

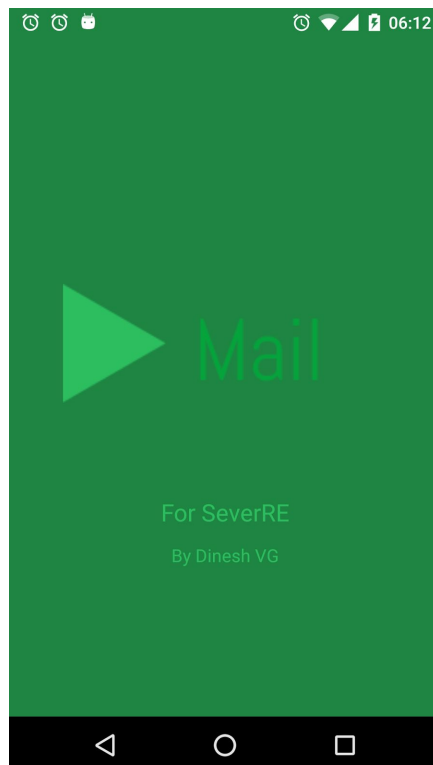
Mail Application Report for Seven RE Job application

Application Flow
Business Object
API Parsing
Libraries Used
Issues open

Application Flow

The application consists of 5 screens. The flow between them is pretty simple. The screens are-

1. Splash Screen - This screen stays for just 2 seconds when the application is opened. This functions as an introductory screen.

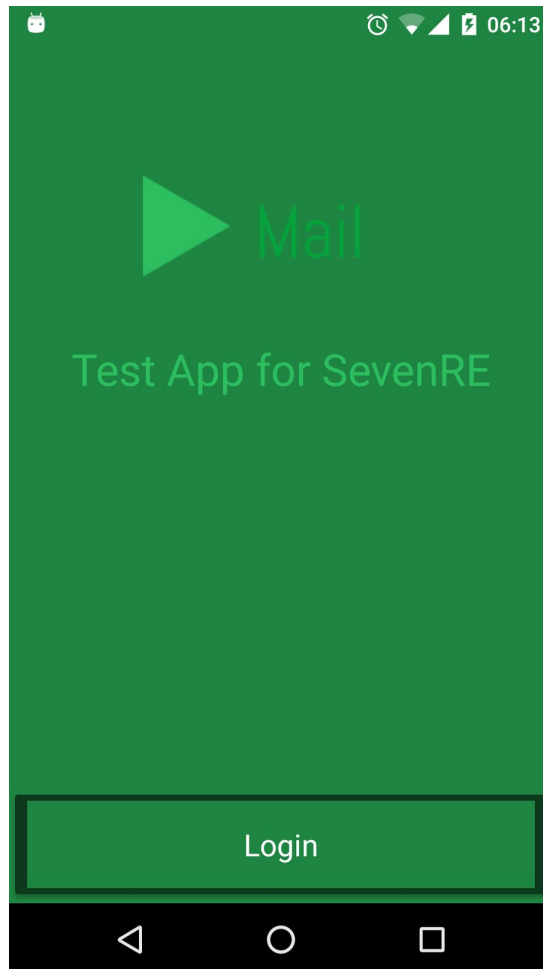


2. The MainActivity -

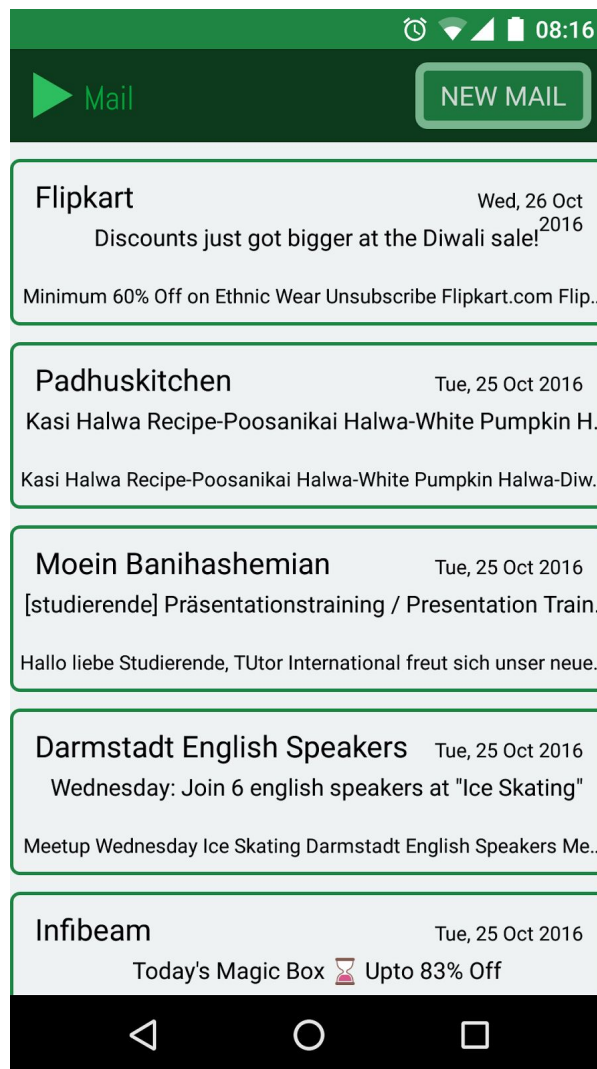
This screen does all the background functions. When a user logs in for the first time, it obtains the permission from the device, obtains the permission from the API.

It fetches 50 conversations (a conversation can have more than 1 mail in it) and stores them in the Realm database. It stores them based on the business object called DirtyMail, DirtyMailContent.

A progress view animation is done for this screen during the pre-execute and removed during the post-execute task.



3. MailsActivity screen - This screen is built on top of a recycler view (obtained from an open source library). The open source library provides the swipe functionality in the screen by itself. This made implementation a little easier.

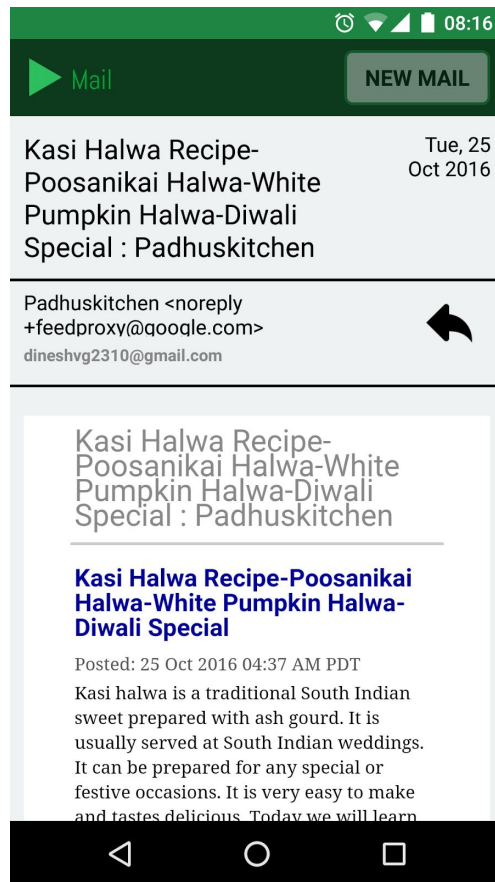


The row information is stored in an adapter, consisting of from and to address, date and subject.



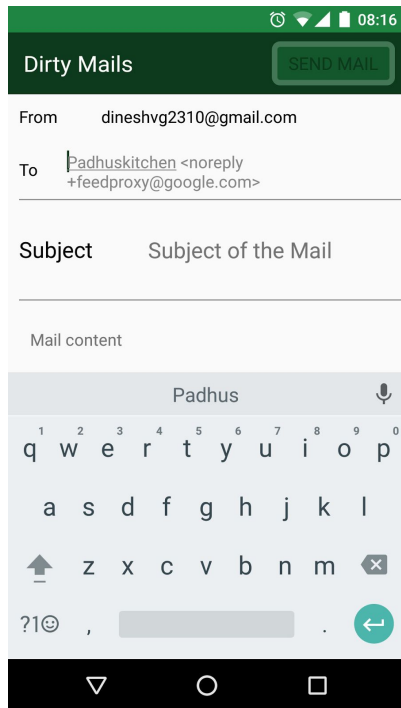
An image is provided for detailed viewing of the screen and an image for deleting the mail locally.

4. DirtyMailActivity - Detailed information where the content of the mail is shown. Right now only mime-types of plain/text, plain/html and multi-alt are shown and not multi-mix.



5.SendMailActivity -

This mail gets the permission from Gmail API to send mails, but spits out an error in console when trying to send. (400 Bad request)



```
W/System.err: com.google.api.client.googleapis.json.GoogleJsonResponseException: 400 Bad Request
W/System.err: {
W/System.err:   "code" : 400,
W/System.err:   "errors" : [ {
W/System.err:     "domain" : "global",
W/System.err:     "message" : "Invalid to header",
W/System.err:     "reason" : "badRequest"
W/System.err:   } ],
W/System.err:   "message" : "Invalid to header",
W/System.err:   "status" : "INVALID_ARGUMENT"
```

App Flow

Business Object

DirtyMail

```
//private int id;  
@PrimaryKey  
private String messageld;  
private String threadId;  
private String readLabel;  
private String date;  
private String subject;  
private boolean important;  
private String fromAddress;  
private String toAddress;  
private String replyToAddress;  
private String messageSnippet;  
private String messageFull;  
//Content based parsing  
private DirtyMailContent content;  
  
public DirtyMailContent() {}  
  
//private int contentId;  
//private int id; //ID to link to Dirty mail  
private boolean isMixed;  
private boolean isAlt;  
private boolean isPlain;  
private boolean isHtml;  
private Integer numOfParts;  
private String parts;  
private boolean hasAttachment;  
private String partTypes;
```

API Parsing

API	Requests	Errors	Error ratio	Latency, median	Latency, 98%
 Gmail API	69	0	0%	— ?	— ?

Access only obtained for the Gmail API to process information.

Libraries Used

- Realm Database
- JavaX Mail to construct Mimetype mails
- SwipeRevealLayout to swipe information

Open Issues

Recycler view still is not constructed fully, will cause application breaking if we try to delete last object. Needs to be fixed.

400 Error on send mail (issues, but as per requirement)