

LATEST NEWS ANDROID APPLICATION

[Document subtitle]



AUGUST 6, 2019
YUVASHREE KAMALAKANNAN

Table of Contents

Introduction:	2
Features:	2
Layout:	2
MainActivity page:	2
CategoryActivity page :	3
NewsListActivity page:	4
API Request Example :	4
Response:	5
Dependencies and Permissions:	7
Conclusion:	7

Introduction:

Our World's latest news application pulls news sources from across the world, so it's likely user will be able to find their favorite category and publications. The app can set up a daily briefing to give user the most important stories of the day, and user can choose their own customized stories.

Features:

- Upon opening the application, user will be able to select country and enter keywords.
- In the next page user can select the categories they are interested in.
- The last window shows the news that is relevant to user's preference, user can scroll between different news of the selected topics.
- When the user selects the topic from the list, the news related to that topic will be opened in an inline browser of the application.
- In this application we use the API call for getting the latest news data as JSON object and we display it on the user interface according to the user's preference.

Layout:

Our application consists of 3 pages.

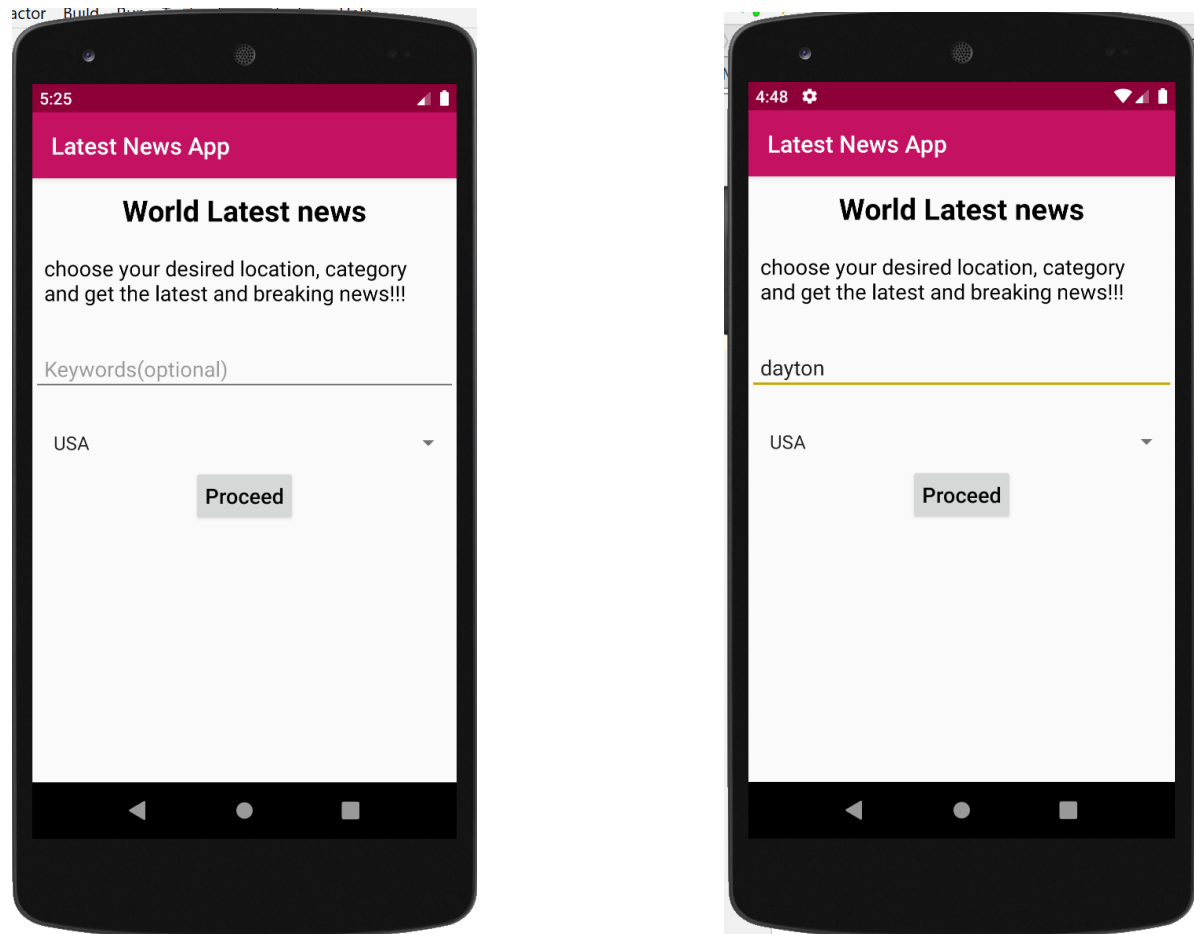
- MainActivity page
- CategoryActivity page
- NewsListActivity page

MainActivity page:

In this page there will be a dropdown option to choose user's preferred country. When the user selects the country then user can enter the keywords(optional) in the text box that he/she might be interested in. This is an additional option in our application that will shortlist the stories according to the user's keyword search. Then click on proceed button to move to the

next page. The below image shows the first page of our application.

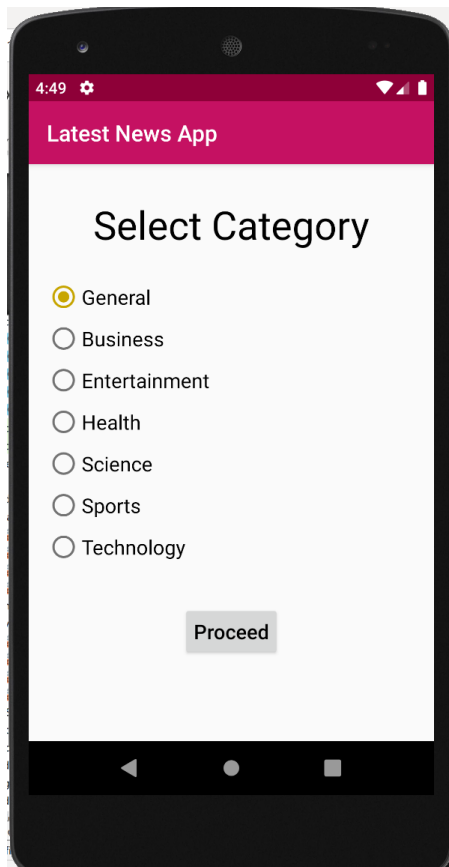
Reference docs: <https://developer.android.com/reference/android/widget/Spinner>



CategoryActivity page :

In this part of the application there will be radio buttons based on the categories, a TextView box and a Button. For instance, the categories will be like business, political, sports, etc. So, the users can select their respective category they are interested in and click the proceed button.

Reference docs: <https://developer.android.com/guide/topics/ui/controls/radiobutton>



NewsListActivity page:

In this page of the application there will be a list of latest topics based on the user's selections. For example, the list of sports news will be displayed in this page if the user selects Country->USA, Category->sports. All the news resource displayed in this page are the response from the newsapi call.

API Request Example :

URL : <https://newsapi.org/v2/top-headlines?q=two&country=us&category=general&apiKey=9220d9a452ce4cdf9f7ad25b91fb20da>

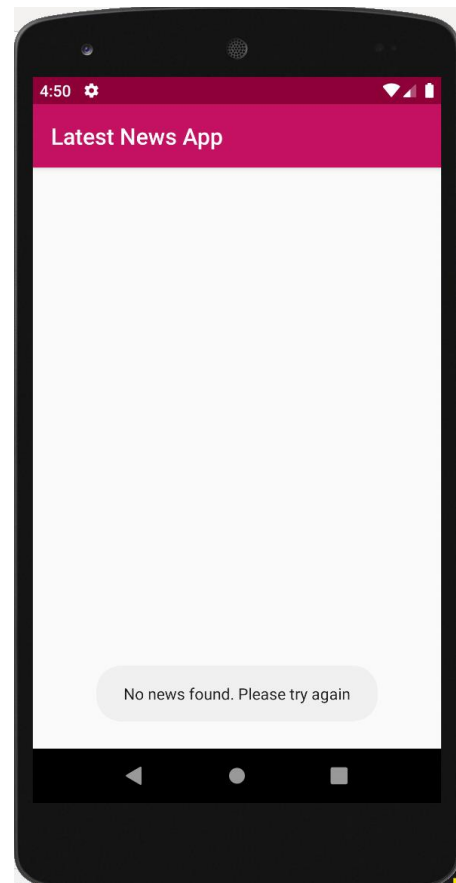
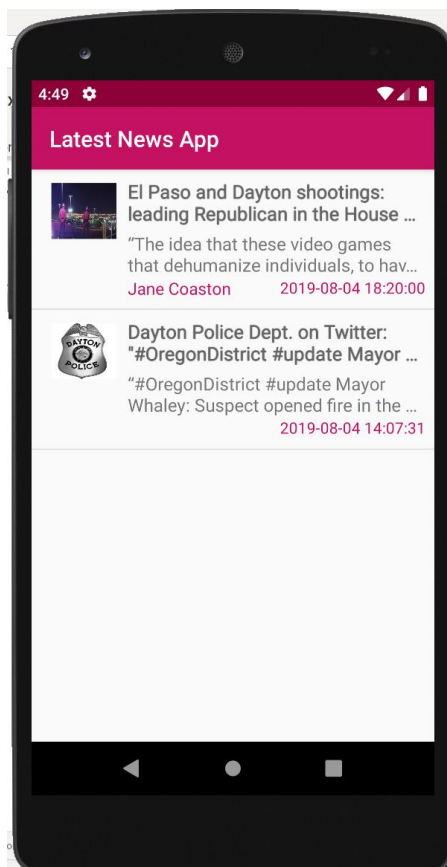
Response:

```
{
  "status": "ok",
  "totalResults": 4,
  "articles": [
    {
      "source": {
        "id": null,
        "name": "Youtube.com",
        "author": null,
        "title": "Two Mass Shootings In 13 hours: Lester Holt Reflects From El Paso | NBC Nightly News - NBC News",
        "description": null,
        "url": "https://www.youtube.com/watch?v=V6MaeNw1RUY",
        "urlToImage": null,
        "publishedAt": "2019-08-04T23:46:55Z",
        "content": "[[getSimpleString(data.title)]]\r\n[[getSimpleString(data.description)]]\r\n[[getSimpleString(data.videoCountText)]]",
        "source": {
          "id": "cbs-news",
          "name": "CBS News",
          "author": "CBS/AP",
          "title": "El Paso shooting: What we know about the victims of the El Paso, Texas, shooting that left 20 dead and 26 wounded - CBS News",
          "description": "Twenty people were killed and more than two dozen were injured Saturday, some of them Mexican citizens",
          "url": "https://www.cbsnews.com/news/el-paso-texas-mass-shooting-what-we-know-about-the-victims-of-the-el-paso-shooting/",
          "urlToImage": "https://cbsnews3.cbsstatic.com/hub/i/r/2019/08/04/39eb3c90-28c7-4ecc-8a51-f21f10603c3d/thumbna1/1200x630/13705a870e0bd03467cf150beac0ec21/ap-19216684420391.jpg",
          "publishedAt": "2019-08-04T22:58:00Z",
          "content": "Twenty people were killed and more than two dozen were injured when a gunman opened fire Saturday afternoon at a Walmart in El Paso, Texas. Authorities have yet to release a list identifying those killed or injured in the shooting.\r\nProsecutors are pursuing a... [+3027 chars]",
          "source": {
            "id": null,
            "name": "Bbc.com",
            "author": "https://www.facebook.com/bbcnews",
            "title": "Whaley Bridge dam: Twenty-two households refuse to leave - BBC News",
            "description": "Police warn Whaley Bridge residents who have not left their homes that they are risking lives.",
            "url": "https://www.bbc.com/news/uk-england-derbyshire-49229936",
            "urlToImage": "https://ichef.bbci.co.uk/images/ic/1024x576/p07jpwr8.jpg",
            "publishedAt": "2019-08-04T20:47:34Z",
            "content": "Media captionWater is being pumped away from the reservoir and sandbags are still being dropped\r\nTwenty-two households have refused to leave a Derbyshire town despite being warned a damaged dam is at risk of bursting, police have said.\r\nThe 31 Whaley Bridge r... [+4250 chars]",
            "source": {
              "id": null,
              "name": "Triblive.com",
              "author": "Jerry DiPaola",
              "title": "Pirates' Joe Musgrove hit hard again in blowout loss to Mets - TribLIVE",
              "description": "Perhaps what happened to Joe Musgrove on Sunday at PNC Park was nothing more than a bad night's sleep leading to a stiff back. Maybe Josh Bell is right and he's not trying too hard, and a good session or two in the batting cage will fix what ails him.",
              "url": "https://triblive.com/sports/mets-pound-joe-musgrove-pirates-13-"
            }
          }
        }
      }
    }
  ]
}
```

The class that extends the `AsyncTask` implements two methods. One is `doInBackground()` method, where the generated endpoint is used in the `Http` handler class and the response data is fetched from `NewsApi` as json string response. Then using `OnPostExecute()` method these values are then converted in to JSON object then the values are set in the User Interface by the class that extends `BaseAdapter`. The documents we referred for implementation are as below.

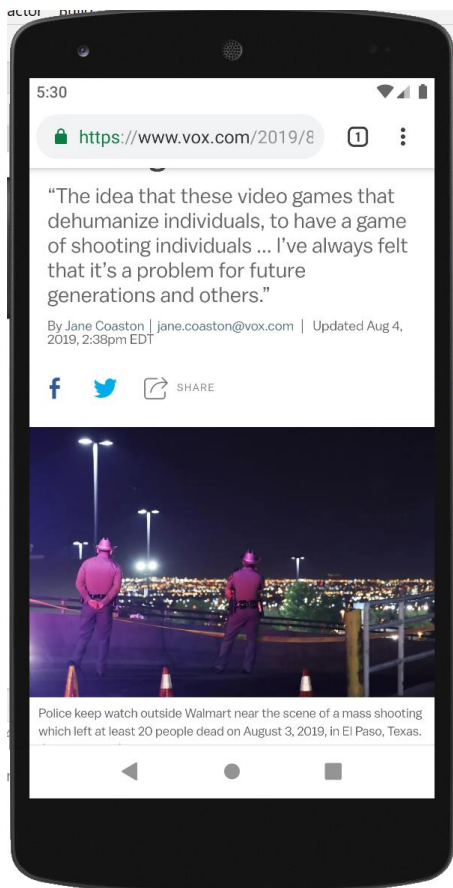
Reference docs: <https://developer.android.com/reference/android/os/AsyncTask>
<https://developer.android.com/reference/android/widget/BaseAdapter>
<https://newsapi.org/docs/endpoints/top-headlines>
<https://developer.android.com/reference/java/net/URLConnection>

Below is the page gets displayed with the list of news stories. Suppose if no stories available, the page will be displayed with the toast message “No news found. Please try again”.



When the user clicks on the latest topic from the list an inline browser will be opened, and the respective breaking news will be displayed. Suppose if the device is without the internet connection the respective toast message will be displayed.

Reference docs: <https://developer.android.com/reference/android/net/ConnectivityManager>



Dependencies and Permissions:

implementation 'com.squareup.picasso:picasso:2.5.2' – To manage images

implementation 'com.android.volley:volley:1.1.0' – To manage network request

<uses-permission android:name="android.permission.INTERNET" />

<uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />

Conclusion:

In addition to the existing features, date and time duration can be given as input to get the news from the mentioned range of time. The API key used in this development is developer version and supports only around 500 requests per day. But this can be improved by using commercial version of API key which also allows us to search news from past 12 months and real-time data can be obtained.