CINEMETRICS

FINAL INCREMENT REPORT

SPRING – 2017

Contributors:

Team – 11 Pinnacle

Gummadi Vinuthna – 30

Esha Mayuri – 50

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Cheldhi,Lavanya - 12

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1. PROJECT DEPLOYMENT:

1.1. USER MANUAL:

1.1.1. INTRODUCTION:

CINEMETRICS is an android application, to manage and keep track of all movies at one place. With the use of TMDB API, all the movies and series are controlled. This app can be used to check all the movies, collect different movies, add movies to watched list or to be watched. It also shows the count of movies the user watched along with the statistic diagrams, these stats can be shared across social media.

1.1.2. OVERALL GOAL:

Overall goal is to create and deploy Cinemetrics app where the user finds it easy to track down the number of movies he has watched and share to the social media. To create interactive and user-friendly app where the movies can be searched and create lists for favourite, watched and to watch.

1.1.3. SPECIFIC OBJECTIVE:

- The user can view movie posters with the help of search criteria like title, rating, year, star cast, Oscar-nominated, genre etc.

- On selection of a movie poster, the user can view the movie description, ratings. The user also has an option to mark if the movie is already watched or to be watched or favourite. These will be added to the user's library. YouTube trailer will also be present and there will be an option to rate the movie or a series.

- The user will be having different screens where he can check the list of watched movies, list of to be watched movies and favourite movies. If the user changes the status of to be watched a movie to watched then this movie will be cleared from the list.

- On the home screen, the user will be having a count of all movies he watched. On click of the count, he can view a statistical history of the movies watched based on year, genre, star cast etc. These stats can be shared across different applications like Facebook, Twitter, WhatsApp etc.

- The user can also share the watched movie across different applications.

- Additionally, a normal user can search for the movies and description of the movie. If he would like to get the movie count and add movies to the above-mentioned list, he registers his account. He can either create account or signup using Google or Facebook.

- Remainder option is available if user wants to remind about a movie.

1.1.4. SPECIFIC FEATURES:

- User-friendly search screen for search of different key words.
- Description of movies.
- Count of movies the user watched where he can share to social media.
- Statistics of the movies the user watched.
- Remainder to watch a movie.

1.1.5. SIGNIFICANCE:

Cinemetrics will be one stop movie library for the users who wants to maintain the movie database with them and share to the social media.

1.1.6. EXISTING SERVICES / REST API:

We have used TMDBI API, which is the rest implemented API which gives the results of the movies. Please find the below link for reference.

https://www.themoviedb.org/documentation/api

We have used Firebase for the OAuth for Facebook, Google and Twitter login

https://console.firebase.google.com/

We have used MPAndroidChart for pie chart representation

https://github.com/PhilJay/MPAndroidChart

We have used youtube api for rendering youtube trailers for the movies

https://developers.google.com/youtube/

We have used Mongo db for storing and retrieving the data

https://mlab.com/

1.1.7. INSTALLATION:

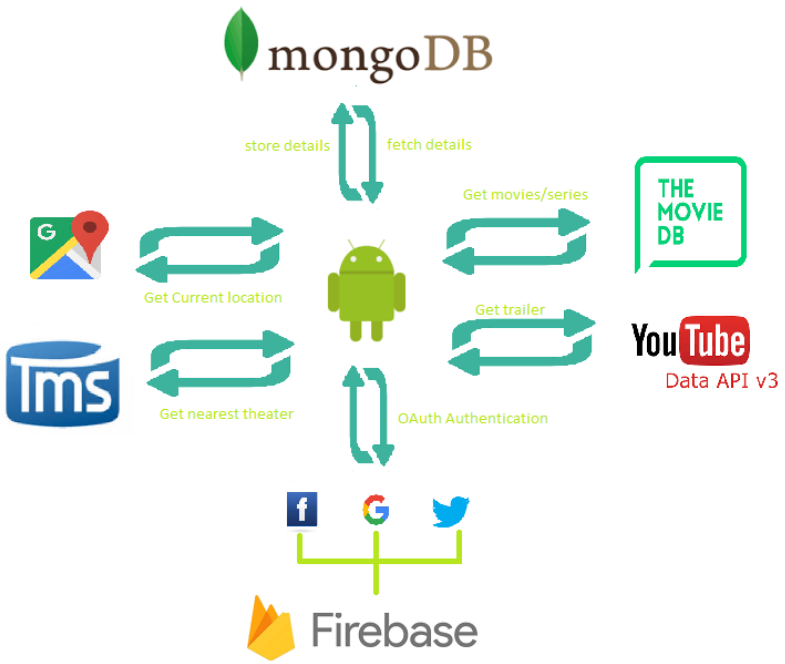
Install apk present in below url:
https://github.com/VinuthnaGummadi/Cinemetrics-Project/tree/master/apk

1.1.8. DEVICE CONSTRAINS:

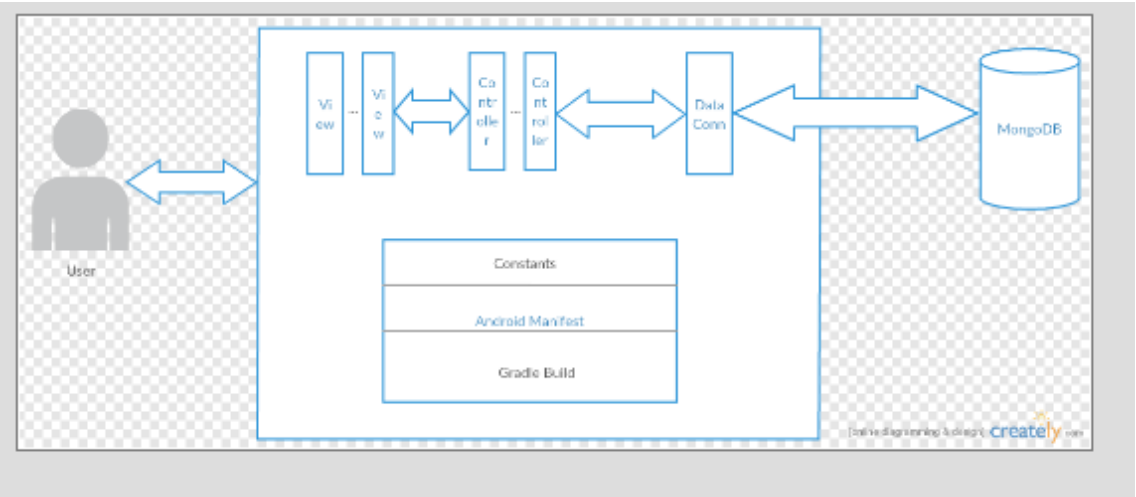
Cinemetrics can be deployed from Android 4.0 to 7.1.2.
Location should be enabled in order to fetch nearest movie theatres.

1.2. Detail Design of Features:

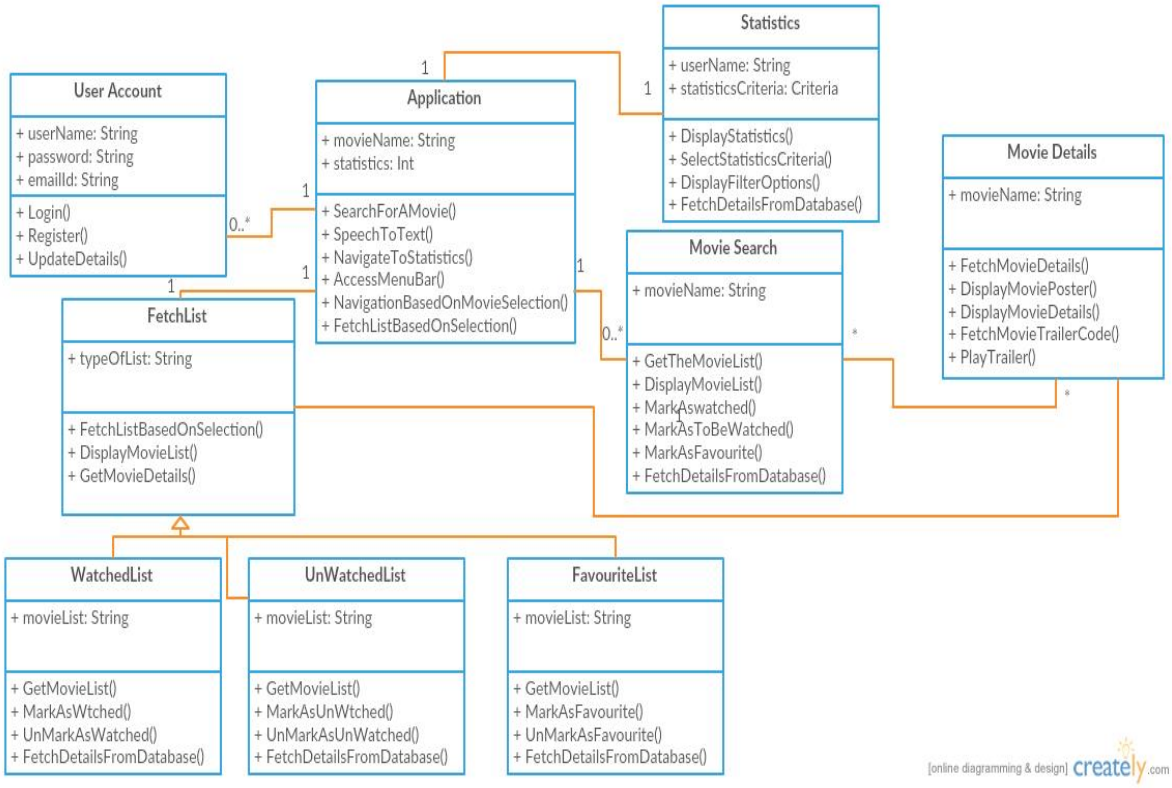
1.2.1. ARCHITECTURE DIAGRAM:



Wireframe:



1.2.2. CLASS DIAGRAM:

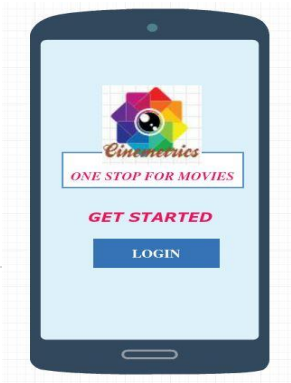


1.2.3. LOGO:

1.2.4. Wire Frames:

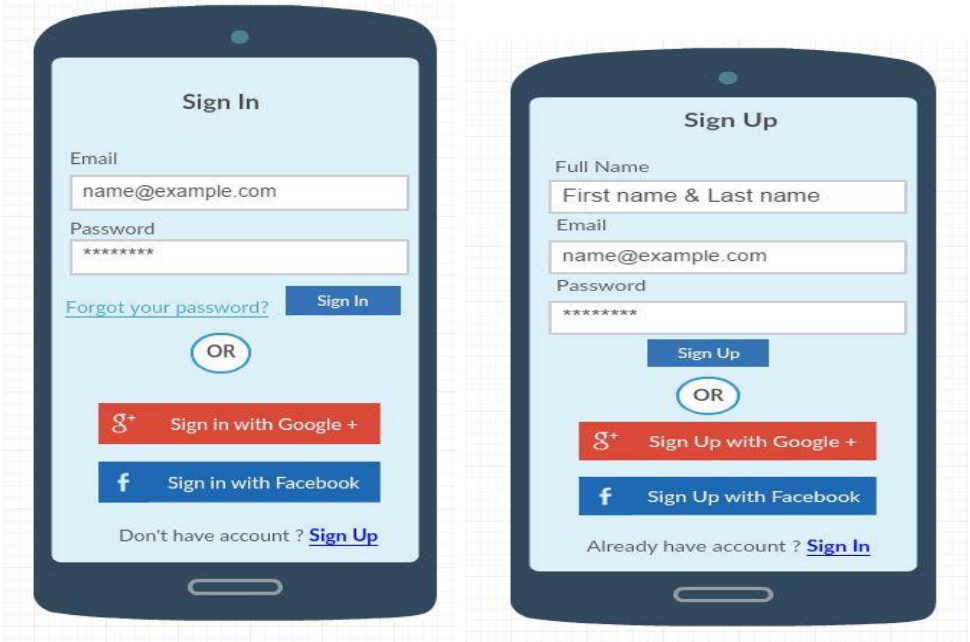
1.2.4.1. LANDING PAGE:

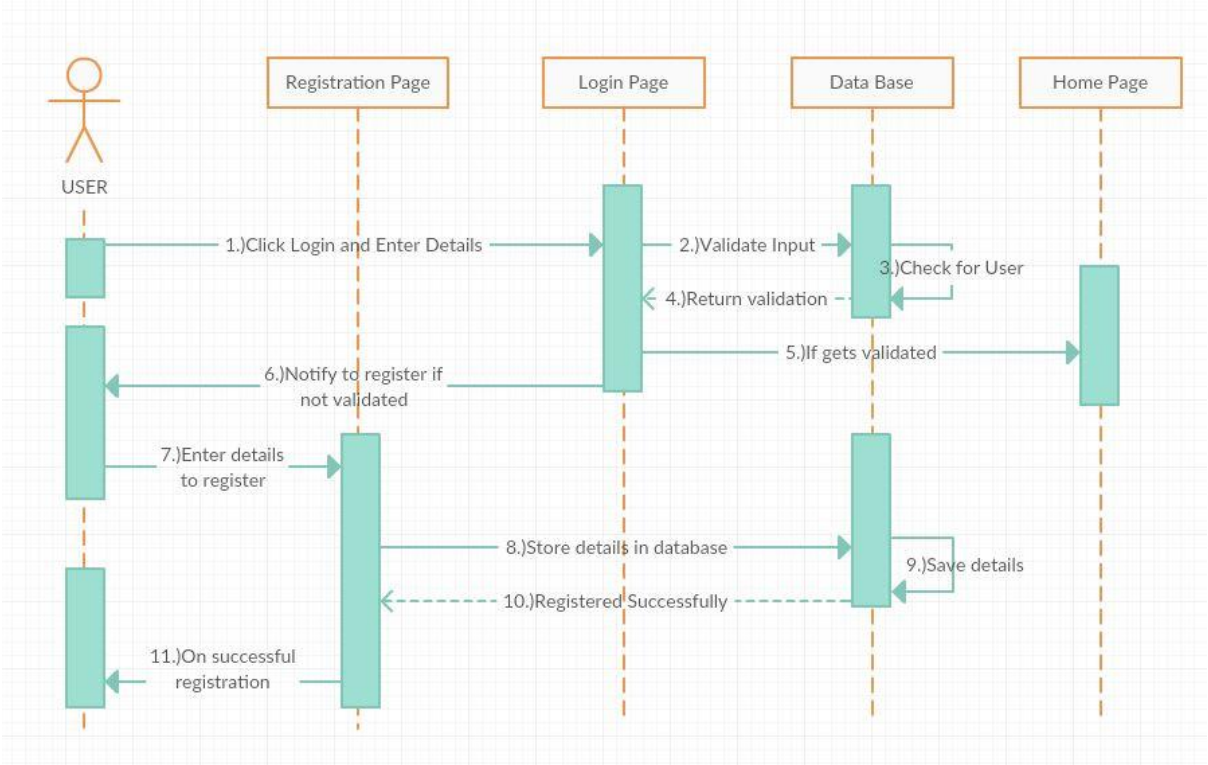
On click of logo in android application, landing page will be loaded. UI wireframe is as below



1.2.4.2. LOGIN AND REGISTRATION:

On click of Login in landing page user is redirected to Login screen. Below are the UI wireframe and sequence diagram of login and registration.





1.2.4.3. GET STARTED:

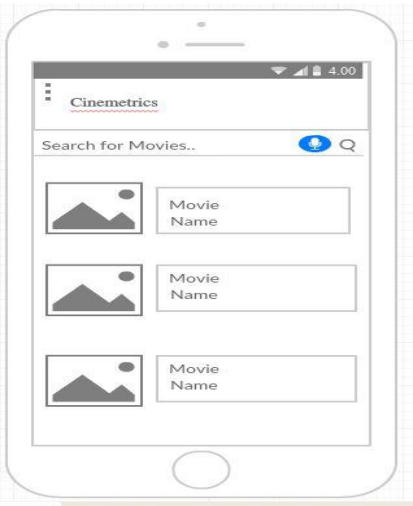
There are two types of users, Normal user and Registered user.

Normal user can click of GET STARTED and view the movie search screen and movie description.
Registered user has access to check the movie count and have chance to add the movies to favourite list or watched list or to be watched list.

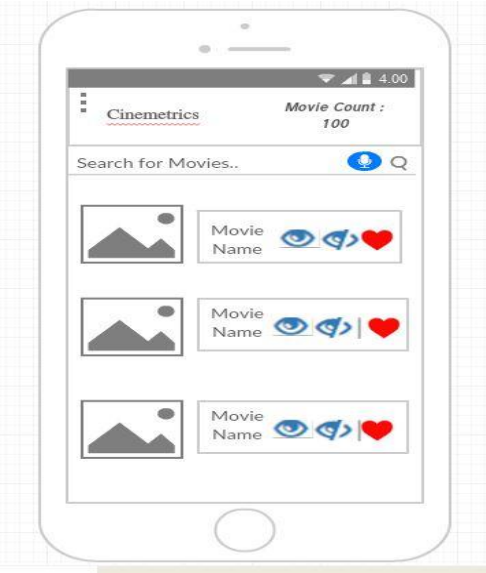
1.2.4.4. SEARCH SCREEN:

Search screen contains a search bar with mike option along with best movies in the current year. Voice to Text functionality is available. If the user swipes left or right on the movie list then that movie row will be cleared from the list.

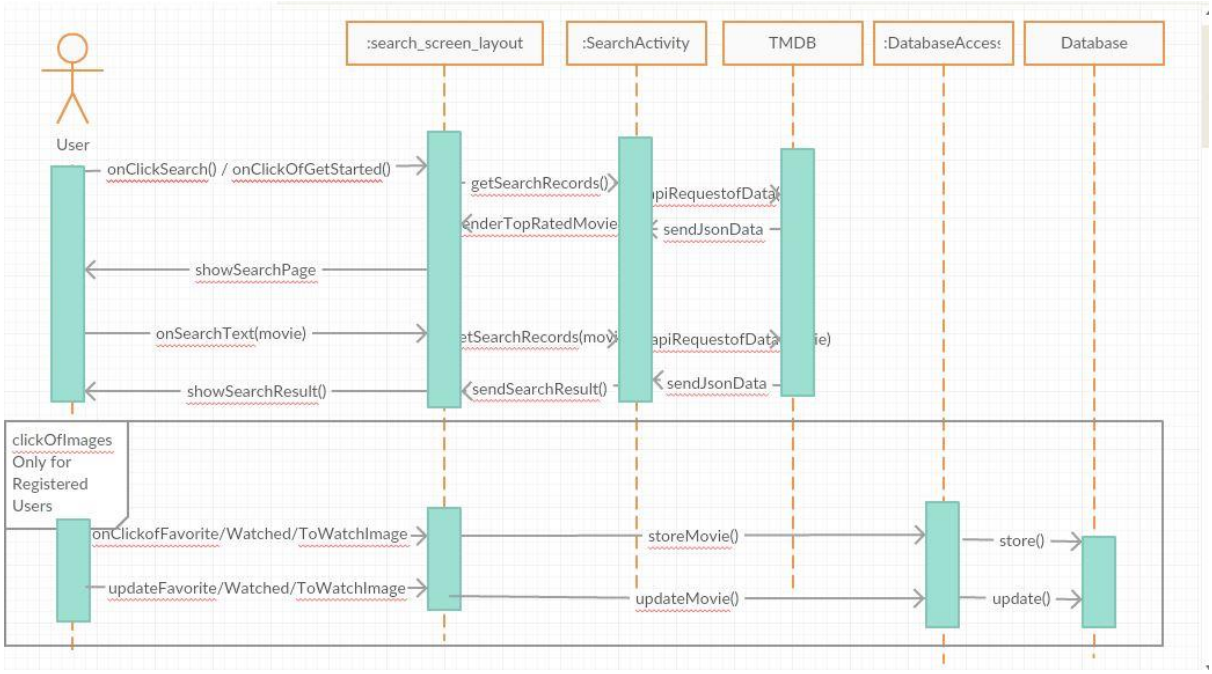
Normal User Search Screen:



Registered User Search Screen:



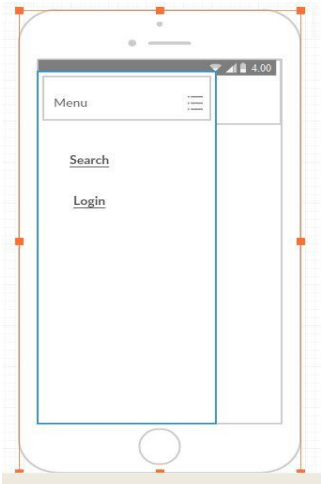
Sequence Diagram:



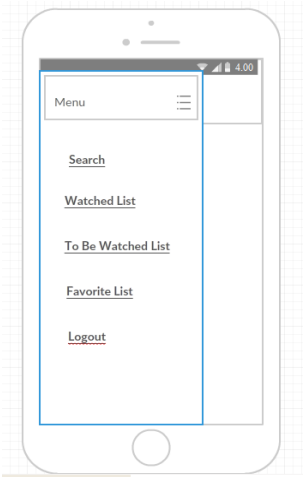
1.2.4.5. SIDE MENU

Side menu for normal user and registered user are as below

Normal User:

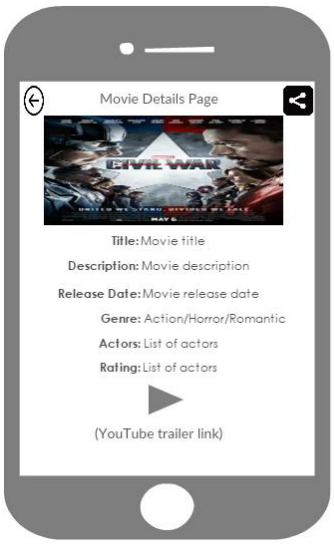


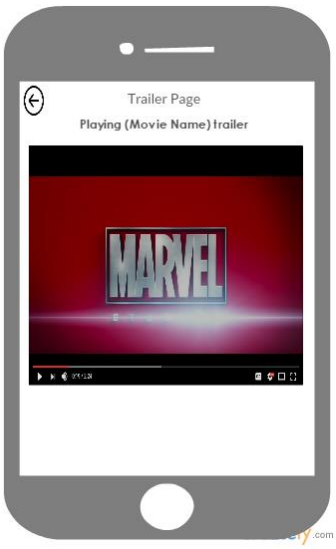
Registered User:

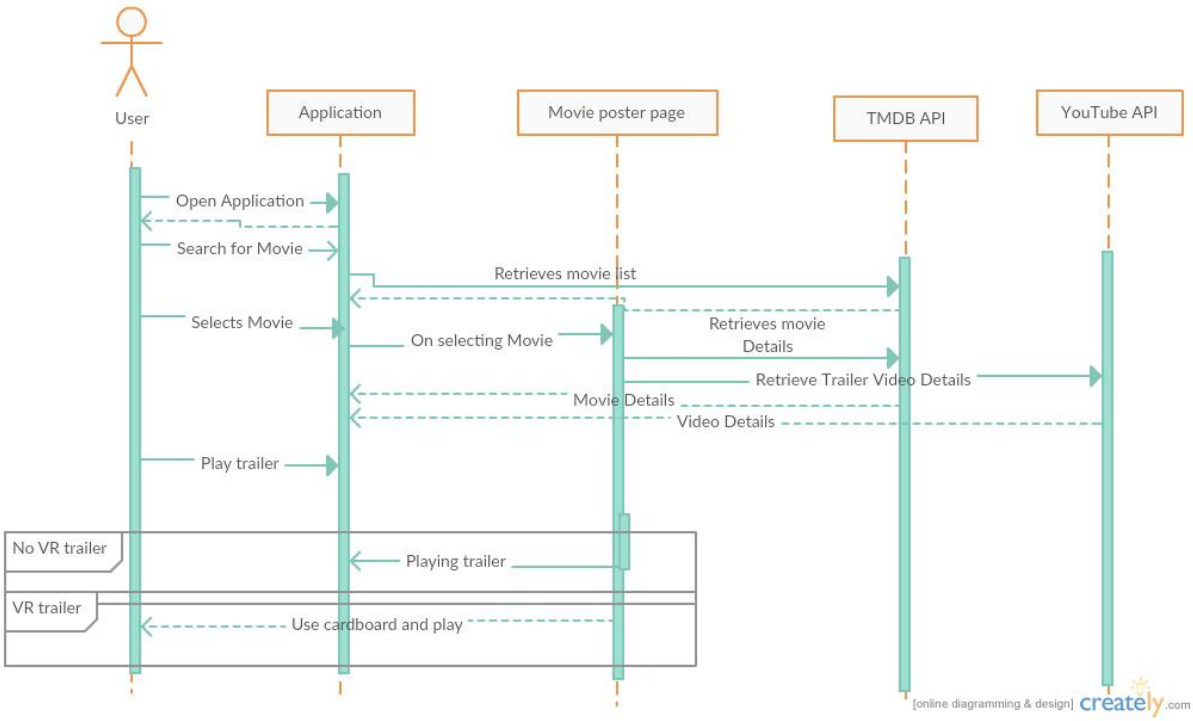


1.2.4.6. MOVIE DESCRIPTION SCREEN

Movie description screen contains the movie details like poster, movie title, release date, genre etc. YouTube trailer is available. If VR enabled trailer is available, then user can view in google cardboard. User can also share the movie description to social media with comments. Below are the UI wireframes and sequence diagram:

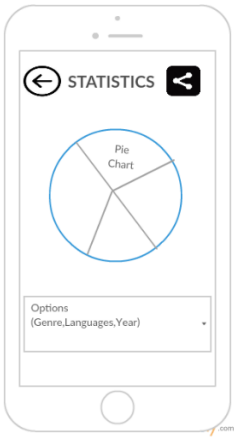


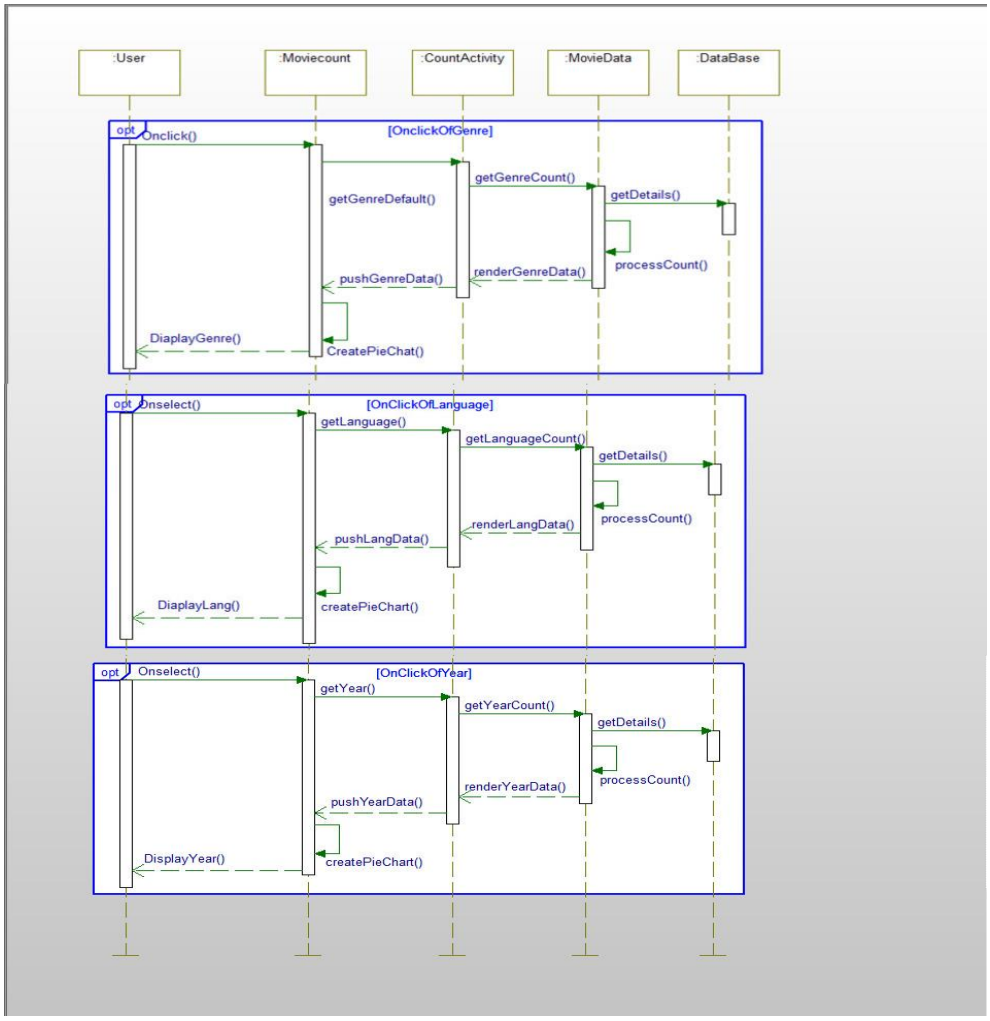



User
Application
Movie poster page
TMDB API
YouTube API
Open Application
Search for Movie
Retrieves movie list
Selects Movie
On selecting Movie
Retrieves movie Details
Retrieve Trailer Video Details
Movie Details
Video Details
Play trailer
No VR trailer
Playing trailer
VR trailer
Use cardboard and play
[online diagramming & design] creately.com

1.2.4.7. STATISTICS PAGE

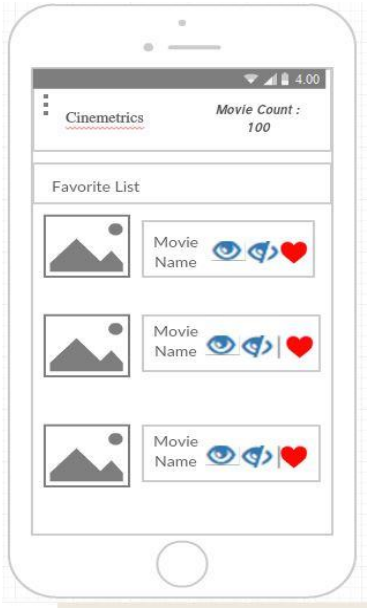
On click of Movie Count on the search screen, user is redirected to statistics page. Pie chart based on genre of watched list is displayed by default and the description of the chart. User can filter the chart and alter the pie chart by selecting options like language, year etc. Below are the UI wireframes and sequence diagram.

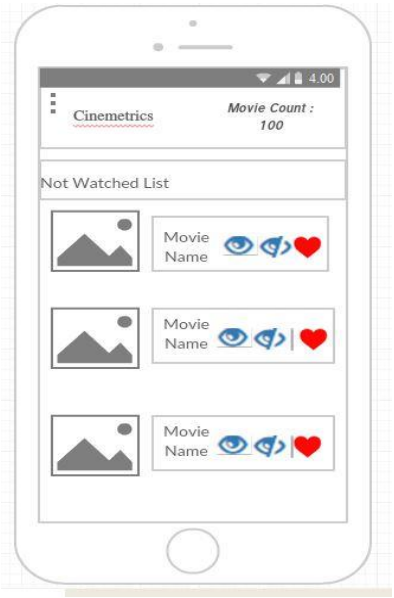


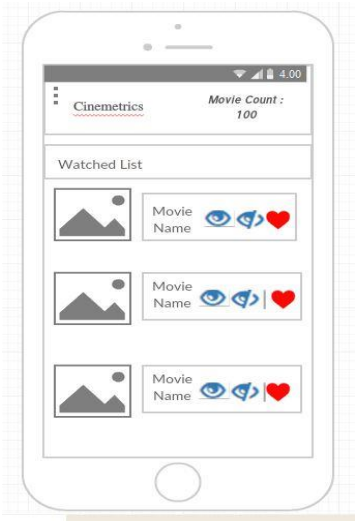


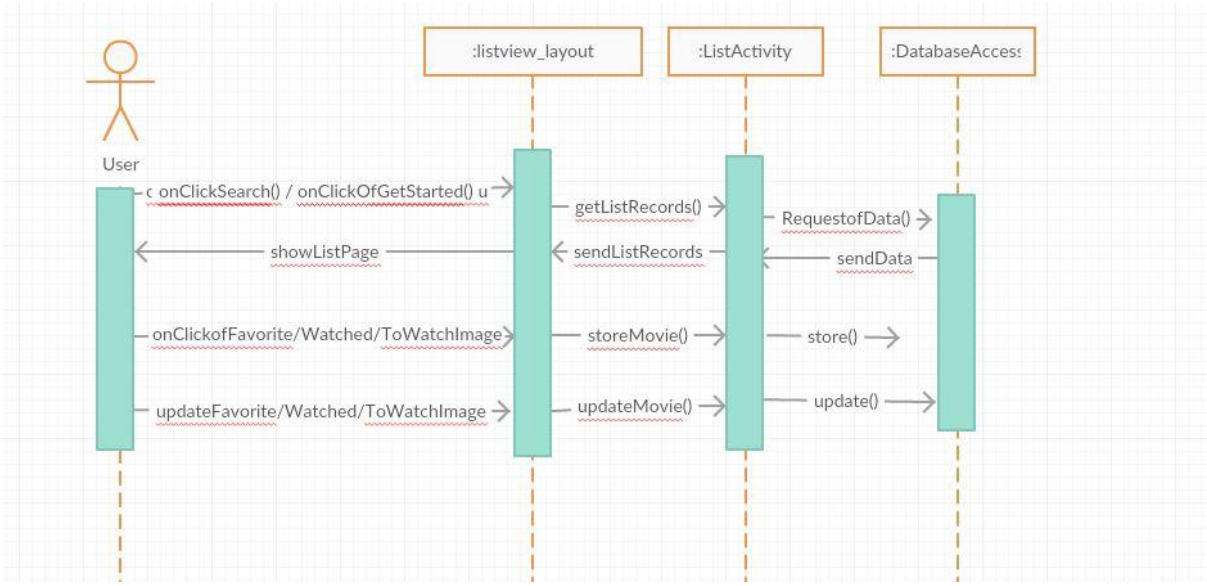
1.2.4.8. WATCHED LIST, TO BE WATCHED LIST, FAVORITES LIST

On selection of Watched List, watched movie details will be shown on the screen.
On selection of To Be Watched List, to be watched movie details will be shown on the screen.
On selection of Favourite List, favourite movie details will be shown on the screen.
When the user toggles the options to add into lists on the search screen or movie description screen, details will be stored into database.
Details will be fetched from database on selection of these pages. User can also toggle these options on these screens. Below are the UI wireframes and sequence diagram.


4.00
Cinemetrics
Movie Count : 100
Favorite List
Movie Name
Movie Name
Movie Name


4.00
Cinemetrics
Movie Count : 100
Not Watched List
Movie Name
Movie Name
Movie Name


4.00
Cinemetrics
Movie Count : 100
Watched List
Movie Name
Movie Name
Movie Name



1.3. PROJECT TIMELINES, MEMBERS AND TASK RESPONSIBILITY

Increment 1: 02/01/2017 to 02/17/2017
Increment 2: 02/02/2017 to 03/10/2017
Increment 3: 03/13/2017 to 04/07/2017
Increment 4: 04/10/2017 to 04/26/2017

MEMBERS:

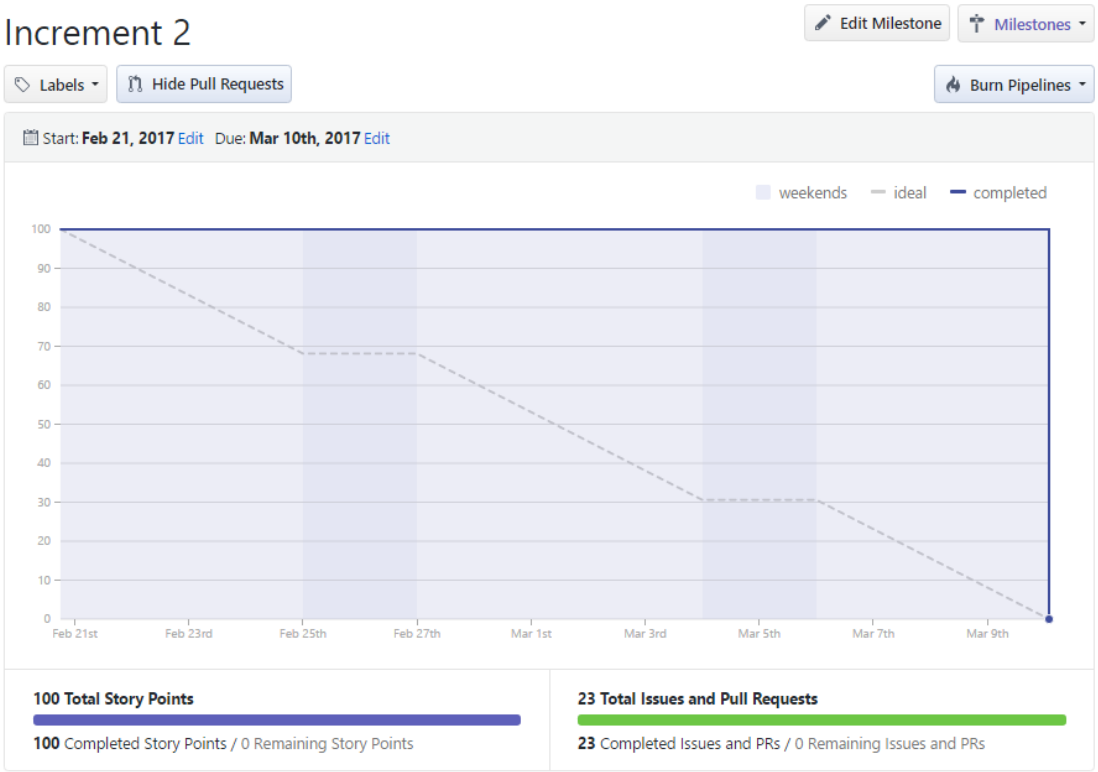
1. Vinuthna Gummadi
2. Penumetcha,Jnana Gayathri
3. Mayuri,Esha
4. Cheldhi,Lavanya

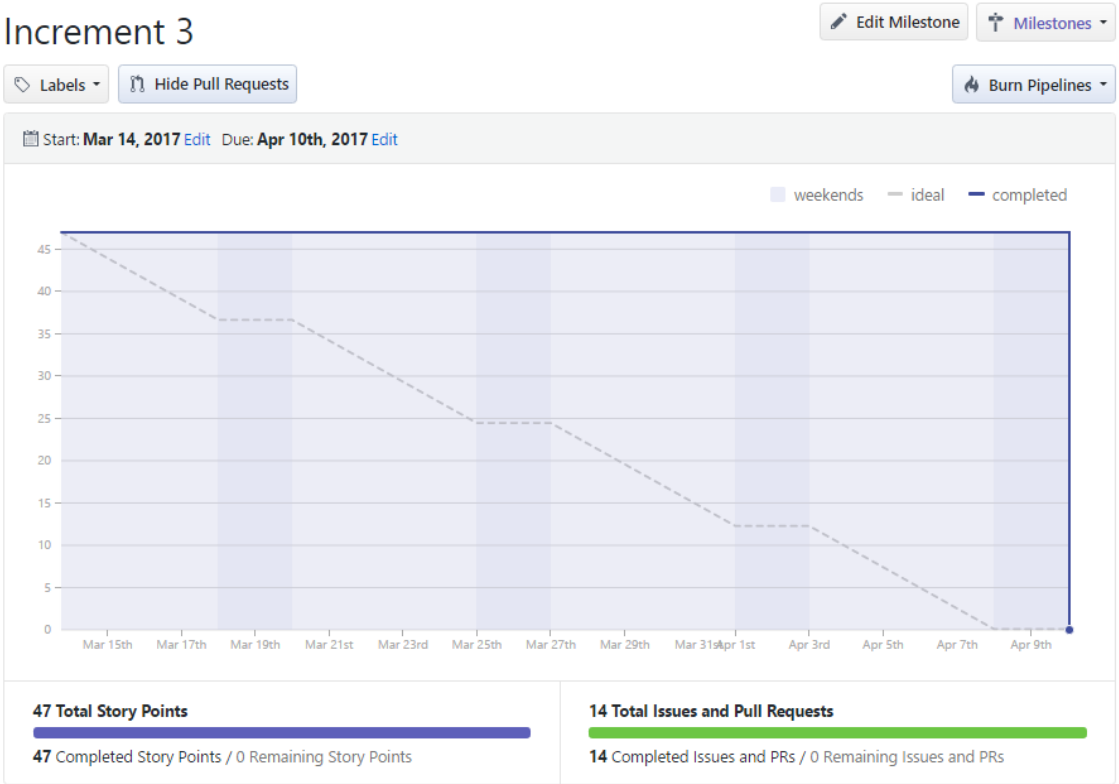
TASK RESPONSIBILITY:
The application screens are shared as below:
Vinuthna: Normal and Registered User Search Screen, Database Design, Watched List Screen, To be watched list and favourites list screen.
Gayathri: Statistics Page with database integration.
Esha: Movie Description Page, YouTube trailer, Voice to Text, Side Menu layout.
Lavanya: Landing page, Login validation and Manual Testing.

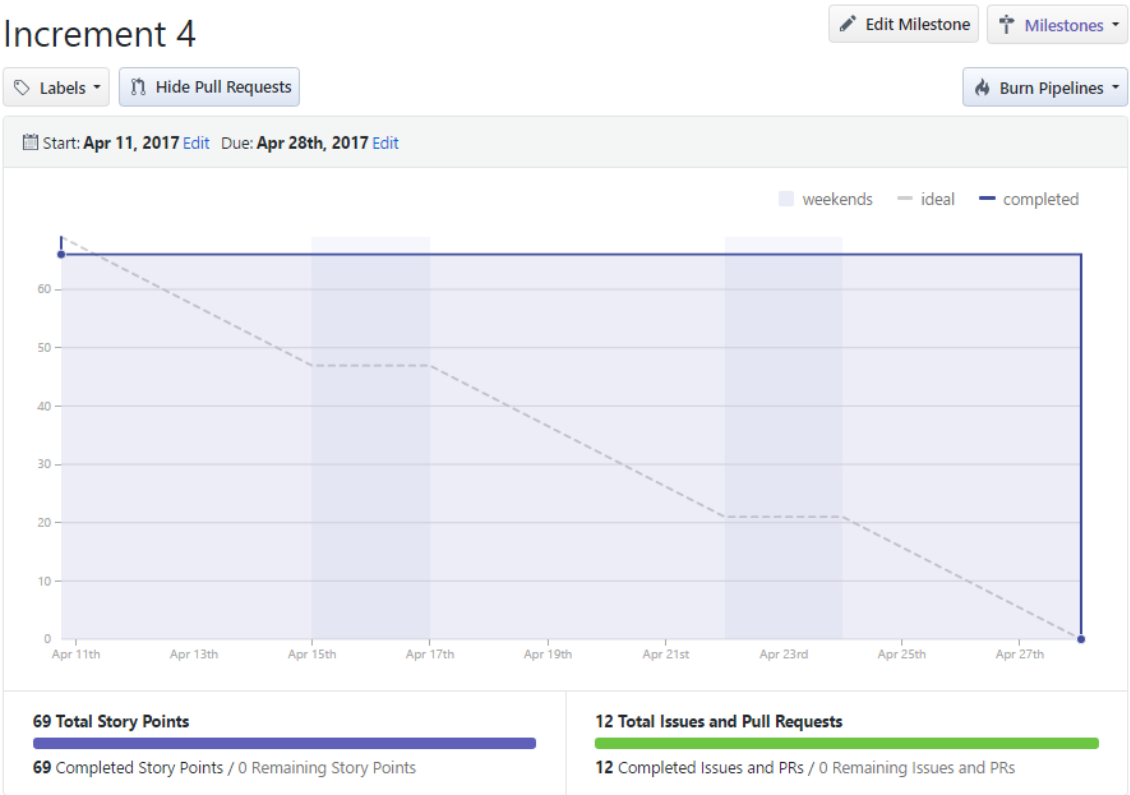
INCREMENT 1: Design plan, Architecture Diagram, Class Diagram, UI wireframes and sequence diagrams for all modules, Revised project proposal, Project Documentation, Tasks creation for all increments. Login and Registration pages implementation, testing and deployment.

INCREMENT 2: Search screen, custom list ui implementation, statistics page ui implementation, movie description page implementation, landing page implementation and login page facebook, google integration. Testing and deployment of the above.
INCREMENT 3: Database creation, completion of custom list ui screens, statistics page completion, share functionality completion and movie description page completion. Testing and implementation of above.
INCREMENT 4: Any enhancements, backdrop issues, changes requested. Integration of all modules and perform Integration testing and Final Testing.

1.3. BURNDOWN CHART:


Increment 2
Edit Milestone
Milestones
Labels
Hide Pull Requests
Burn Pipelines
Start: Feb 21, 2017 Edit Due: Mar 10th, 2017 Edit
weekends
ideal
completed
100
90
80
70
60
50
40
30
20
10
0
Feb 21st
Feb 23rd
Feb 25th
Feb 27th
Mar 1st
Mar 3rd
Mar 5th
Mar 7th
Mar 9th
100 Total Story Points
100 Completed Story Points / 0 Remaining Story Points
23 Total Issues and Pull Requests
23 Completed Issues and PRs / 0 Remaining Issues and PRs

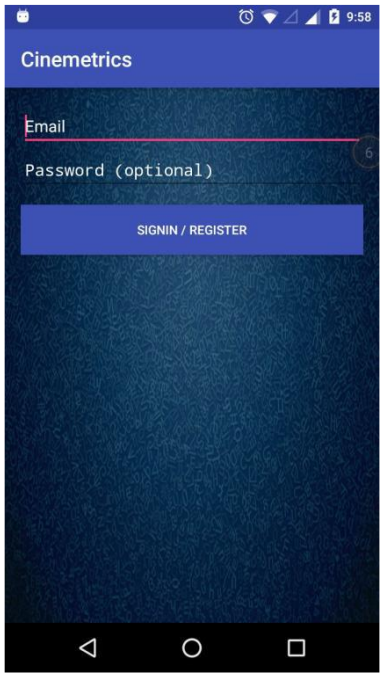

Increment 3
Edit Milestone
Milestones
Labels
Hide Pull Requests
Burn Pipelines
Start: Mar 14, 2017 Edit Due: Apr 10th, 2017 Edit
weekends
ideal
completed
45
40
35
30
25
20
15
10
5
0
Mar 15th
Mar 17th
Mar 19th
Mar 21st
Mar 23rd
Mar 25th
Mar 27th
Mar 29th
Mar 31st
Apr 1st
Apr 3rd
Apr 5th
Apr 7th
Apr 9th
47 Total Story Points
47 Completed Story Points / 0 Remaining Story Points
14 Total Issues and Pull Requests
14 Completed Issues and PRs / 0 Remaining Issues and PRs

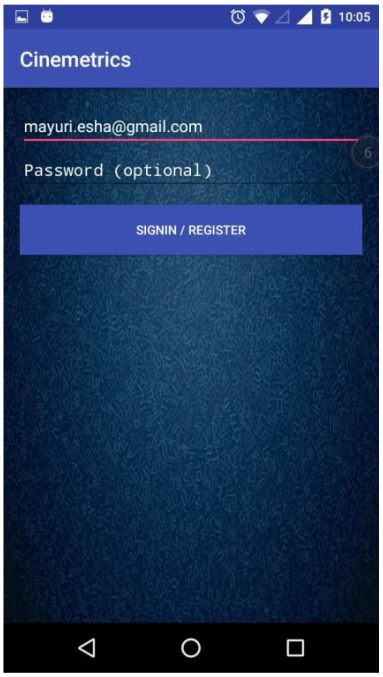

Increment 4
Edit Milestone
Milestones
Labels
Hide Pull Requests
Burn Pipelines
Start: Apr 11, 2017 Edit Due: Apr 28th, 2017 Edit
weekends
ideal
completed
60
50
40
30
20
10
0
Apr 11th
Apr 13th
Apr 15th
Apr 17th
Apr 19th
Apr 21st
Apr 23rd
Apr 25th
Apr 27th
69 Total Story Points
69 Completed Story Points / 0 Remaining Story Points
12 Total Issues and Pull Requests
12 Completed Issues and PRs / 0 Remaining Issues and PRs

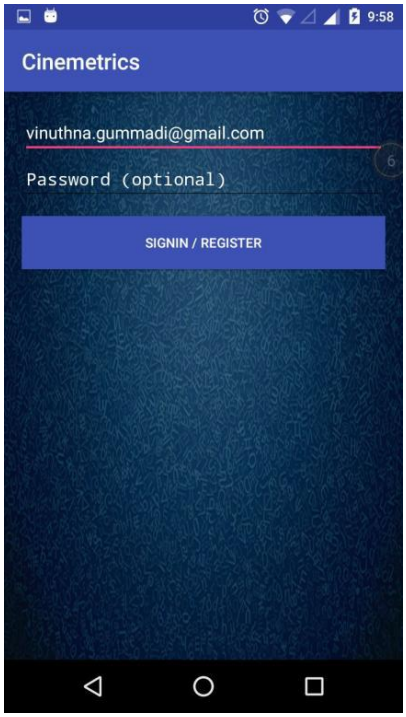
2. FIRST INCREMENT REPORT IMPLEMENTATION:

Total Project plan which includes all the Design along with UML Diagrams and Wireframes which are mentioned in the above part of the document. Partial implementation of Login page and Registration page is completed in this increment.

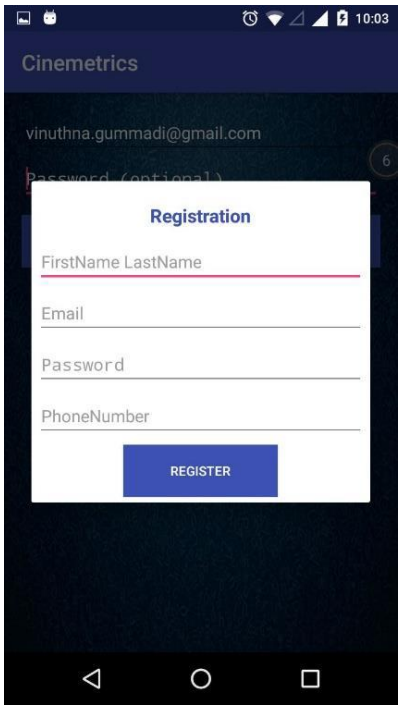
Below are the screenshots of the implemented code

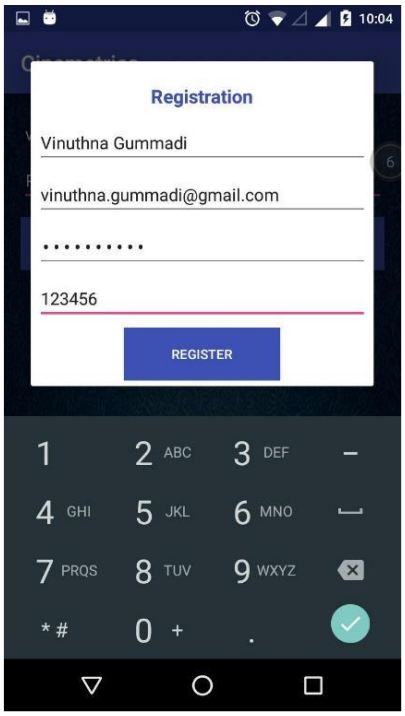


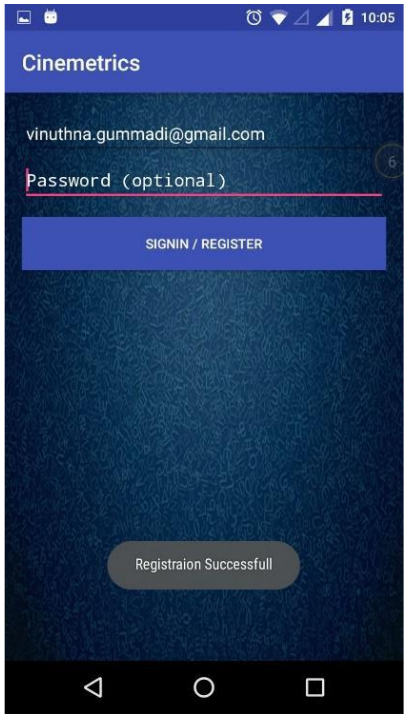




On click of SIGNIN / REGISTER:







GIT HUB

Source code: https://github.com/Cinemetrics/Cinemetrics-Project/tree/master/Source/Cinemetrics

WIKI page: https://github.com/Cinemetrics/Cinemetrics-Project/wiki/First-Increment-Report

Project Plan: https://github.com/Cinemetrics/Cinemetrics-Project/wiki/Cinemetrics-Project-Plan

Implementation: https://github.com/Cinemetrics/Cinemetrics-Project/wiki/First-Increment-Implementation

3. SECOND INCREMENT REPORT IMPLEMENTATION:

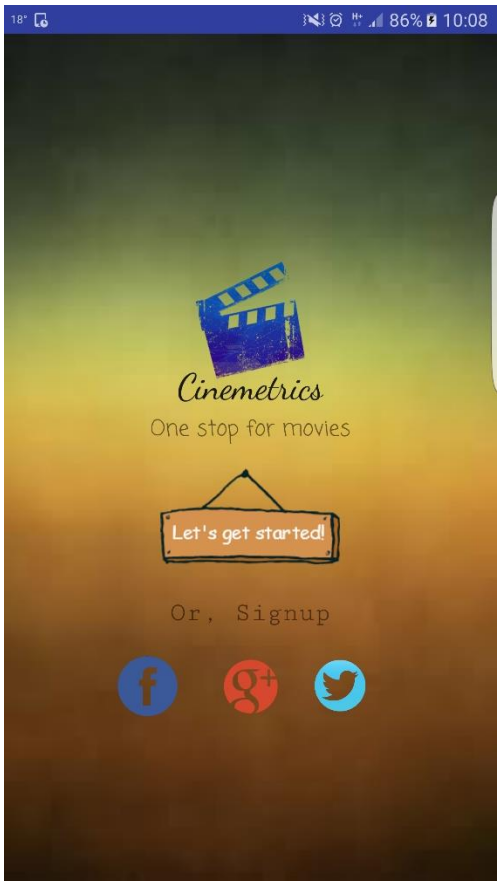
For Increment 2, all the UI are created and integrated. Usage of TMDB API in Search screen and Movie Description page. Statistical graph for the movies watched are done.

Below are the contributions of the team members:

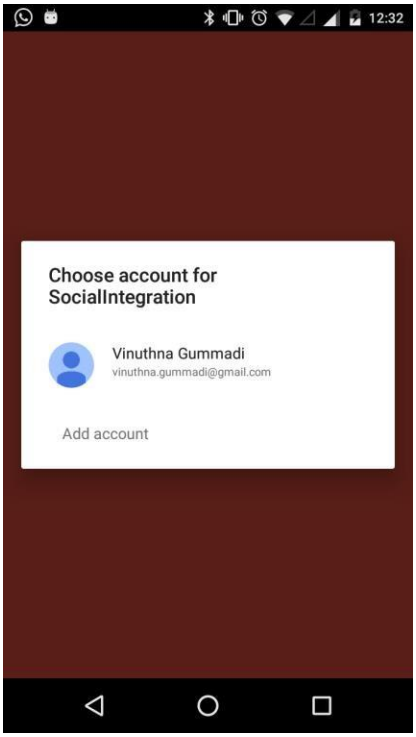
Lavanya:

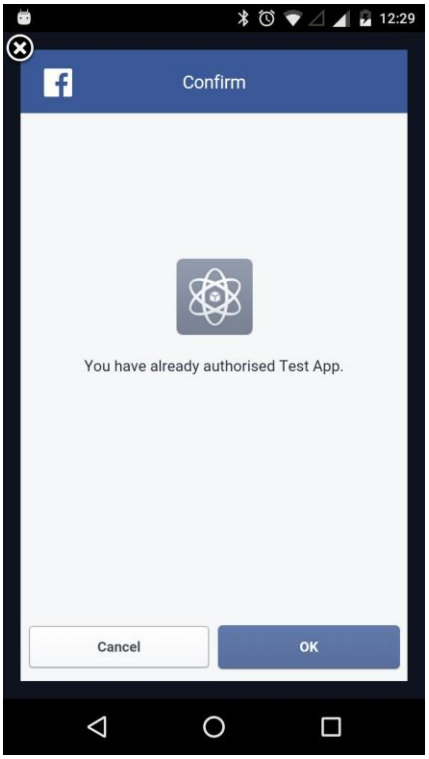
Cinemetrics Login Screen:

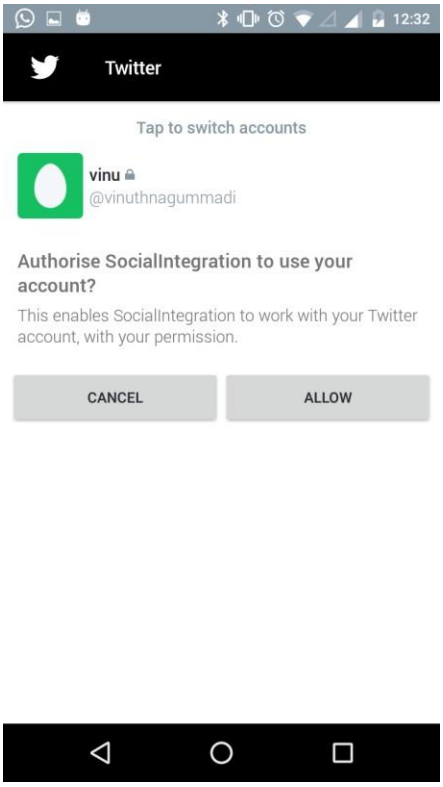
On click of Cinemetrics app, below screen appears.

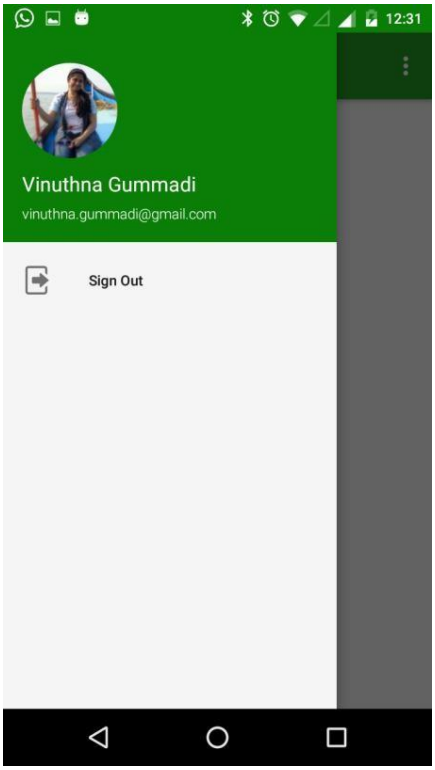


User can authenticate using google or facebook or twitter.


12:32
Choose account for SocialIntegration
Vinuthna Gummadi
vinuthna.gummadi@gmail.com
Add account


12:29
Confirm
You have already authorised Test App.
Cancel
OK

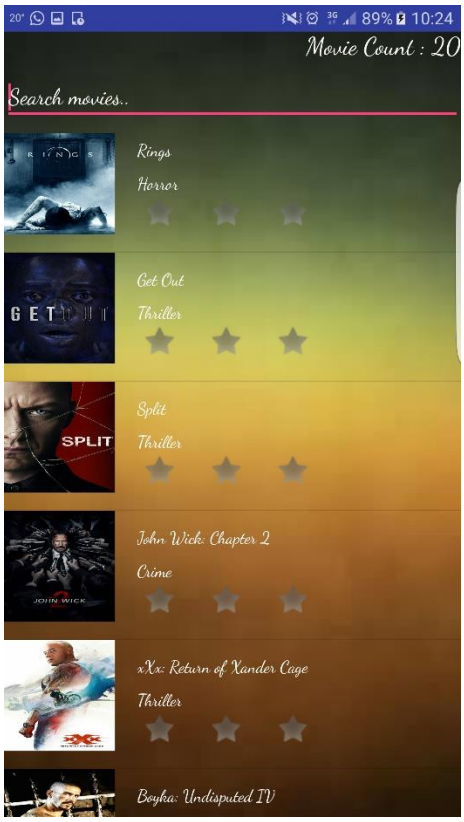

12:32
Twitter
Tap to switch accounts
vinu
@vinuthnagummadi
Authorise SocialIntegration to use your account?
This enables SocialIntegration to work with your Twitter account, with your permission.
CANCEL
ALLOW

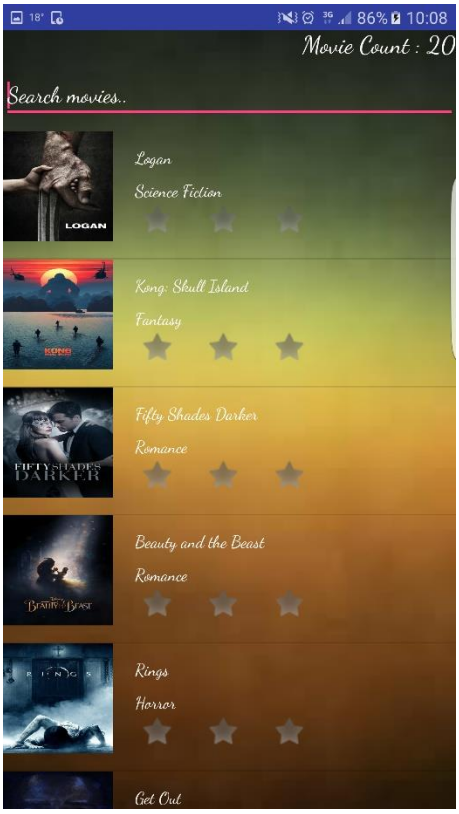

12:31
Vinuthna Gummadi
vinuthna.gummadi@gmail.com
Sign Out

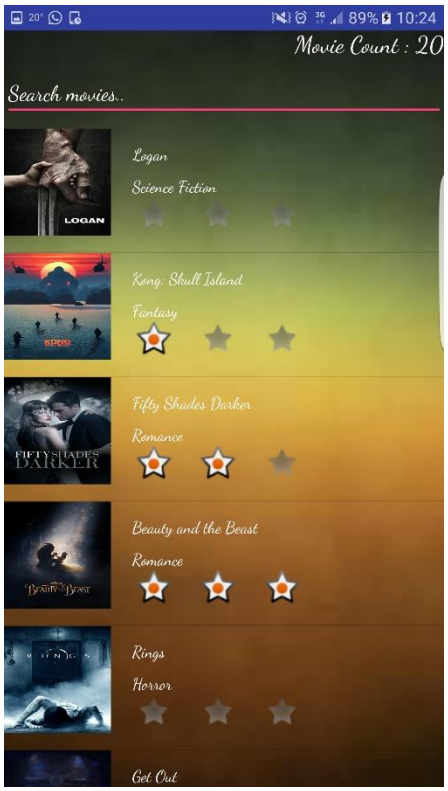
Vinuthna:

Cinemetrics Search Screen:

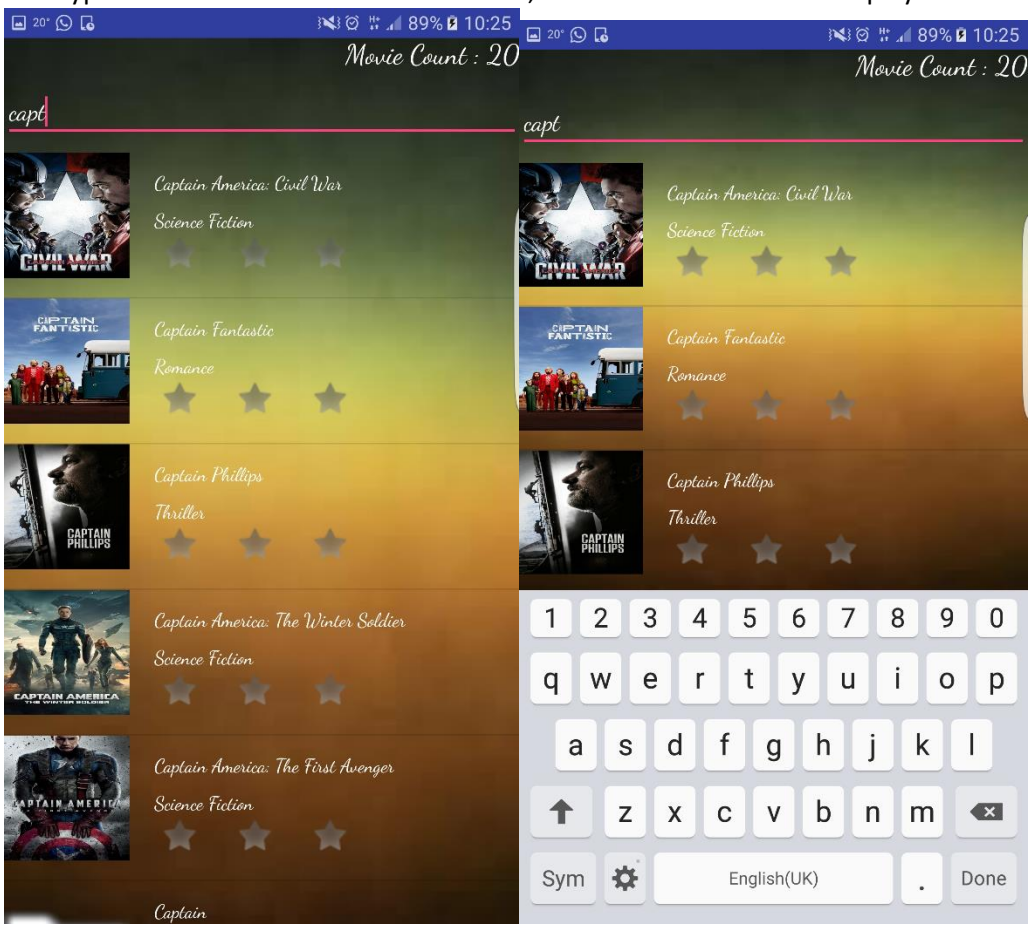
On successful login, user is navigated to the search screen. Search screen by defaults gives the top-rated movies in the current year.

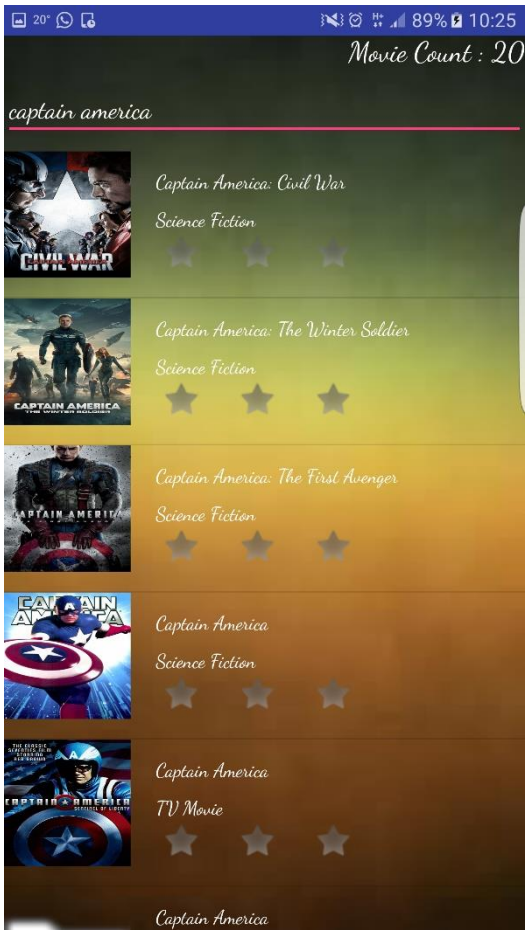





89% 10:24
Movie Count : 20
Search movies..
Logan
Science Fiction
Kong: Skull Island
Fantasy
Fifty Shades Darker
Romance
Beauty and the Beast
Romance
Rings
Horror
Get Out

On type of at least 4 letters of movie name, the search result will be displayed.

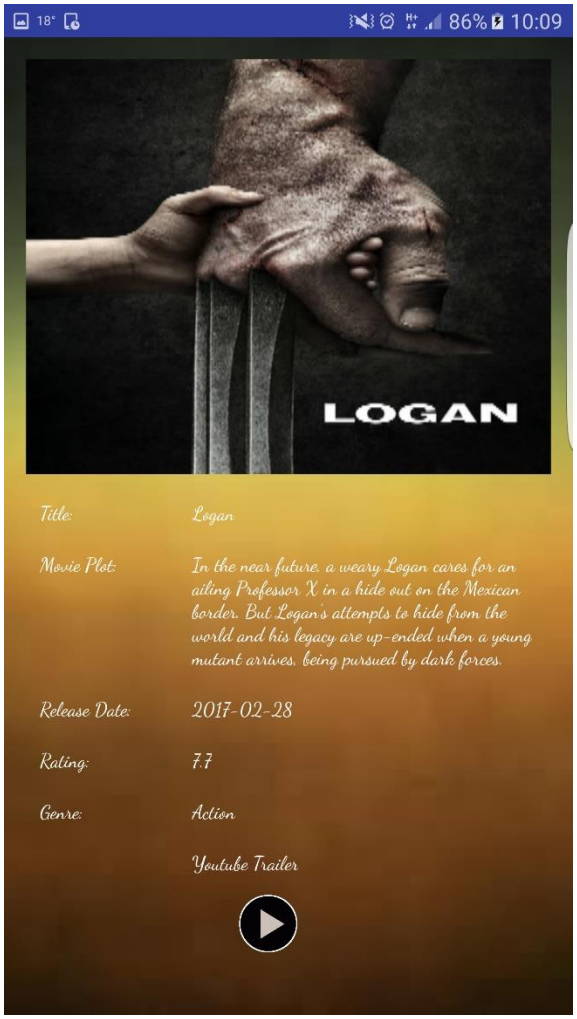



89% 10:25
Movie Count : 20
captain america
Captain America: Civil War
Science Fiction
Captain America: The Winter Soldier
Science Fiction
Captain America: The First Avenger
Science Fiction
Captain America
Science Fiction
Captain America
TV Movie
Captain America

By ESHA –

Development for increment 2:

1. Once the user selects a movie from the list of movies available in search page they will be redirected to movie details page where they will be able to have a look at movie details such as Movie poster, movie title, plot, genre, release date and a trailer.



All the above details would be fetched only on a selection of particular movie.

List of tasks implemented to develop this module of displaying movie details and playing a trailer:

1. Designed a page to display all the movie details listed above.
2. By using TMDB API I am fetching movie details like:
    - Movie poster
    - Complete movie title
    - Brief description of movie
    - Release date
    - User rating
    - Genre code

API call command : https://api.themoviedb.org/3/search/movie?query=

+moviename +&api_key= +Apikey

3. They movie genre code initially fetched would be in numerical format, that should be mapped with the other genre list maintained by TMDB which would give us an understandable format of genre. I am mapping and displaying the genre in an understandable format.

API call command to map genre: https://api.themoviedb.org/3/genre/movie/list?language=en-US&api_key= +Apikey

4. Once the movie details are fetched and displayed, as the TMDB doesn't give an access for trailer. I am using the movie name to fetch the YouTube video Id for the movie trailer.

API call command:

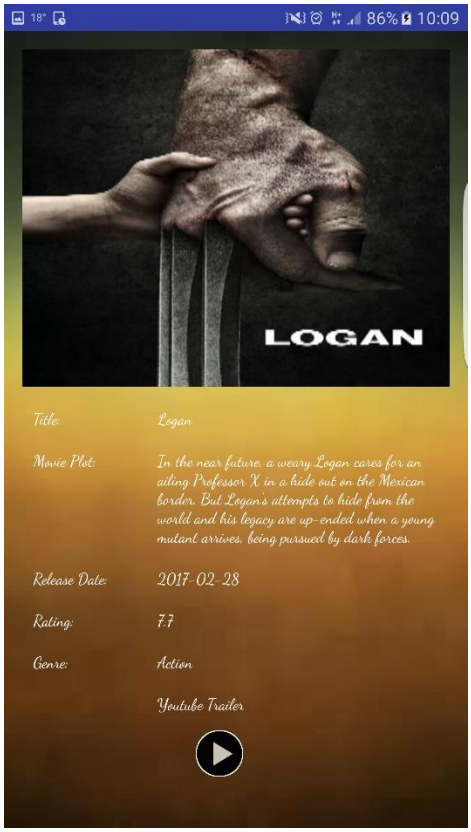
https://www.googleapis.com/youtube/v3/search?part=snippet&maxResults=10&q=

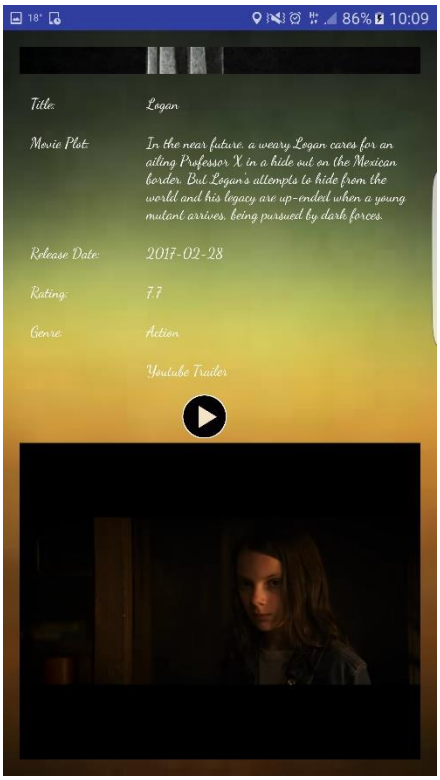
+ movieName + &type=video&key= +apikey

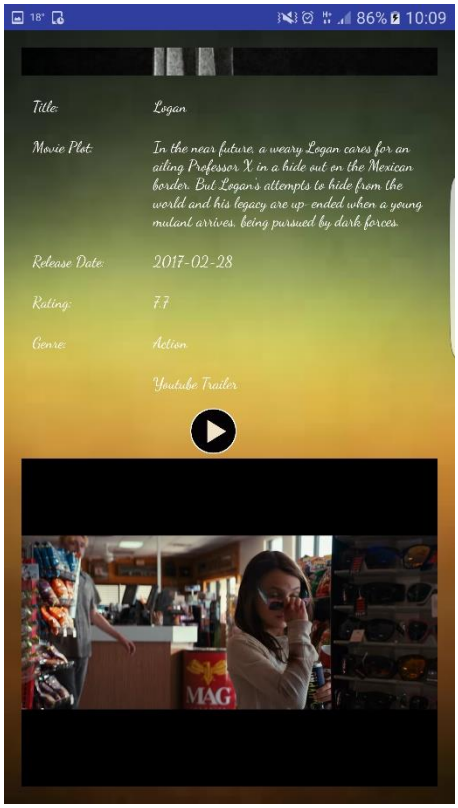
5. Later on once I have a YouTube video Id, I am using YouTubeBaseActivity functionality to play a YouTube trailer on the movie details page.

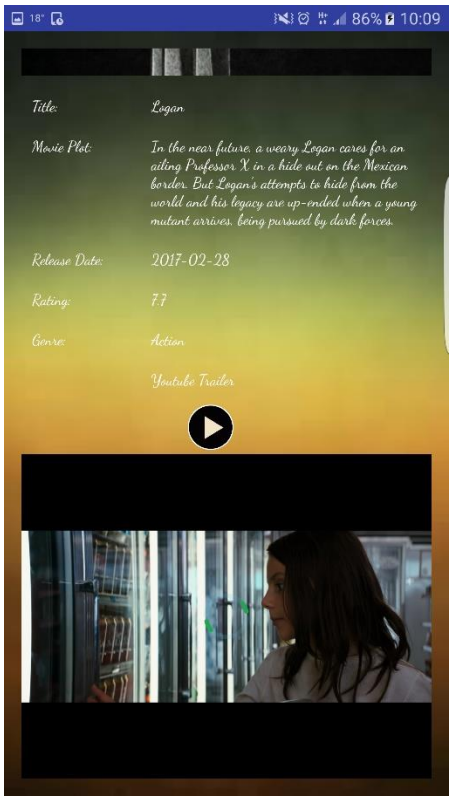
6. Manually tested the tasks that I have accomplished in this increment. Code is fetching all the required details when a movie name is supplied.

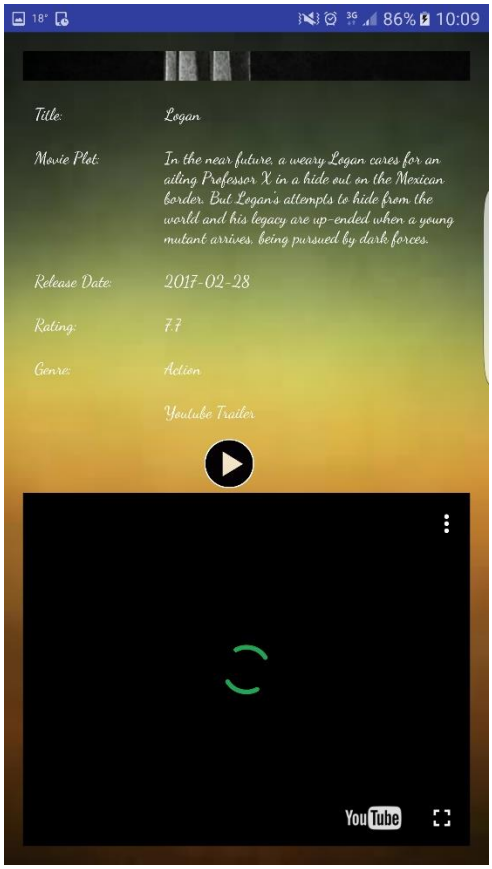
Below are few screenshots for the movie details page:

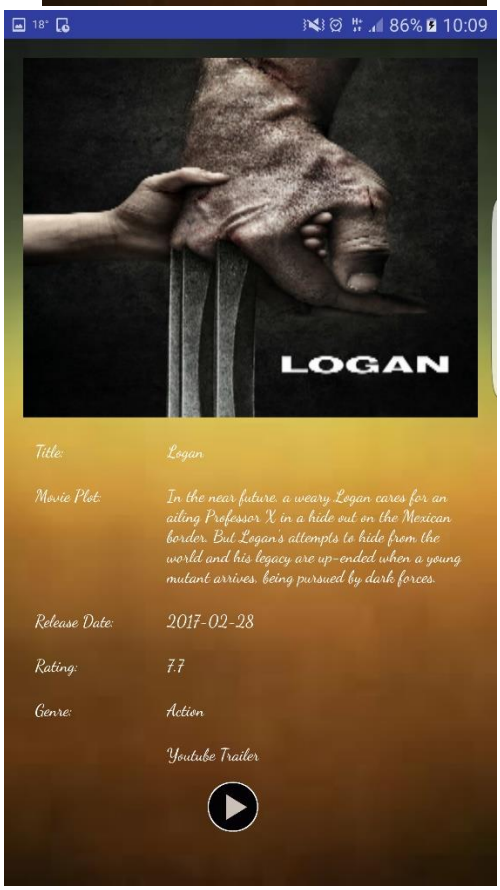


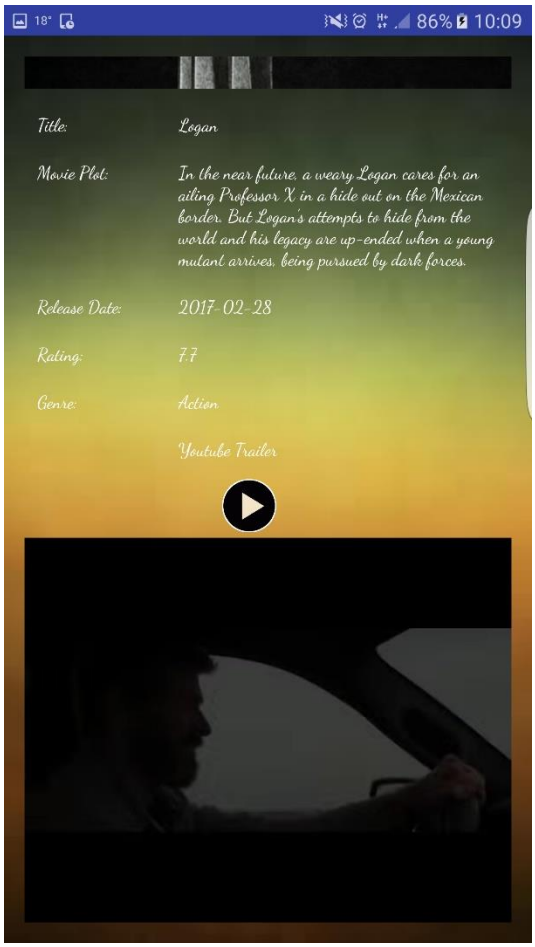



18°
86% 10:09
Title:
Logan
Movie Plot:
In the near future, a weary Logan cares for an ailing Professor X in a hide out on the Mexican border. But Logan's attempts to hide from the world and his legacy are up-ended when a young mutant arrives, being pursued by dark forces.
Release Date:
2017-02-28
Rating:
7.7
Genre:
Action
Youtube Trailer
MAG

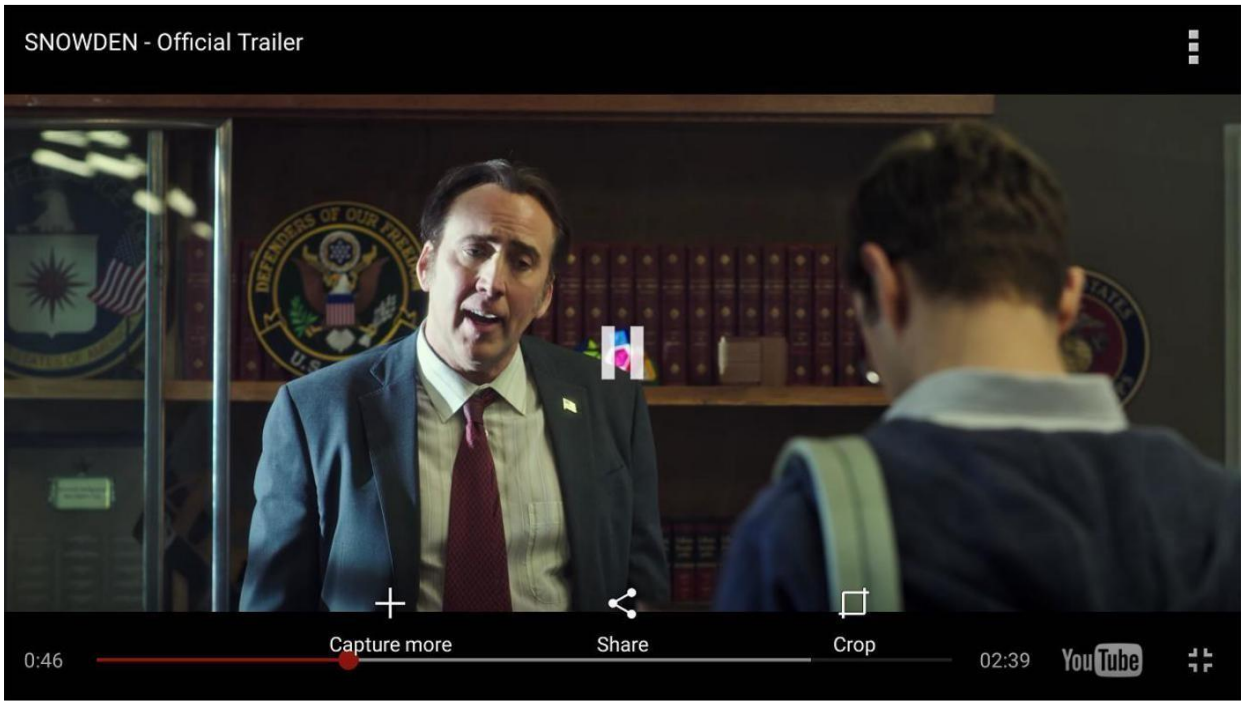

18°
86% 10:09
Title:
Logan
Movie Plot:
In the near future, a weary Logan cares for an ailing Professor X in a hide out on the Mexican border. But Logan's attempts to hide from the world and his legacy are up-ended when a young mutant arrives, being pursued by dark forces.
Release Date:
2017-02-28
Rating:
7.7
Genre:
Action
Youtube Trailer


18°
86% 10:09
Title:
Logan
Movie Plot:
In the near future, a weary Logan cares for an ailing Professor X in a hide out on the Mexican border. But Logan's attempts to hide from the world and his legacy are up-ended when a young mutant arrives, being pursued by dark forces.
Release Date:
2017-02-28
Rating:
7.7
Genre:
Action
Youtube Trailer
YouTube


18°
86% 10:09
LOGAN
Title:
Logan
Movie Plot:
In the near future, a weary Logan cares for an ailing Professor X in a hide out on the Mexican border. But Logan's attempts to hide from the world and his legacy are up-ended when a young mutant arrives, being pursued by dark forces.
Release Date:
2017-02-28
Rating:
7.7
Genre:
Action
Youtube Trailer


86% 10:09
Title:
Logan
Movie Plot:
In the near future, a weary Logan cares for an ailing Professor X in a hide out on the Mexican border. But Logan's attempts to hide from the world and his legacy are up-ended when a young mulant arrives, being pursued by dark forces.
Release Date:
2017-02-28
Rating:
7.7
Genre:
Action
Youtube Trailer

I am playing the trailer in landspace mode in the following images:



Gayathri:

Development for Increment 2 :

This page developed displays the statistical data of the user for this app.

Once the user clicks on the watched list, they would have a option to display the their statistical data depending on the genre, language, director or hero that they have watched. As a team we decided to display this data in the form of a pie chart.

This page would also display a share option where in the user can share their data, that is the respective pie chart figure that they desire.

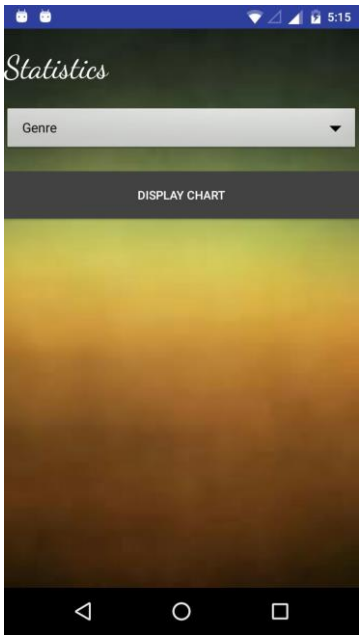
List of tasks implemented to develop this module of a statistical data display through options such as genre, language, director or hero.

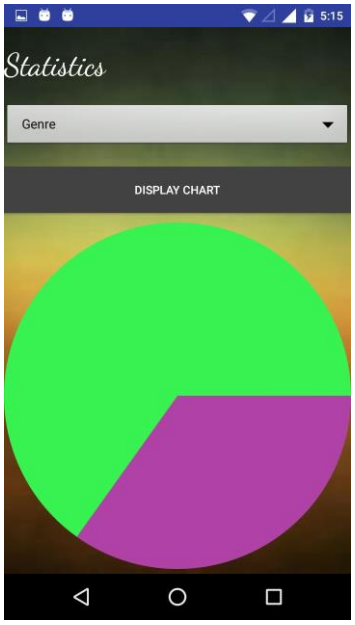
2. Designed a page that would display the data of the kind of films or trailers watched by the user in the form of a pie chart.
3. From the MainActivity.java class, I have fetched the related values in order to display that in the form of a pie chart.
4. In order to display charts, we can use AchartEngine library available in Android or we may also use Google charts API. I have used the library for our application.
5. I have also implemented animation to the pie charts. To accomplish this task, I have used nineoldandroids maven library and integrated that through the manifest file. I have made the necessary changes for a good UI.
6. The user on clicking on a specific slice of the pie chart, its reference will be displayed allowing it to be more user friendly.
7. I have used “android.graphics” to complete all the dependencies required.
8. The logic to calculate the data needed and to display that diagrammatically in a animated form has been implemented.

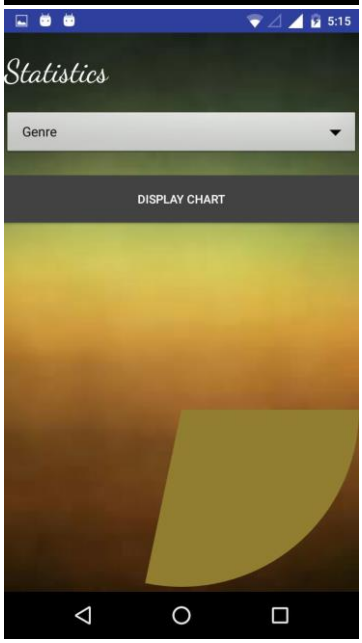
All the appropriate details have been fetched and displayed in order to view a complete statistical analysis.

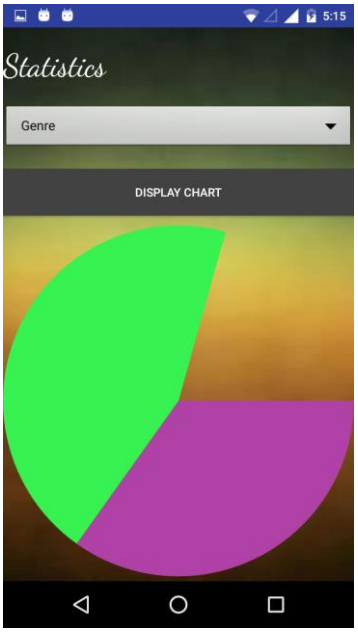
Below are some of the screenshots as we run this page.

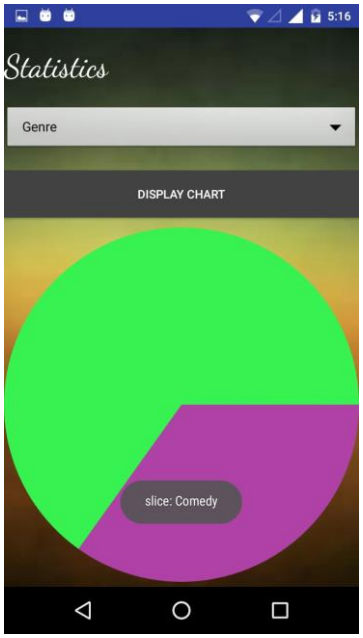
On click of every option in drop down list

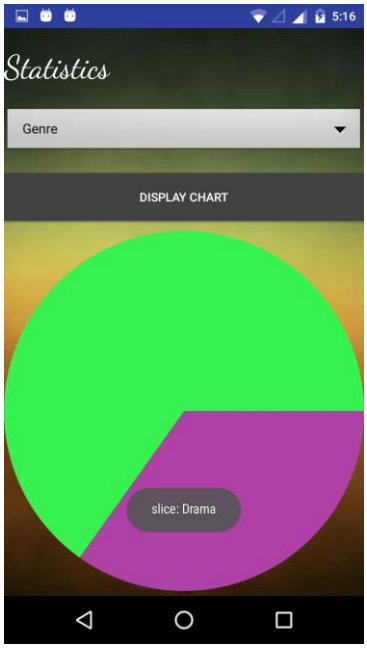

5:15
Statistics
Genre
DISPLAY CHART

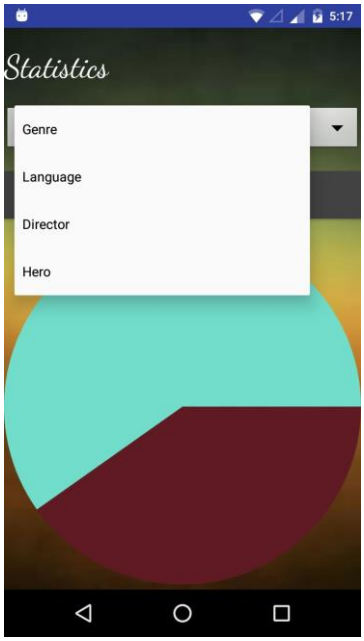

5:15
Statistics
Genre
DISPLAY CHART

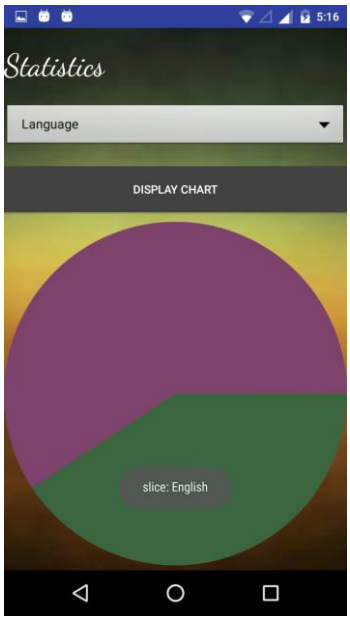

5:15
Statistics
Genre
DISPLAY CHART

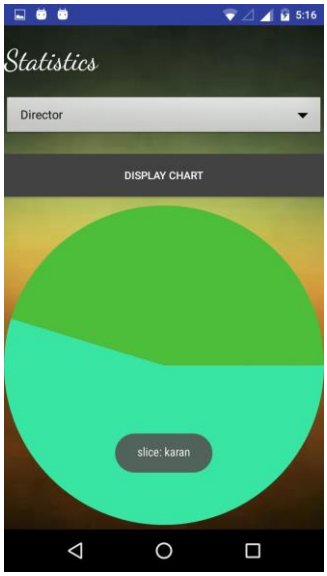

5:15
Statistics
Genre
DISPLAY CHART

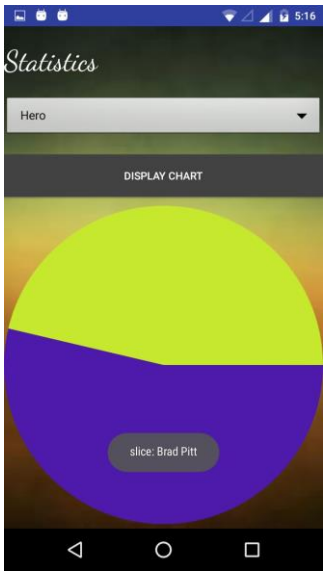

5:16
Statistics
Genre
DISPLAY CHART
slice: Comedy


5:16
Statistics
Genre
DISPLAY CHART
slice: Drama


5:17
Statistics
Genre
Language
Director
Hero


5:16
Statistics
Language
DISPLAY CHART
slice: English

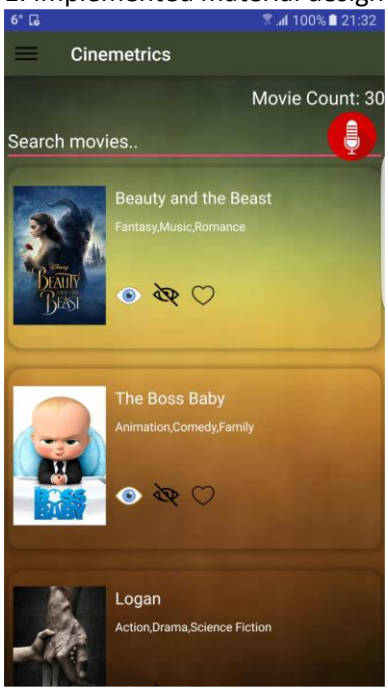

5:16
Statistics
Director
DISPLAY CHART
slice: karan


5:16
Statistics
Hero
DISPLAY CHART
slice: Brad Pitt

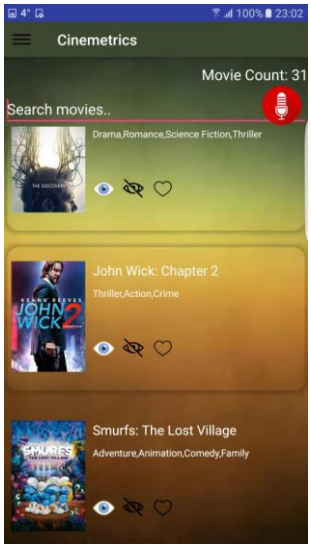
4. THIRD INCREMENT REPORT IMPLEMENTATION:

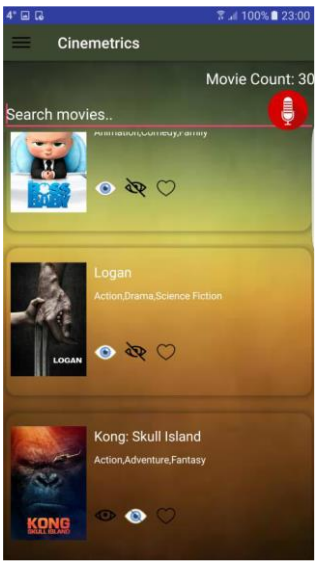
Work done by Vinuthna:

1. Implemented material design for Search Screen

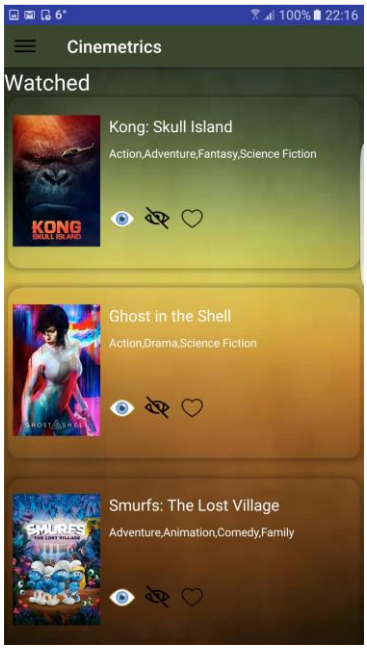


Implemented toggle buttons for watched, to watch and favorite movies and implemented CRUD operations into MONGO DB.

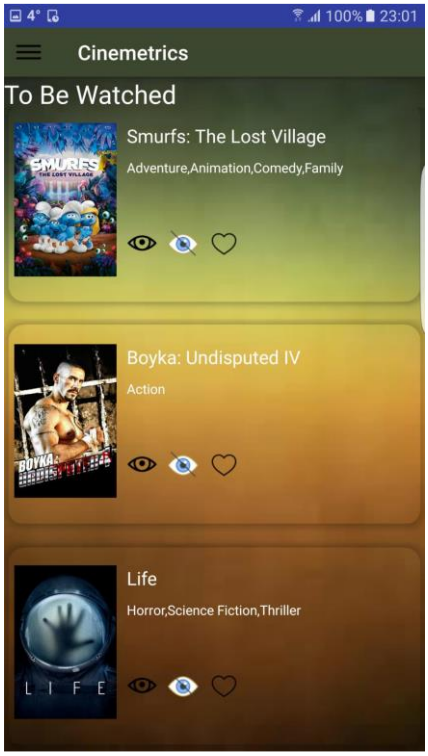




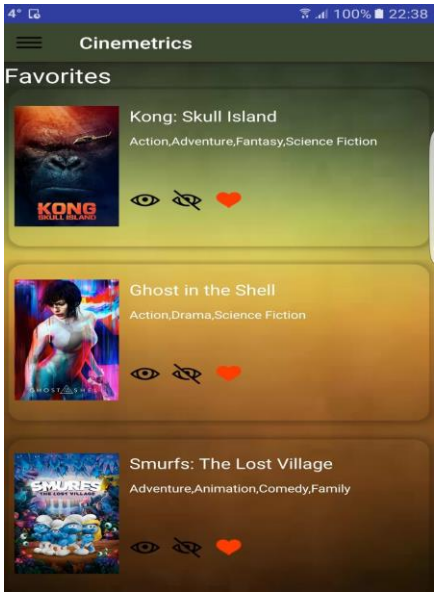
Implemented Watched List in the Menu bar on click of Watched in Menu



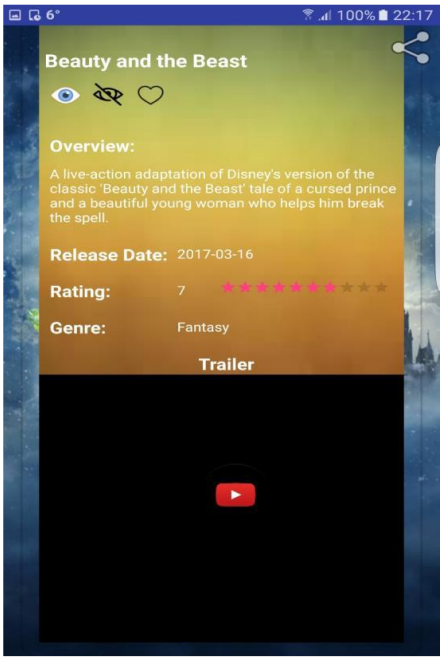
Implemented To Watch List in the Menu bar on click of To Watch in Menu



Worked on favorites tab.

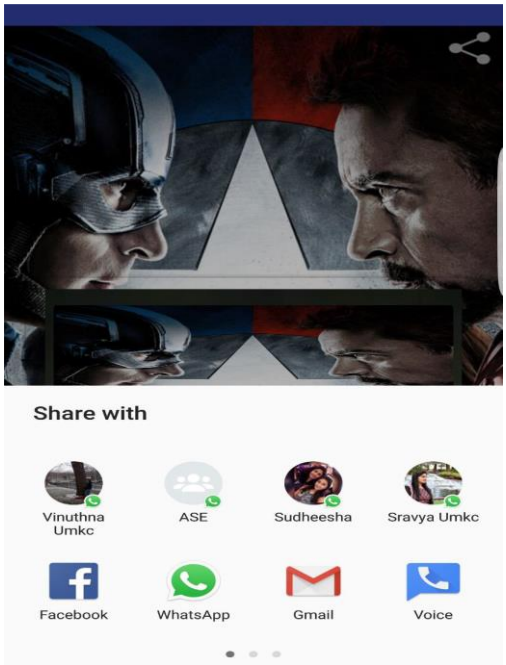


Esha:
Development for Increment 2:
1. Implemented material design of the movie details page.

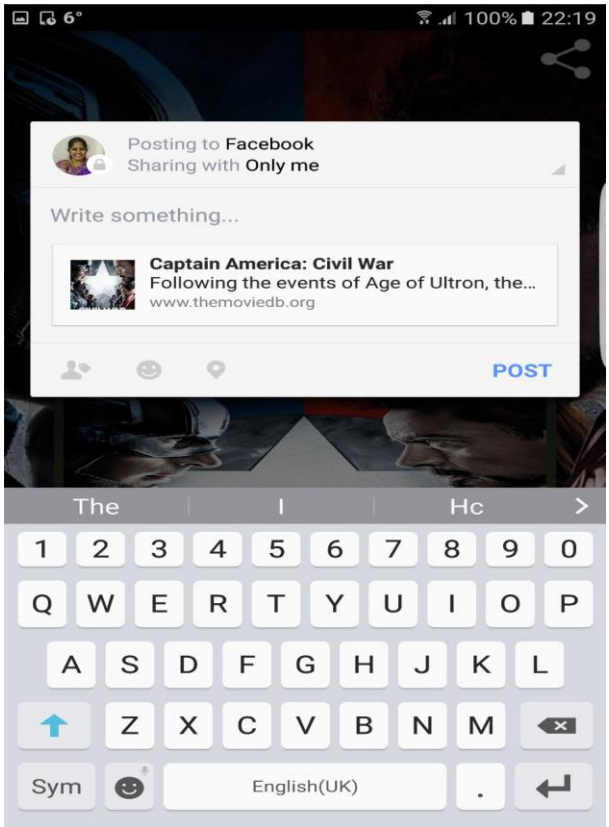


2. Implemented toggle buttons in movie details page for adding the movie to Watched, to be watched and favorite list.

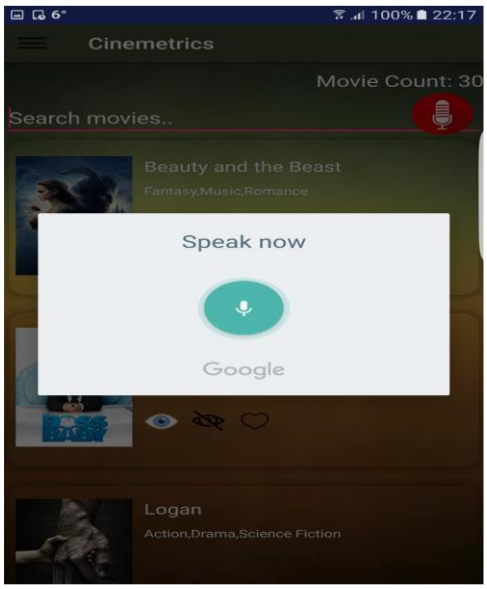
3. Implemented share option in movie details page to share the tmdb movie details link.

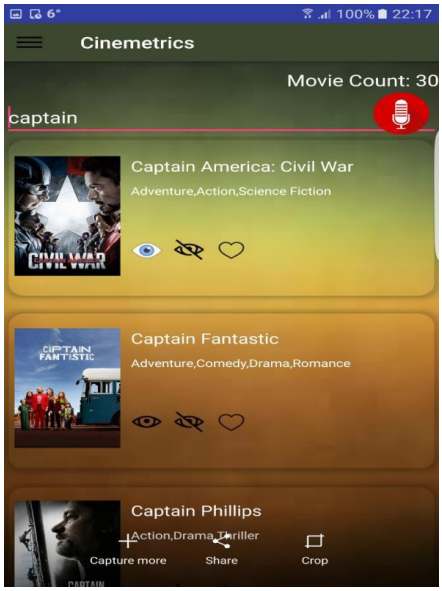


Sharing on Facebook:

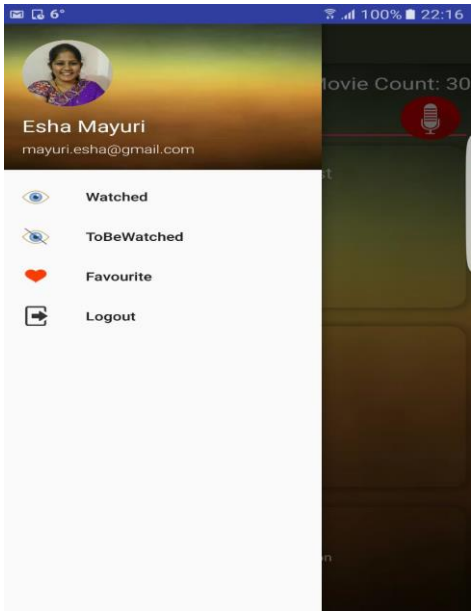


4. Implemented Text to speech in movie search page.





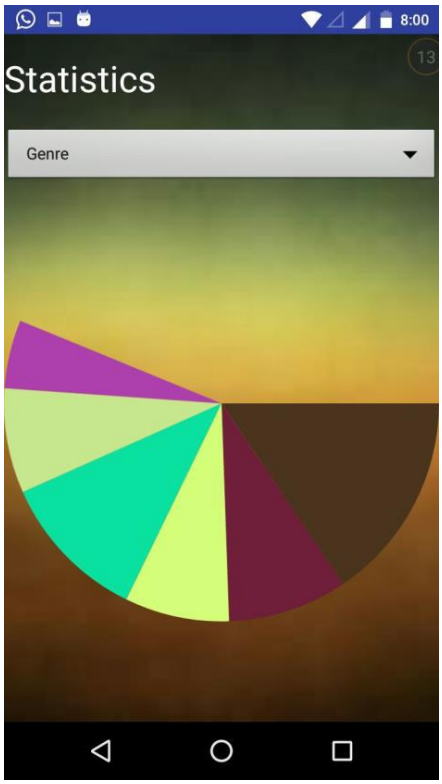
Designed navigation menu in search page.

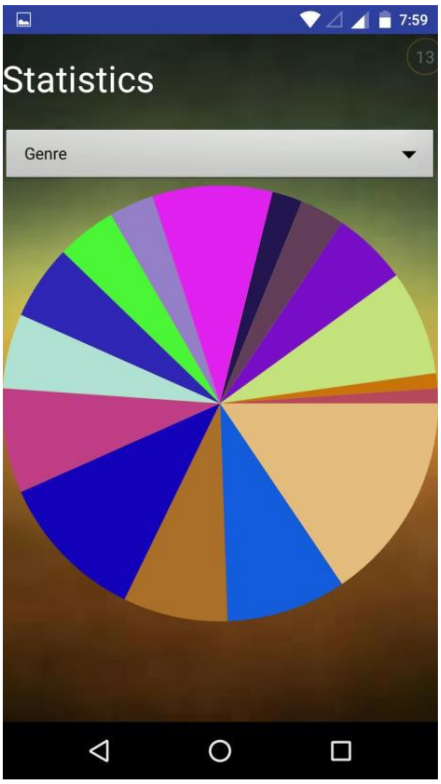


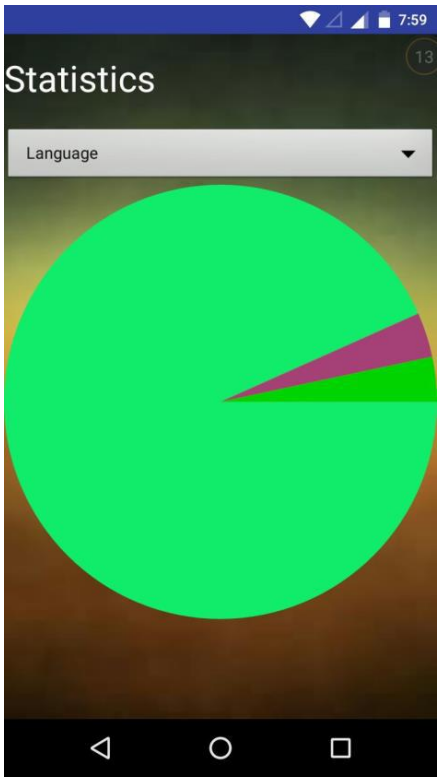
Gayathri – Increment 3

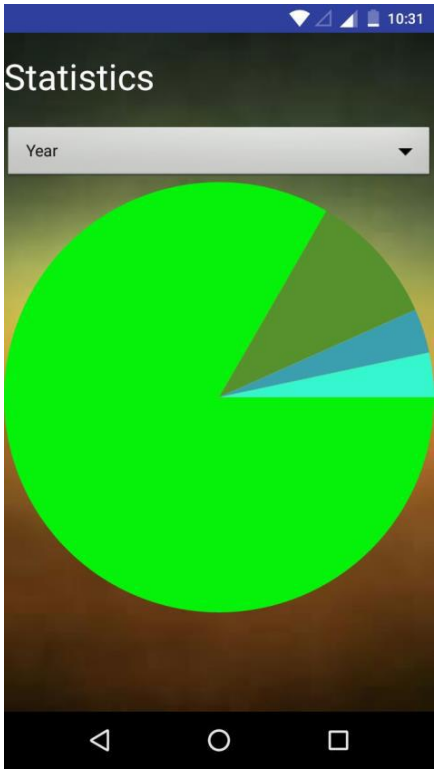
Tables have been created in database (mongodb) depending on the watched list by the user.
Initially a connection with mongodb is established and data is fetched from the database.
Logic has been applied to display the app usage in the form of a pie chart.
The same is displayed on clicking on a specific slice of the pie chart from the algorithm.
Pie chart for genre is displayed as default as soon as the user opens the statistics page.
Nineoldandroids has been used for the animation purpose.
Unit testing has been done for the created developers database tables.

Below are the screenshots to show animated pie charts displayed by the data fetched from mongodb and calculated for genre, language and year.

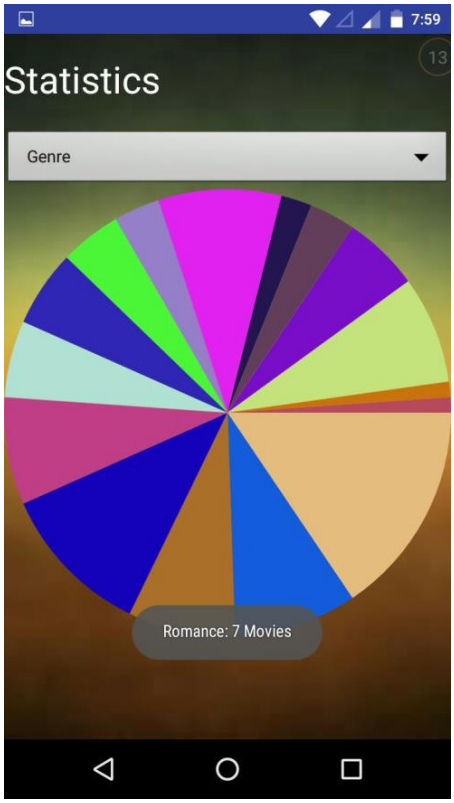








On click of the slice, its particular details are displayed.



Lavanya –
For this increment, fixed Twitter and Google login issues and participated in testing.

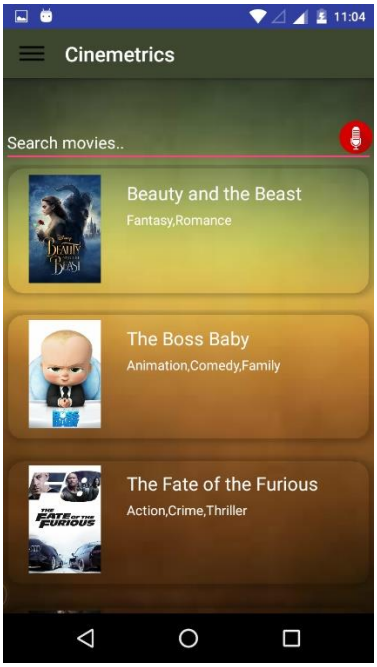
GIT HUB link: https://github.com/Cinemetrics/Cinemetrics-Project

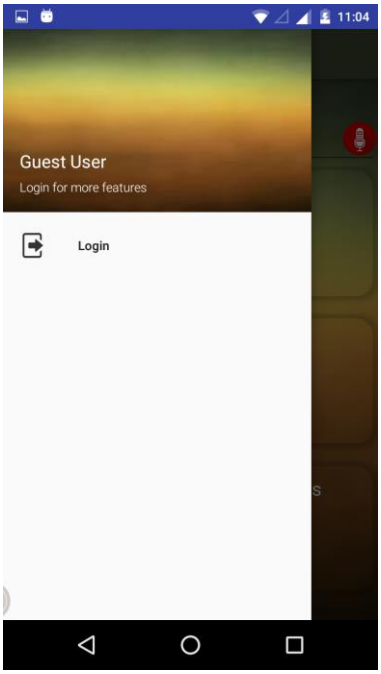
5. FOURTH INCREMENT REPORT IMPLEMENTATION:

Guest User:

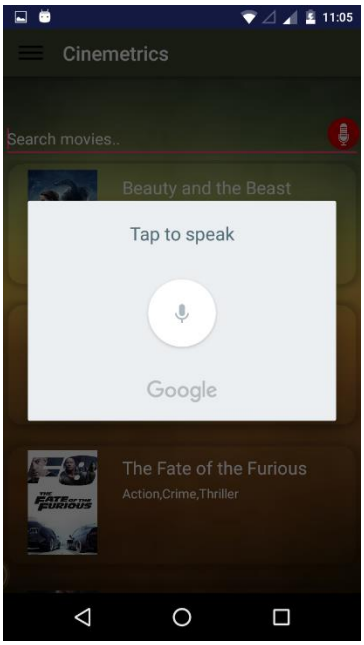
Landing Page:

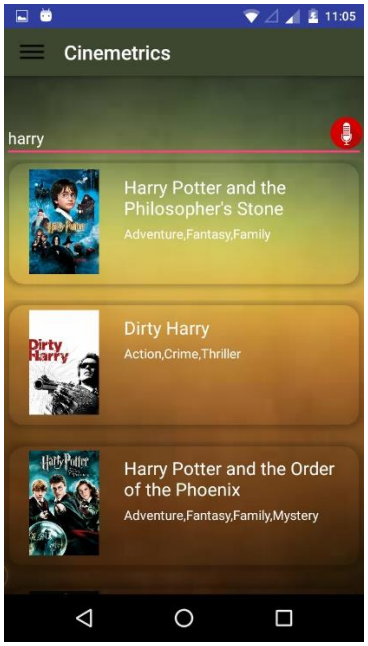
Guest User can check the application by clicking on Let's get started.
Search screen with latest popular English movies are displayed.



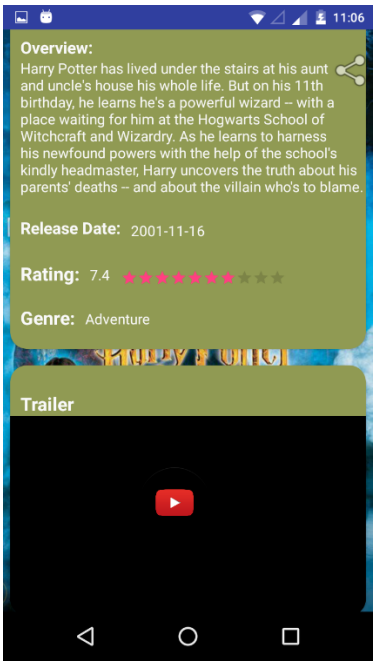


User can type to search for movies or can use the mic. This lists down the movies with the searched content.

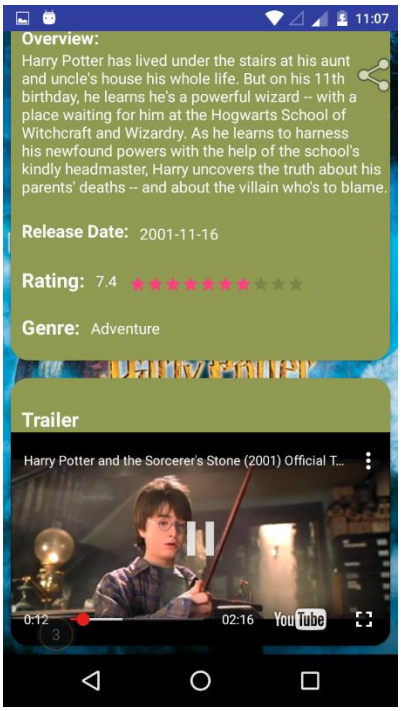




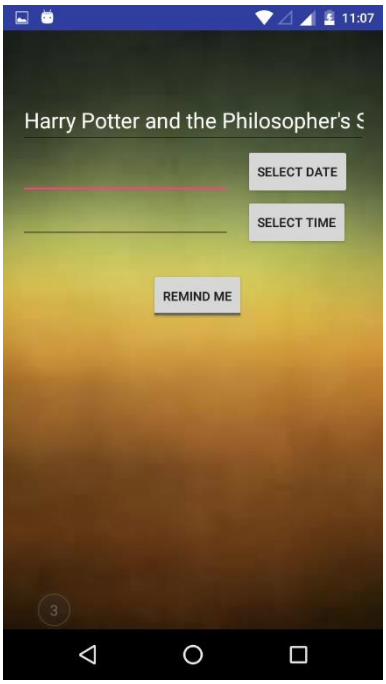
On click of movie, it redirects to movie description page

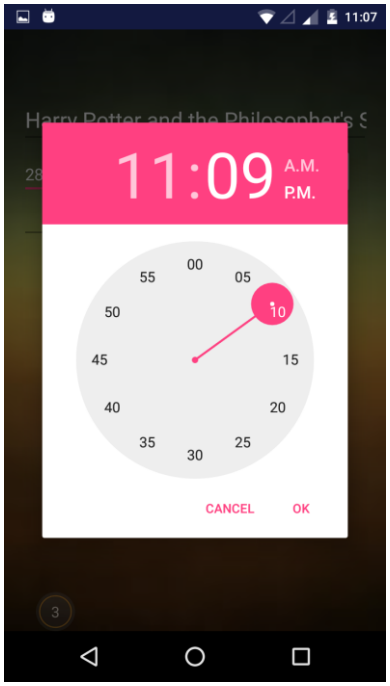


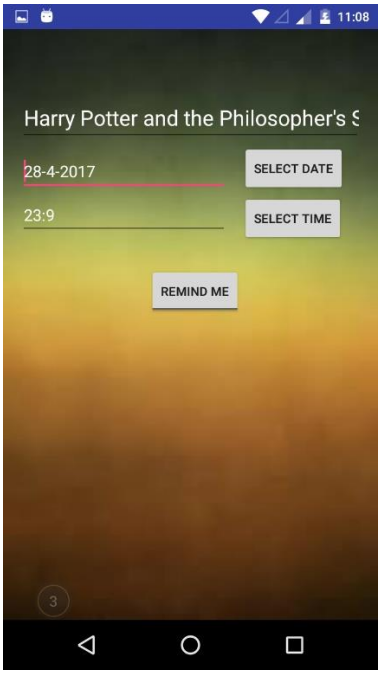
User can also play the trailer

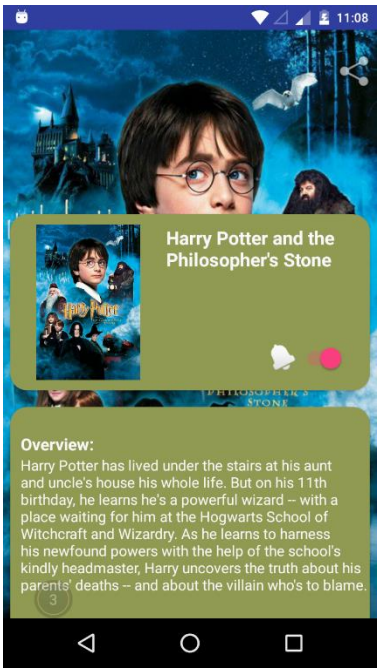


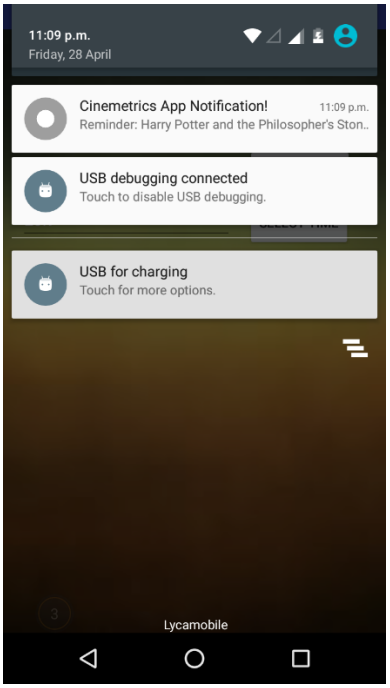
User has an option to set a remainder for the movie.
On click of reminder,



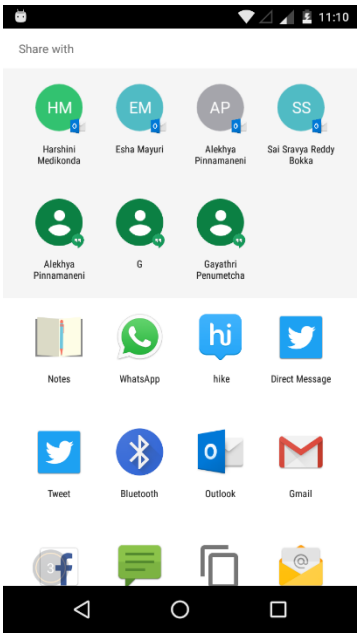


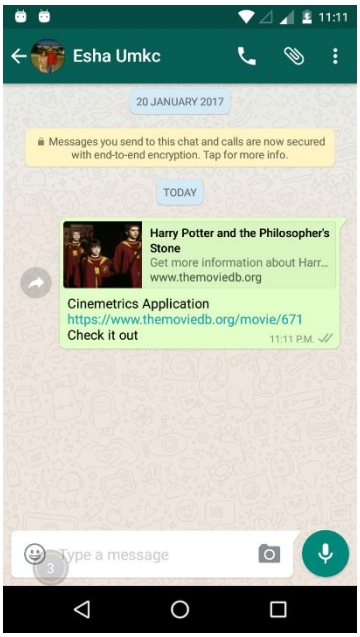

11:08
Harry Potter and the Philosopher's S
28-4-2017
SELECT DATE
23:9
SELECT TIME
REMIND ME


11:08
Harry Potter and the Philosopher's Stone
Overview:
Harry Potter has lived under the stairs at his aunt and uncle's house his whole life. But on his 11th birthday, he learns he's a powerful wizard -- with a place waiting for him at the Hogwarts School of Witchcraft and Wizardry. As he learns to harness his newfound powers with the help of the school's kindly headmaster, Harry uncovers the truth about his parents' deaths -- and about the villain who's to blame.


11:09 p.m.
Friday, 28 April
Cinemetrics App Notification!
11:09 p.m.
Reminder: Harry Potter and the Philosopher's Ston..
USB debugging connected
Touch to disable USB debugging.
USB for charging
Touch for more options.
Lycamobile

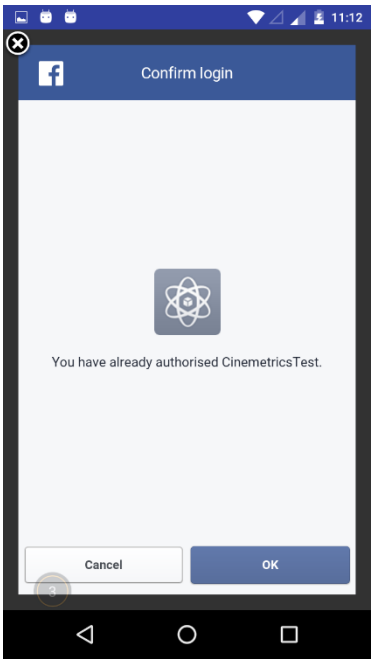
User can share the movie on social media,



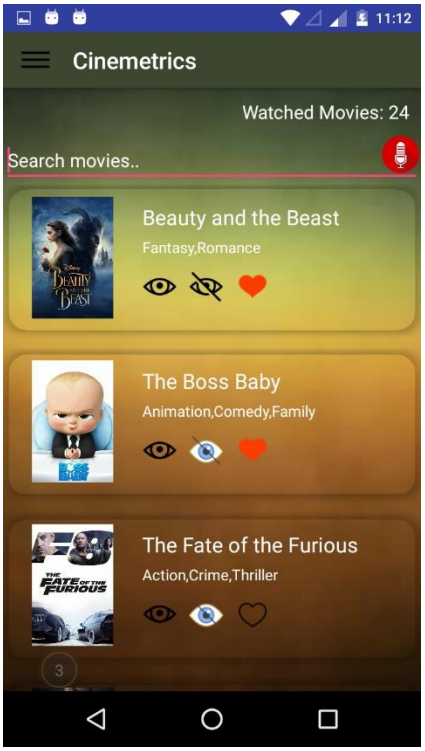


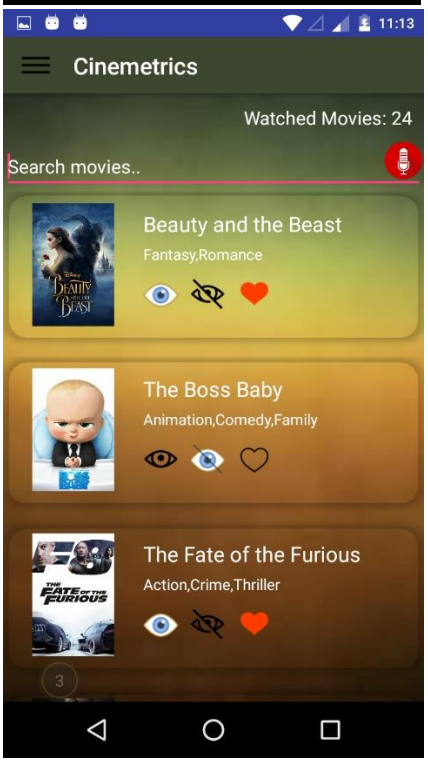
Registered user:

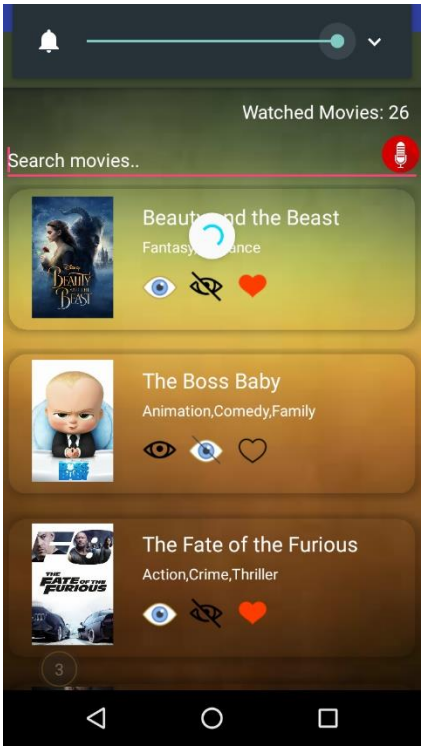
On click of Facebook,

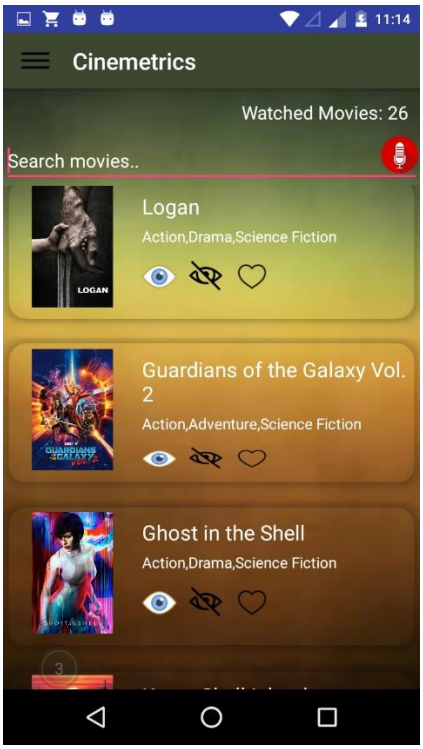


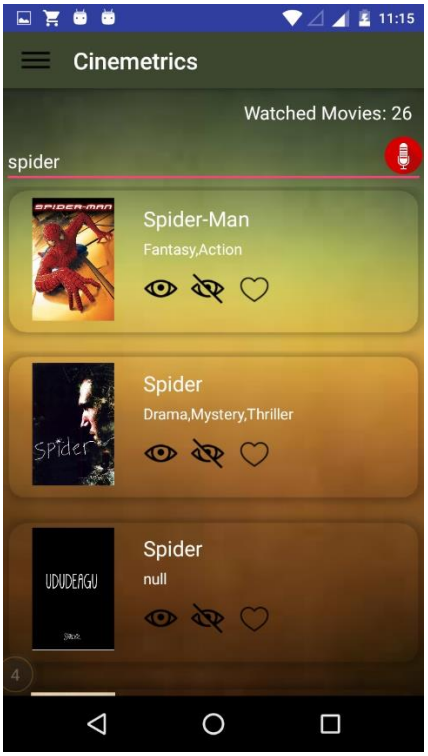
Search screen is displayed with the latest popular movies. User can select if he watched the movie, if he wants to watch a movie or favourite movie using toggle buttons. User has the watched movie count. User can search for any other movie using search field or mic button.


11:12
Cinemetrics
Watched Movies: 24
Search movies..
Beauty and the Beast
Fantasy,Romance
The Boss Baby
Animation,Comedy,Family
The Fate of the Furious
Action,Crime,Thriller
3

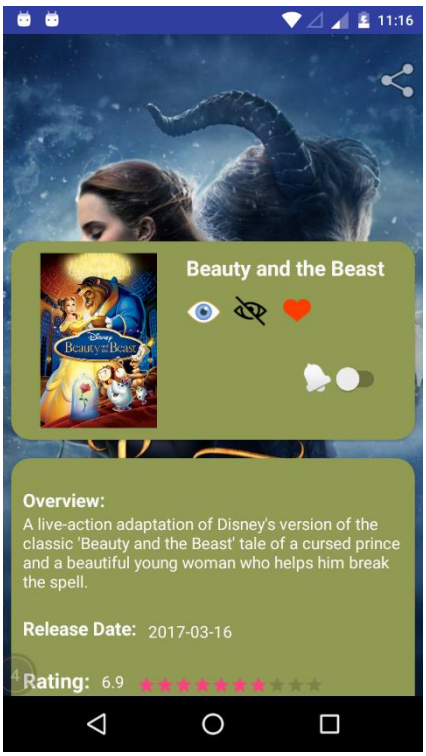

11:13
Cinemetrics
Watched Movies: 24
Search movies..
Beauty and the Beast
Fantasy,Romance
The Boss Baby
Animation,Comedy,Family
The Fate of the Furious
Action,Crime,Thriller
3

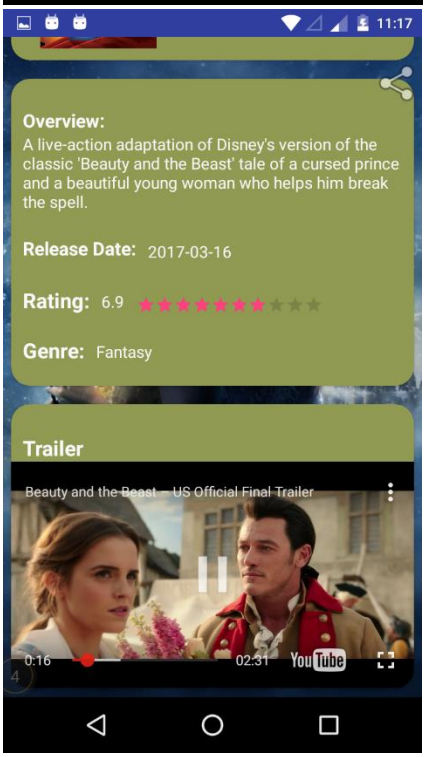

Watched Movies: 26
Search movies..
Beauty and the Beast
The Boss Baby
Animation,Comedy,Family
The Fate of the Furious
Action,Crime,Thriller


11:14
Cinemetrics
Watched Movies: 26
Search movies..
Logan
Action,Drama,Science Fiction
Guardians of the Galaxy Vol. 2
Action,Adventure,Science Fiction
Ghost in the Shell
Action,Drama,Science Fiction

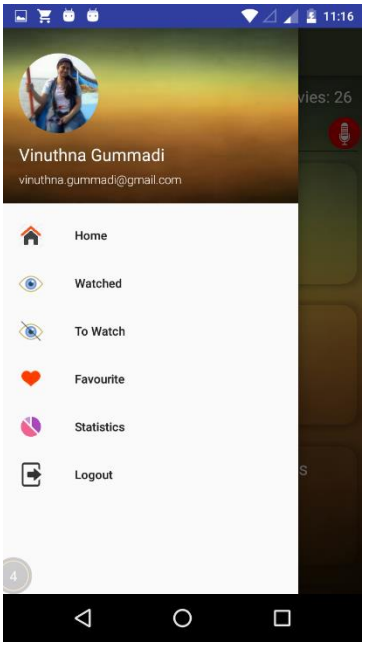

11:15
Cinemetrics
Watched Movies: 26
spider
Spider-Man
Fantasy,Action
Spider
Drama,Mystery,Thriller
Spider
null

On click of movie, user is redirected to movie description page. User can set remainder for the movie using the remainder button.

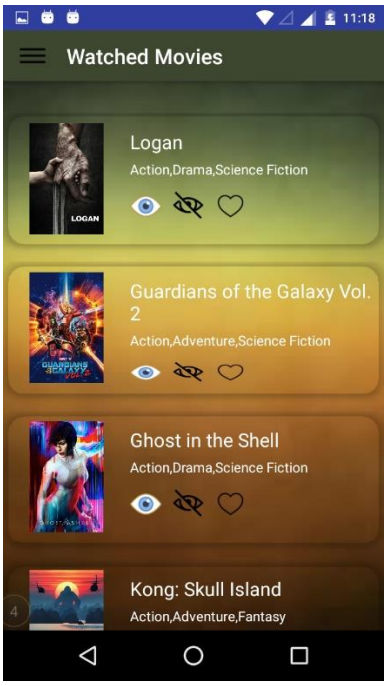




User can view watched list, to watch list, favourite list of movies which were selected on the search screen.

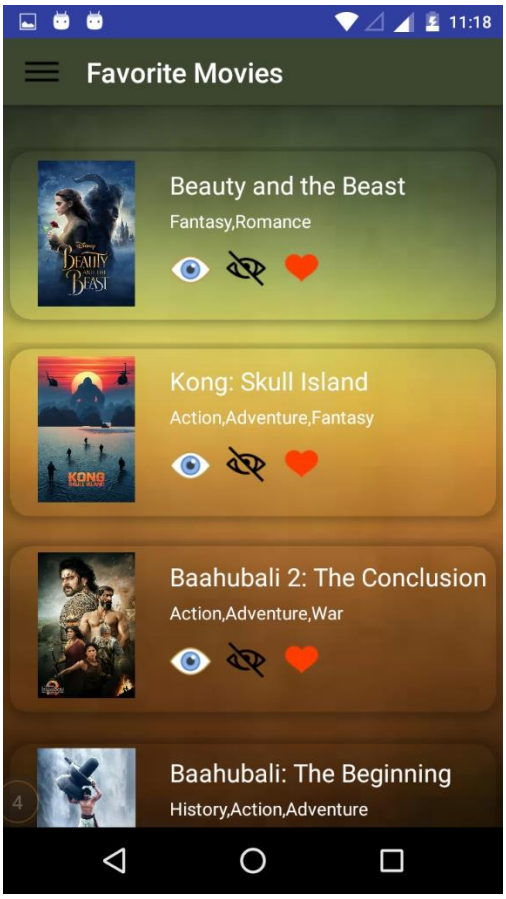

11:16
Vinuthna Gummadi
vinuthna.gummadi@gmail.com
Home
Watched
To Watch
Favourite
Statistics
Logout

On click of Watched

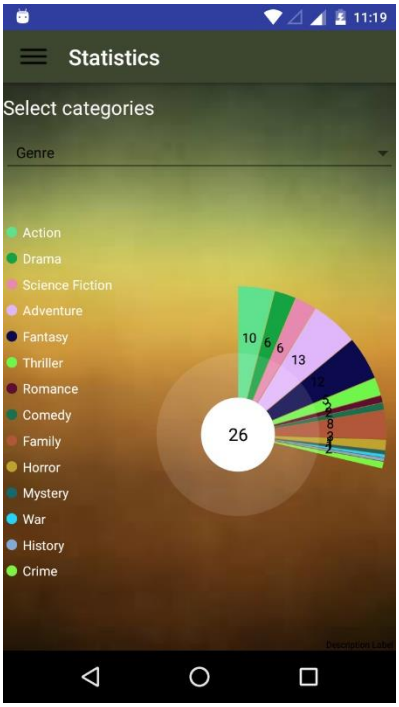


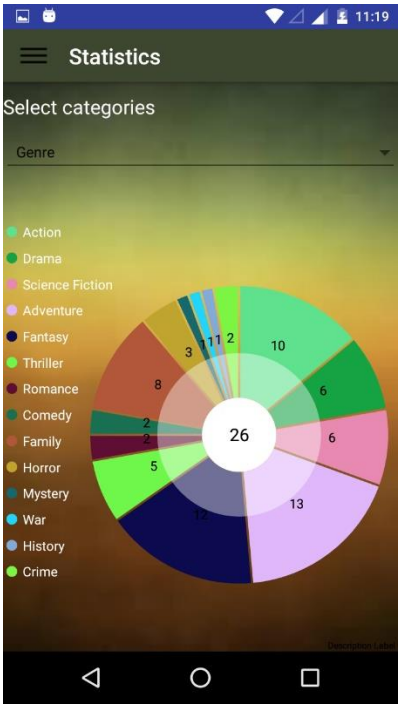
On click of To Watch

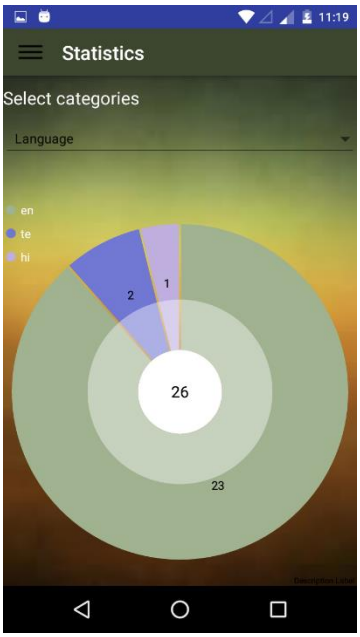
On click of Favourites

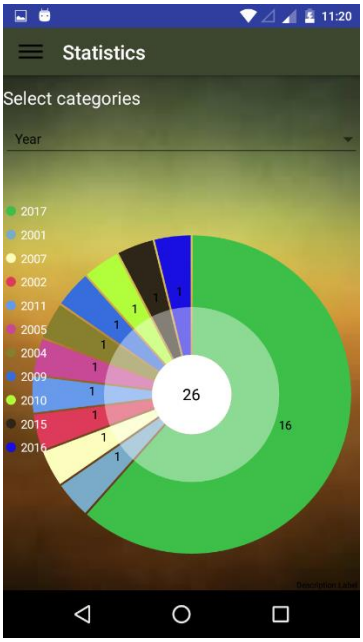


User can view the statistics of the movies he watched. On click of Statistics side menu or the movie count on search screen, it redirects to statistics screen









GIT HUB

Source code: https://github.com/Cinemetrics/Cinemetrics-Project/tree/master/Source/Cinemetrics

WIKI page: https://github.com/Cinemetrics/Cinemetrics-Project/wiki/First-Increment-Report

Project Plan: https://github.com/Cinemetrics/Cinemetrics-Project/wiki/Cinemetrics-Project-Plan

6. TESTING:

https://github.com/Cinemetrics/Cinemetrics-Project/issues?q=is%3Aissue+is%3Aclosed

7. PRESENTATION SLIDE:

https://docs.google.com/presentation/d/1mwOqksUtQR_W-vKd9WTf0pFTwC8kQEHbpgye9epBETI/edit?usp=sharing

8. GIT HUB URL:

https://github.com/Cinemetrics/Cinemetrics-Project/

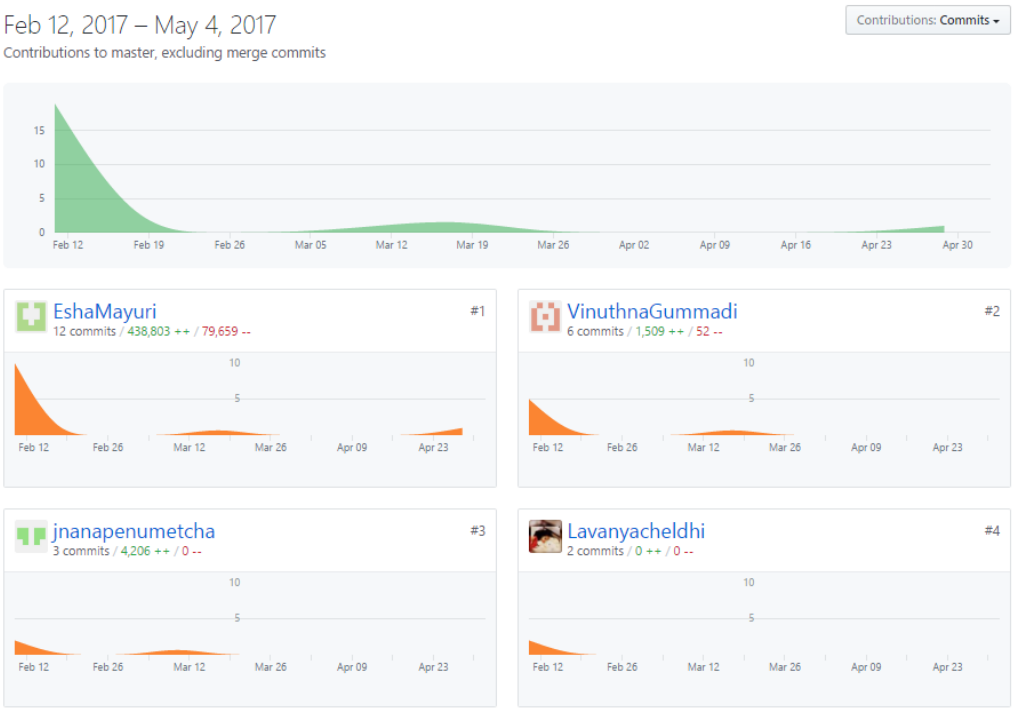
9. YOUTUBE URL:

https://www.youtube.com/watch?v=G7SVsvqj3kM

10. APK INSTALLATION:

https://github.com/Cinemetrics/Cinemetrics-Project/tree/master/apk

11. Project management report



12. Final project evaluation

All the features and milestones are achieved on time. We are satisfied with the project work and design process. Agile process was very helpful in creating the app in regular basics along with our course work. Real management technique in our project is helping each other and completing the tasks. For the future score, we would like to change the architecture by introducing webservice on node js for all rest services.

13. Bibliography

https://www.themoviedb.org/documentation/api

https://console.firebase.google.com/

https://github.com/PhilJay/MPAndroidChart

https://developers.google.com/youtube/

https://mlab.com/