Project 4

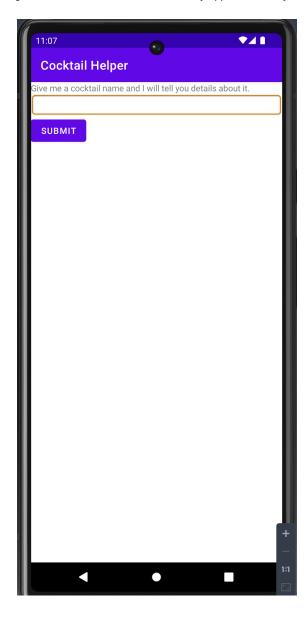
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Description: Our application is a cocktail helper for those who are interested in all kinds of cocktails and want to try some homemade cocktail. Users input a cocktail name and our app fetches and displays detailed information about it.

Below is how our app meets all requirements.

- 1. Implement a native Android application
 - a. at least three different kinds of Views

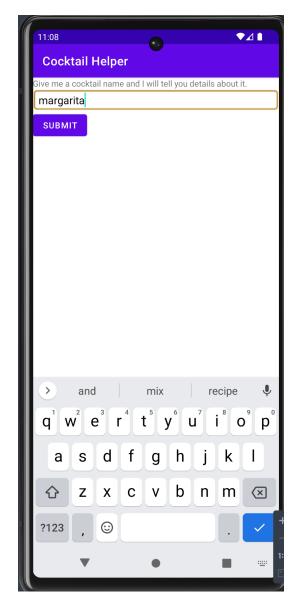
There are several text views, imgae view, edit text and button view in my app. See /res/layout/content_main.xml for details.



Project 4

b. Requires input from the user

Here is a screenshot of user search for margarita.



c. Makes an HTTP request (using an appropriate HTTP method) to your web service

Our app does a HTTP get request in getData.java. Request url is "https://frozen-reef-96952.herokuapp.com/getCocktailInfo? searchWord="+searchTerm" where searchTerm is user's input cocktail name. This request will go to my web service deployed on heroku to fetch data, parsed the return html to get json-formatted data about specific cocktail. Then we parse the json data and render them on app.

d. Receives and parses an XML or JSON formatted reply from your web service

an example of json-formatted reply from web service is as below.

```
{
    "strInstructionsDE": "Reiben Sie den Rand des Glases mit der Limettenscheibe, damit das Salz daran haftet. Achten Sie darauf, das
    "strImageSource": "https://commons.wikimedia.org/wiki/File:Klassiche_Margarita.jpg",
    "strIngredienti0": null,
    "strDrink": "Margarita",
    "strIngredient12": null,
```

```
"strIngredient11": null,
"strIngredient14": null,
"strCategory": "Ordinary Drink",
"strAlcoholic": "Alcoholic",
"strIngredient13": null,
"strIngredient15": null,
"strCreativeCommonsConfirmed": "Yes",
"strIBA": "Contemporary Classics",
"strVideo": null,
"strTags": "IBA,ContemporaryClassic",
"strInstructions": "Rub the rim of the glass with the lime slice to make the salt stick to it. Take care to moisten only the oute
"strIngredient1": "Tequila",
"strIngredient3": "Lime juice",
"strIngredient2": "Triple sec",
"strIngredient5": null,
"strIngredient4": "Salt",
"strIngredient7": null,
"strIngredient6": null,
"strIngredient9": null,
"strInstructionsFR": null,
"strIngredient8": null,
"idDrink": "11007",
"strInstructionsES": null,
"strInstructionsIT": "Strofina il bordo del bicchiere con la fetta di lime per far aderire il sale.\r\nAvere cura di inumidire sα
"strGlass": "Cocktail glass",
"strMeasure12": null,
"strMeasure13": null,
"strMeasure10": null,
"strMeasure11": null,
"strImageAttribution": "Cocktailmarler",
"dateModified": "2015-08-18 14:42:59",
"strDrinkAlternate": null,
"strDrinkThumb": "https://www.thecocktaildb.com/images/media/drink/5noda61589575158.jpg",
"strInstructionsZH-HANT": null,
"strMeasure9": null,
"strMeasure7": null,
"strMeasure8": null,
"strMeasure5": null,
"strMeasure6": null,
"strMeasure3": "1 oz ",
"strMeasure4": null,
"strMeasure1": "1 1/2 oz ",
"strMeasure2": "1/2 oz ",
"strInstructionsZH-HANS": null,
"strMeasure14": null,
"strMeasure15": null
```

e. Displays new information to the user

Here is a screenshot of returned information about margarita.



f. Is repeatable

User can type in another cocktail name and click on submit button to get another cocktail's details. Here is a screenshot of "tequila".



- 2. Implement a web service, deployed to Heroku (url of web service deployed on heroku is <a href="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchword="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchword="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchword="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchword="https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchword="https://frozen-reef-96952.herokuapp.com/getCocktailInfo.herokuapp.com/getCocktailInfo.herokuapp.com/getCocktailI
 - a. Implement a simple (can be a single path) API.

In my web service project,

model: CocktailModel.java; DashboardModel.java

view: index.jsp and result.jsp;

controller: CocktailServlet

b. Receives an HTTP request from the native Android application

CocktailServlet.java receives the HTTP GET request with the argument "searchWord". It passes this search string on to the CocktailModel, and send request to API to fetch json-formatted data.

c. Executes business logic appropriate to your application

CocktailModel.java makes an HTTP request to: <a href="https://www.thecocktaildb.com/api/json/v1/1/search.php?s="https://www.thecocktaildb.com/api/json/v1/search.php?s="https://www.thecocktaildb.com/api/json/v1/search.php?s="https://www.thecocktaildb.com/api/json/v1/search.php?s="https://www.thecocktaildb.

- d. Replies to the Android application with an XML or JSON formatted response
 Result.jsp formats the response to the mobile application in json, as is shown above.
- 3. Handle error conditions (no need for writeup in this section)
- 4. Log useful information
- 5. Store the log information in a database

fields	description			
search word	keywords searched by users time when android app request the web service			
request time				
response time	time when web service get response from 3rd party API			
latency	the gap between request time and response time in ms			
user agent	full user agent information from request header			
device model	users' phone model information parsed from user agent (blank when the device is not mobile)			
response status	if search succeed or not ()			
request from app	request content from Android application			
request to 3rd party API	request content to cocktailDB			
response from 3rd party API	response content from cocktailDB			

At las~connection~string: ~"mongodb+srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb+srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb+srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb+srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb+srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb-srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb-srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb-srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb-srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb-srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb-srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb-srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb-srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority" ~"mongodb-srv://keqingxing:kq123456@cluster0.od4bwm4.mongodb.net/?retryWrites=true&w=majority ~"mongodb.net/?retryWrites=true&w=majority ~

- 6. Display operations analytics and full logs on a web-based dashboard
 - a. A unique URL addresses a web interface dashboard for the web service.

https://frozen-reef-96952.herokuapp.com/

- b. The dashboard displays at least 3 interesting operations analytics.
 - i. top 10 high frequency device models
 - ii. top 10 high frequency popular searched cocktails

Top 10 Popular Search Words

search word	times
tequila	6
margarita	6
brandy	3
cat	3
rum	2
vodka	1
gin	1

Average Latency: 252 ms

Top 10 Popular Device Models

device type	times
	13
sdk_gphone64_arm64	9

iii. The dashboard displays formatted full logs.

	Log										
search weed	request time	response	latency	user agent	device model	response	request from app	request to 3rd party API	response from 3rd party API		
tequila		2022-11-20 13:42:20:846		Mozila/5.0 (Macinton); Intel Mac OS X 10.15.7) AppleWebKi/337.36 (KHTML, like Gecko) Chome/107.0.0.0 Safari/537.36		success	org.apache.catalina.connector.RequestFacade@4028881	https://www.thecocktaildth.com/api/json/v1/1/search.php/ s=tequila	pin "Advance?" nd. "A		
tequila	2022-11-20 13:56:40.772	2022-11-20 13:56:40:976	204	Mezilla/S.0 (Macintosh; Intel Mac OS X 10, 15, 7) AppleWebKit/S37.36 (KHTML, like Gelco) Chorne/107.0.00 Safari/S37.36		success	org, apache, cutalina connector RequestFacade 8 920998c	https://www.thecocktalldh.com/upl/jons/v1/1/search.php/ s=tequila	failacies filture in the becine Cultur on celebra fightion Sengri on given its, mostle errori. "Sellam" "Cultur in the becine Cultur on celebra fightion Sengri on given its, mostle errori." Sellam "Cultur in the sellam "		
reurgarita	2022-11-20 13-58-55-344	2022-11-20 13:58:55:701	357	Mosilla/5.0 (Macintosh: Intel Misc OS X 10, 15, 7) AppleWebKai/537.36 (KHTML, like Gecko) Charenel/107.0.00 Safari/537.36		нассеня	org.upuche.cutalina.connector@coquentFucade@467222-6c	htps://www.thecocktaildh.com/qsi/pon/v1/I/searth.php/ э-такерийн	beth del tecture can into di true per la attent di se per la attenti di selezione con into di minimi con del treche contrare compagni di sal refi indi devirbit e giornizioni del debendo del contrare compagni di selezione con contrare compagni di selezione con contrare con contrare		
margarita	2022-11-20 13-59:34.416	2022-11-20 13:59:34 619	202	Mexila/5.0 (Macinton); Intel Mic OS X 10,15,7) AppleWeXu/337.36 (KHTML, like Gecko) Chrome/107.0,0 Safari/537.36		success	org.apuche.catalitas.connector/RequestPscade#5441655a	https://www.thecookinilds.com/spi/joss/v1/1/searth.php/ somargaria	beth of the claim on the first of time of time of time of the claim of		
mangarita	2022-11-20 14:00:45.135	2022-11-20 14:00:45:383	250	Mexilla/5.0 (Macintosh; Intel Mic OS X 10,15,7) AppleWebKa/537.36 (KHTML, like Gecko) Chroma/107.0.0 Safari/537.36		success	ong apuche catalina connector RequestFucade @74725c/de	https://www.thecookisialsth.com/up/s/post/v1/1/search.php/ s-margarita	bests det tecture can into a trace per autent an interpretation with a district per autent and interpretation and interest contribute on the contribute company in a serie of all all destricts promises and interest and interest and interest and interest per a per a per a serie and interest per a per		
tequila	2022-11-20 14:00:50:309	2022-11-20 14:00:50:536	227	Mosilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKu/537.36 (KITML, like Gecko) Chronel/070.0.0 Safari/537.36		нассеня	org apache catalina connecter RequestFacade@2d1741ea	htps://www.faccocktailds.com/api/jaon/v4/1/search.php/ sotegala	"General Conference of the Con		
cat	2022-11-20 14:00:54.737	2022-11-20 14:00:54.942	205	Mozilla/SJ (Macintos); Intel Mac OS X 10_1S_7) AppleWebKit/SJ7.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/SJ7.36		failure	org.apache.catalina.connector.RequestFocade@750fcacc	https://www.thecocktaildh.com/api/jaon/v1/1/search.php/ svcat			
									["strinstructionsDE", Reiben Sie den Rand des Glases mit der Limettenscheibe, damit das Salz daran haftet. Achten Sie daranf, dass nar der ändere Rand angefeschret wird und streuen Sie das Salz daranf. Das Salz sell Lippen des Genießers befinden und nieruls in den Cocktuil einmischen. Die anderen Zutnen mit Eis schitteln und versichtig in das Glas		

7. Deploy the web service to Heroku

https://frozen-reef-96952.herokuapp.com/getCocktailInfo

https://frozen-reef-96952.herokuapp.com/

 $\underline{https://frozen-reef-96952.herokuapp.com/getCocktailInfo?searchWord=margarita}$