St, Chicago, IL 60608, Unite...	4.7
ChIJK_4_5wtDogRHlIPDH-IB4c	Casa Cafe	https://maps.googleapis.com/maps/api/place/js...	2025 S Western Ave, Chicago, IL 60608, Unite...	4.4
ChIJK410cFLTD4gRgB0eamtHwz7Q	Tempo Cafe	https://maps.googleapis.com/maps/api/place/js...	6 E Chestnut St, Chicago, IL 60611, United States	4.3
ChIJN-ZK0ZMsDooR1caJeUtrmEw	Pho Cafe	https://maos.ooodleapis.com/maos/ai/place/is...	232 W Cermak Rd. Chicago. IL 60616. United S...	4.3

places 8 x

This is a dynamic table which holds the data of only the current search.