Project 4 Task 1 – Event Search App
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Description:

My application takes a search string from the user and uses it to search for events from TicketMaster.com.

1. Implement a native Android application

   The name of my native Android application project in Android Studio is: Project4Android

   1.1. Has at least two different kinds of views in your Layout (TextView, EditText, ImageView, etc.)
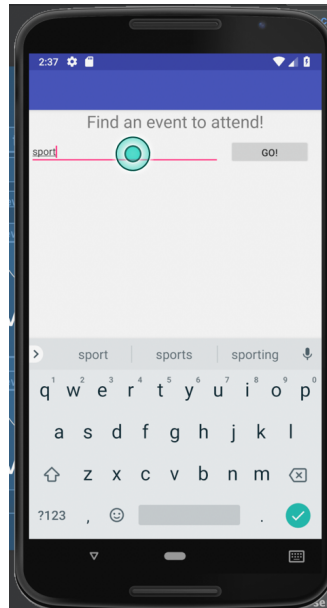
   My application uses TextView, EditText, Button, ImageView, and ScrollView. See content_main.xml for details of how they are incorporated into the LinearLayout.

   Here is a screenshot of my app when open.

1.2. Requires input from the user

Here is a screenshot of the user searching for an event of a sport game.

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

My application does an HTTP GET request in GetEvent.java. The HTTP request is: "https://enigmatic-refuge-51325.herokuapp.com/AppServer/" + "/keyword=searchTerm" where searchTerm is the user's search term.

The search method makes this request of my web application, parses the returned JSON to get all event information I need, fetches the event picture, and returns the info string and bit image of the picture.

1.4. Receives and parses an XML or JSON formatted reply from the webservice

An example of the JSON reply is :

{"events":[{"name":"Cub
Sport","type":"event","id":"1AKZAbtGkd93azR","test":false,"url":"http://www.ticketmaster.com.
au/cub-sport-west-melbourne-victoria-04-13-2019/event/13005629D7489E2F","locale":"en-
us","images":[{"ratio":"3_2","url":"https://s1.ticketm.net/dam/a/03f/f9c42b30-c5bd-4a8b-8ac3-
93a38e9ac03f_970251_TABLET_LANDSCAPE_3_2.jpg","width":1024,"height":683,"fallback":false
},{"ratio":"16_9","url":"https://s1.ticketm.net/dam/a/03f/f9c42b30-c5bd-4a8b-8ac3-
93a38e9ac03f_970251_TABLET_LANDSCAPE_LARGE_16_9.jpg","width":2048,"height":1152,"fall
back":false},{"ratio":"16_9","url":"https://s1.ticketm.net/dam/a/b39/934612ea-e066-4c1c-b9cd-
0ded377ecb39_942041_RECOMENDATION_16_9.jpg","width":100,"height":56,"fallback":false},{
"ratio":"16_9","url":"https://s1.ticketm.net/dam/a/03f/f9c42b30-c5bd-4a8b-8ac3-
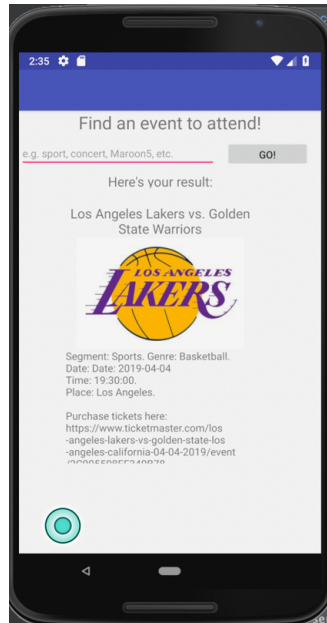93a38e9ac03f_970251_TABLET_LANDSCAPE_16_9.jpg","width":1024,"height":576,"fallback":fals

e},{"ratio":"3_2","url":"https://s1.ticketm.net/dam/a/b39/934612ea-e066-4c1c-b9cd-0ded377ecb39_942041_RETINA_PORTRAIT_3_2.jpg","width":640,"height":427,"fallback":false},{"ratio":"16_9","url":"https://s1.ticketm.net/dam/a/03f/f9c42b30-c5bd-4a8b-8ac3-93a38e9ac03f_970251_RETINA_LANDSCAPE_16_9.jpg","width":1136,"height":639,"fallback":false},{"ratio":"3_2","url":"https://s1.ticketm.net/dam/a/b39/934612ea-e066-4c1c-b9cd-0ded377ecb39_942041_ARTIST_PAGE_3_2.jpg","width":305,"height":203,"fallback":false},{"ratio":"4_3","url":"https://s1.ticketm.net/dam/a/b39/934612ea-e066-4c1c-b9cd-0ded377ecb39_942041_CUSTOM.jpg","width":305,"height":225,"fallback":false},{"ratio":"16_9","url":"https://s1.ticketm.net/dam/a/b39/934612ea-e066-4c1c-b9cd-0ded377ecb39_942041_RETINA_PORTRAIT_16_9.jpg","width":640,"height":360,"fallback":false},{"ratio":"16_9","url":"https://s1.ticketm.net/dam/a/b39/934612ea-e066-4c1c-b9cd-0ded377ecb39_942041_EVENT_DETAIL_PAGE_16_9.jpg","width":205,"height":115,"fallback":false}],"sales":{"public":{"startDateTime":"2019-01-10T23:00:00Z","startTBD":false,"endDateTime":"2019-04-13T11:00:00Z"}},"dates":{"start":{"localDate":"2019-04-13","localTime":"20:00:00","dateTime":"2019-04-13T10:00:00Z","dateTBD":false,"dateTBA":false,"timeTBA":false,"noSpecificTime":false},"timezone":"Australia/Melbourne","status":{"code":"onsale"},"spanMultipleDays":false},"classifications":[{"primary":true,"segment":{"id":"KZFzniwnSyZfZ7v7nJ","name":"Music"},"genre":{"id":"KnvZfZ7vAev","name":"Pop"},"subGenre":{"id":"KZazBEonSMnZfZ7vk1t","name":"Pop"},"type":{"id":"KZAyXgnZfZ7v7nI","name":"Undefined"},"subType":{"id":"KZFzBErXgnZfZ7v7lJ","name":"Undefined"},"family":false}],"info":"Seating: Reserved Seating in the Balcony is a licensed area. Photo I.D. (One of the 5 government approved only; learners & drivers licence, passport, keypass, proof of age card) must be shown at the door to gain entry. PERSONS UNDER 18 YEARS CANNOT ACCESS THIS AREA. NO ID, NO ENTRY, NO EXCHANGES, NO REFUNDS General Admission Standing on the Main Floor is an unlicensed area. All ages ticket holders may access these areas. 18+ Years Patrons on General Admission Floor will have access to a bar downstairs & require Photo I.D. for entry.","pleaseNote":"Fees & Charges: A Handling Fee from $3.55 per transaction applies. In addition a delivery fee may apply depending on the mode of delivery selected. Ticket Collections: Ticket collections prior to the event can be made from all Ticketmaster outlets. Pick ups and Ticket Sales on event night can be made from 1 hour prior to doors opening from the Ticket Sales window located on Dudley St, near the cloak room. Wheelchair/Accessible Seating: For all enquiries please contact the Box Office on (03) 9329 9699.","priceRanges":[{"type":"standard","currency":"AUD","min":42.5,"max":42.5}],"seatmap":{"staticUrl":"https://s1.ticketm.net/tmimages/venue/maps/aus/91558s.gif"},"ticketLimit":{"info":"There is a ticket limit of 10 per customer for this event."},"_links":{"self":{"href":"/discovery/v2/events/1AKZAbtGkd93azR?locale=en-us"},"attractions":[{"href":"/discovery/v2/attractions/K8vZ917phj0?locale=en-us"},{"href":"/discovery/v2/attractions/K8vZ9179pw0?locale=en-us"}],"venues":[{"href":"/discovery/v2/venues/KovZpZA66dJA?locale=en-us"}]}}

I reformatted to only the info I want. A sample reformatted JSON looks like this: (not the same event from above)

{"event0":{"date":"Date: 2019-04-13\nTime: 20:00:00","image":"https://s1.ticketm.net/dam/a/b39/934612ea-e066-4c1c-b9cd-0ded377ecb39_942041_ARTIST_PAGE_3_2.jpg","address":"West Melbourne","segment":"Music","name":"Cub Sport","genre":"Pop","url":"http://www.ticketmaster.com.au/cub-sport-west-melbourne-victoria-04-13-2019/event/13005629D7489E2F"}}
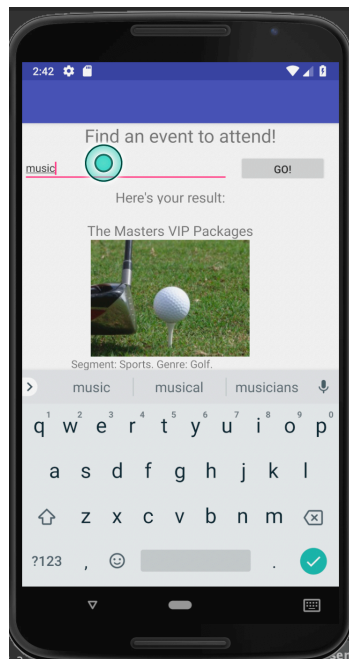
1.5.   Displays new information to the user

Here is the screen shot after the event has been returned. In the middle it is a ScrollView so the user can scroll down to see more events.

1.6.   Is repeatable (user can repeatedly reuse the application without restarting it.)

The user can type in another search term and hit Go. Here is an example of having typed in "music".

2. Implement a web application, deployed to Heroku

The URL of my web service deployed to Heroku is:
https://enigmatic-refuge-51325.herokuapp.com
The project directory :
https://enigmatic-refuge-51325.herokuapp.com/AppServer

2.1.   Using an HttpServlet to implement a simple (can be a single path) API

In my web app project:
Model: Project4Task1Model.java
View: N/A
Controller: Project4Task1Servlet.java

2.2.   Receives an HTTP request from the native Android application

Project4Task1Servlet.java receives the HTTP GET request with the argument
retrieved from path info. It passes the search string on to the model.

2.3.   Executes business logic appropriate to your application

Project4Task1Model.java makes an HTTP request to:
http://app.ticketmaster.com/discovery/v2/events.json?keyword=...&apikey=...

2.4.   Replies to the Android application with an XML or JSON formatted response

Project4Task1Model formats the response to the mobile application in a simple
JSON format of my own design:
{"event0":{"date":"Date: 2019-04-13\nTime:
20:00:00","image":"https://s1.ticketm.net/dam/a/b39/934612ea-e066-4c1c-
b9cd-0ded377ecb39_942041_ARTIST_PAGE_3_2.jpg","address":"West
Melbourne","segment":"Music","name":"Cub
Sport","genre":"Pop","url":"http://www.ticketmaster.com.au/cub-sport-west-
melbourne-victoria-04-13-2019/event/13005629D7489E2F"}}