My Institution   **Courses**   Community   👤 Emma Kjergaard Rolsted   ary ⏻

F19 - ITSMAP-01 Smartphone applikationer [24007PU042]   🗐   Assignments   Assignment 2

Assignment 2

Assignment 2 - Movies (continued)

The assignment covers the topics learned in the previous lessons on UI, storage/persistence, services, asynchronous processing and networking through HTTPS – all in alignment with the learning goals of the course. You will be able to use a lot of the knowledge gained from the lab exercises you did in these modules as well.
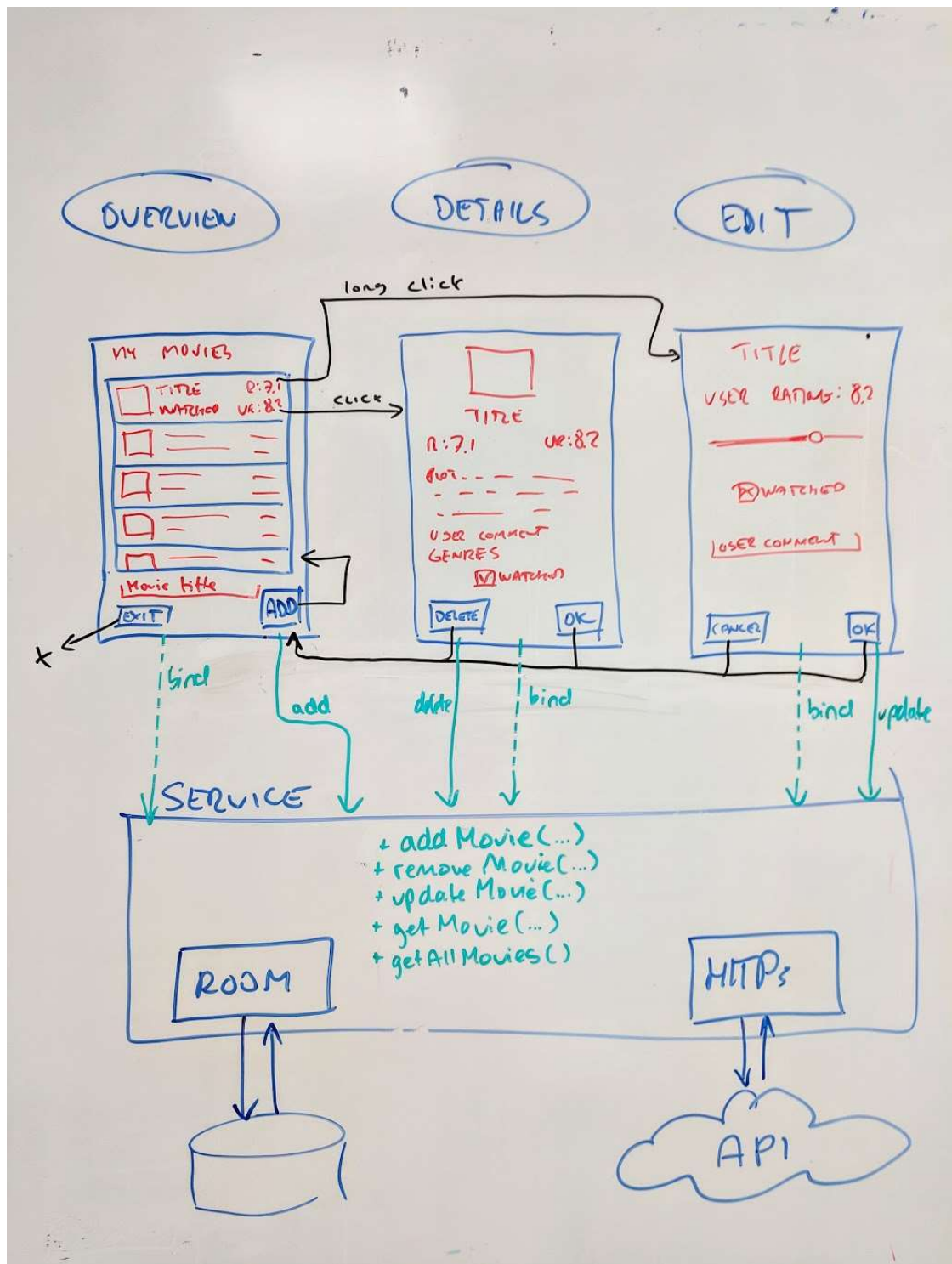
In this assignment you will be extending your Movie app from Assignment 1, that allows the user to keep track of Movies. Of course a personal movie library is more useful if you can add new movies and maintain the list of movies on the device even after the app is closed. In this assignment you will be adding these features, and also a service that runs in the background and suggests a random movie from the library to watch) ever so often, using notifications.

The app will use a free online web service/API by http://www.omdbapi.com/ to download details of movies in JSON format. You will be using the free version of this API which has some limitations (1000 lookups every day) which will be fine for this app.

To motivate the user to watch more movies, you will need to write a background service that picks a random movie form the existing list every 2 minutes and displays a new notification to the user suggesting to watch this. This service will be running in the background at all times (started service) and will keep track of you movies using a Room database. All Activities of your app must bind to the service to get information about movies, and in some cases add new movies or update e.g. ratings.

As in assignment 1, you will need a UI with three activities: One that shows an overview of the current movies; one that displays more details of a particular movie when the user clicks in the list; and a third Activity which allows the user to change the personal rating, viewed status and notes for each movie. The first (overview) activity must also allow the user to add new Movies based on a string input of the title of he movie.

The pictures below shows a mock of the UI (almost the same as in assignment 1), the data flow and a rough architecture for your app.

Your solution must have the following components and talk to the external web server:

1. OverviewActivity with list overview: this Activity will use the Service to get up-to-date data for each movie you have added and show it to the user in a scrollable list view. The list items must show movie title, icon for genre, imdb rating, user rating, and whether is has been watched or not.
2. DetailsActivity with details of a particular movie: The user goes to this screen when clicking and item in the list in (OverviewActivity). This detail view must include at least the movie title, icon of genre IMDB rating, user rating, user notes and whether is has been watched or not. It should also be possible to remove the given movie from the library.
3. EditActivity with ability to view and change the user rating, viewed status and user notes.
4. Service: your app should have a background service that manages the list of movies. The Service should always have the updated data/state and the Activities should get it when needed through binding.

5. Data persistence: The user's movie library should be persisted e.g. in case the app is closed or the phone restarted. This should be done through the Service with Room database.
6. Notification: The background service should set (or update) a notification that suggest a random movie from the library every 2 minutes.

Further details on requirements for assignment:

- The DetailsActivity should show the movie details in whatever way you want to present it (above sketches could be a starting point). The genre must be shown as an icon.
- The background service should run all the time (from the first time the app is started).
  The OverviewActivity, DetailsActivity, and EditActivity should bind to the service when active and retrieve the most up-to-date movie information through method calls.

- The Service should send out a local broadcast when a new Movie has been added. The OverviewActivity should register for this, and update the UI if needed.
- You should use HttpsURLConnection or Volley for networking.
- You must have a custom icon for your app.
- You app name should be "auXXXXXX Movies" where XX is your AU id.
- You must have a unique package name
- You should include LogCat outputs / logging to validate that the service is running and performing network operations.
- All resources used should be externalized.
- You must support both portrait and landscape mode with specific designs as outlined in assignment 1
- The app must be resistant and not crash or lose data due to rotation.
- You are not allowed to 'lock' the orientation (in the manifest or code).
- You must style the app with (at least) your own colors
- When the app is first started it should be populated with 11 movies as listed in assignment 1.

Bonus:

- Make the service run even if the user reboots the device.
- Additional movie information (check out the API) and visualization.
- Different layouts, e.g. for large and small devices.

Hints:

- Strong consider making the service a Foreground service.
- Remember your activities are binding to your service and the service has all the data - you don't need to pass all the data between using Intents anymore.
- You can (potentially) reuse your activities from the first activity.
- Adding new movies will a asynchronous, so use the broadcast receiver to update you UI when a new movie has been added.
- Consider using GSON for converting the JSON response from the API. Remember you can auto generate classes for this using e.g. http://www.jsonschema2pojo.org/

Do not's:

To ensure a good peer review process and some consistency across the apps, the follwing are not allowed

- Do not use new architecture components LiveData, Viewmodels, etc. even though they are introduced in lecture 10.
- Do not use external libraries or tools like Butterknife, Dagger, etc.
- Do write in Java and not Kotlin or other languages

Assignment 2 peer reviews

1) Find your assigned apps in the list below - you should review the two students below your own name in the list (consider the list cyclic, if you are at the end, revert back to the top):

assignment 2 review list.pdf

2) once you have found your two assigned persons - find and download the assignments in the links below (item named Assignment 2 links) (pro tip: search for AU id)

3) Do a proper code review and write down peer feedback for both of your assigned apps according to the criteria:

ITSMAP 2019 Spring assignment2 rubric.pdf

4) Submit using this Google form (enter once for each app) :

https://forms.gle/gsgL5VzUpotup3SL8

5) Hand in an empty assignment 2a on blackboard (optional put in picture of great meme) when you have submitted BOTH forms to indicate you have completed the peer review. This assignment is not complete until this step is complete.

Assignment 2 Links

Assignment 2_au544051_attempt_2019-04-20-20-38-10_KristofferVilladsen_au544051_ITSMAP19_spring_Assignment2.zip

Assignment 2_au543939_attempt_2019-04-21-23-34-00_SameerAhmadHabibi_au543939_ITSMAP19_spring_Assignment2.zip Assignment 2_au541800_attempt_2019-04-21-20-55-29_EmmaRolsted_au541800_ITSMAP19_spring_Assignment2.zip Assignment 2_au541689_attempt_2019-04-21-12-33-43_SorenKatborg_au541689_ITSMAP19_Assignment2.zip Assignment 2_au222852_attempt_2019-04-21-20-42-39_AntonBrixToroe_au222852_ITSMAP19_spring_Assignment2.zip Assignment 2_au569945_attempt_2019-04-21-18-41-40_DanielNoerbygaard_au569945_ITSMAP1_spring_Assignment2.zip Assignment 2_au554156_attempt_2019-04-21-09-08-47_CasperPilgaard_au554156_ITSMAP19_spring_Assignment2.zip Assignment 2_au208406_attempt_2019-04-21-23-46-40_MikkelBuskEspersen_au208406_ITSMAP19_spring_Assignment2.zip Assignment 2_au545682_attempt_2019-04-21-19-45-22_VictorFard_au545682_ITSMAP19_spring_Assignment2.zip Assignment 2_au565633_attempt_2019-04-21-22-04-27_DanielPatHansen_au565633_ITSMAP19_spring_Assignment2.zip Assignment 2_au566287_attempt_2019-04-21-12-52-34_AlexanderRasmussen_au566287_ITSMAP19_spring_Assignment2.zip Assignment 2_au556650_attempt_2019-04-21-16-07-51_SigurdVilstrup_au556650_ITSMAP19_spring_Assignment2.zip Assignment 2_au565408_attempt_2019-04-16-13-51-50_ChristianThingKnudsen_au565408_ITSMAP19_spring_Assignment2.zip Assignment 2_au557269_attempt_2019-04-19-19-23-20_BenjaminMikkelsen_AU557269_Assignment2.zip Assignment 2_au556902_attempt_2019-04-21-22-39-34_LarsLippertOvesen_au556902_ITSMAP19_spring_Assignment2.zip Assignment 2_au566645_attempt_2019-04-21-20-17-40_DennisKobberholm_au566645_ITSMAP19_spring_Assignment2.zip Assignment 2_au557919_attempt_2019-04-20-14-37-37_KasperJuulHermansen_au557919_ITSMAP19_spring_Assignment2.zip Assignment 2_au566737_attempt_2019-04-22-01-16-37_ThomasWolffKristensen_au566737_ITSMAP19_spring_Assignment2.zip Assignment 2_au557619_attempt_2019-04-22-03-51-11_MadsSejrJensen_au557619_ITSMAP19_spring_Assignment2.zip Assignment 2_au537065_attempt_2019-04-10-10-33-40_ChristianLukePedersen_au537065_ITSMAP19_spring_Assignment2.zip Assignment 2_au536165_attempt_2019-04-21-21-58-09_MikeBirch_au536165_ITSMAP19_spring_Assignment2.zip Assignment 2_au534498_attempt_2019-04-21-20-08-04_MargaritHolm_au534498_ITSMAP19_spring_Assignment2.zip Assignment 2_au529152_attempt_2019-04-21-23-28-25_MikkelIsaksenJensen_au529152_ITSMAP19_Assignment2.zip Assignment 2_au538062_attempt_2019-04-10-09-20-14_NicholasLadefoged_au538062_ITSMAP19_spring_Assignment2.zip Assignment 2_au564911_attempt_2019-04-21-20-46-33_SimonFabriciusNielsen_au564911_ITSMAP19_spring_Assignment2.zip Assignment 2_au565118_attempt_2019-04-21-21-57-39_MartinAndersen_au565118_ITSMAP19_spring_Assignment2.zip Assignment 2_au570170_attempt_2019-04-20-11-10-24_ChristianMorup_au570170_ITSMAP19_spring_Assignment2.zip Assignment 2_au553095_attempt_2019-04-18-21-42-38_ChristianeSvendsen_au553095_ITSMAP19_spring_Assignment2.zip Assignment 2_au564866_attempt_2019-04-17-09-44-08_MikkelHarbo_au564866_ITSMAP19_spring_Assignment2.zip Assignment 2_au570060_attempt_2019-04-19-23-21-33_CasperJanerkaIngeberg_au570060_ITSMAP19_spring_Assignment2.zip Assignment 2_au565242_attempt_2019-04-21-22-56-10_JonasNielsen_au565242_ITSMAP19_spring_Assignment2.zip Assignment 2_au565316_attempt_2019-04-21-22-55-

31_JulieSteenshard_au565316_ITSMAP19_spring_Assigment2.zip Assignment 2_au513665_attempt_2019-04-21-23-42-48_OscarOhrtPradel_au513665_ITSMAP19_spring_Assignment2.zip Assignment 2_au513223_attempt_2019-04-21-21-51-22_GavinAnthony_au513223_Assignment2new.zip Assignment 2_au510403_attempt_2019-04-21-22-00-21_LisbethWLorentzen_au510403_ITSMAP_spring_Assignment2.zip Assignment 2_au553932_attempt_2019-04-21-12-17-15_FatimaKodro_au553932_ITSMAP19_spring_Assignment2.zip Assignment 2_au554093_attempt_2019-04-21-12-41-38_StefanieNielson_au554093_ITSMAP19_spring_Assignment2.zip Assignment 2_au520670_attempt_2019-04-21-19-09-03_MaxJorgensen_au520670_Assignment2.mp4 Assignment 2_au520670_attempt_2019-04-21-19-09-03_MaxBarlyJorgensen_au520670_F19SMAP_Assignment2.zip Assignment 2_au568762_attempt_2019-04-21-22-23-18_ArmineSanjarizadeh_au568762_ITSMAP19_spring_Assignment2.zip Assignment 2_au568986_attempt_2019-04-22-10-10-52_DanielDüringKnudsen_au568986_Spring_Assignment2.zip Assignment 2_au554286_attempt_2019-04-21-20-37-20_EmilHolstPetersen_au554286_ITSMAP19_spring_Assignment2.zip Assignment 2_au563743_attempt_2019-04-21-17-05-17_MaltheJensen_au563743_ITSMAP19_spring_Assignment2.zip Assignment 2_au568238_attempt_2019-04-15-00-26-03_MaikenGuldberg_au568238_ITSMAP19_spring_Assignment2.zip Assignment 2_au554356_attempt_2019-04-21-17-32-20_AlexanderDavidsen_au554356_ITSMAP19_Assignment2.zip Assignment 2_au547352_attempt_2019-04-22-00-19-35_AndreasBlaabjerg_au547352_ITSMAP19_spring_Assignment2.zip Assignment 2_au563738_attempt_2019-04-21-17-02-56_FrederikKastrupMortensen_au563738_ITSMAP19_spring_Assignment2.zip Assignment 2_au568435_attempt_2019-04-21-17-15-27_SørenBech_au568435_ITSMAP19_spring_Assignment2.zip Assignment 2_au564313_attempt_2019-04-20-10-26-06_LaerkeMadsen_au564313_ITSMAP19_spring_Assignment2.zip Assignment 2_au564064_attempt_2019-04-14-22-39-55_MadsAntonsen_au564064_ITSMAP19_spring_Assignment2.zip Assignment 2_au569051_attempt_2019-04-14-20-50-55_RikkeHenriksen_AU569051_ITSMAP19_spring_Assignment2.zip Assignment 2_au564454_attempt_2019-04-16-13-56-16_StellaJørgensen_au564454_ITSMAP19_spring_Assignment2.zip Assignment 2_au297052_attempt_2019-04-21-17-25-28_RuneAagaardKeena_au297052_au123456_ITSMAP19_spring_Assignment2.zip Assignment 2_au259814_attempt_2019-04-19-17-06-35_NickolaiLundby_au259814_ITSMAP19_spring_Assignment2.zip Assignment 2_au253179_attempt_2019-04-21-23-34-47_KhalidEdwan_au253179_ITSMAP19_spring_Assignment2.zip Assignment 2_au556199_attempt_2019-04-11-12-41-54_MichaelMoseholt_au556199_ITSMAP19_Assignment2.rar Assignment 2_au549309_attempt_2019-04-21-22-29-03_Au549309Movies.zip Assignment 2_au551714_attempt_2019-04-13-08-32-03_KristinLieAas_au551714_ITSMAP19_spring_Assignment2.zip Assignment 2_au556327_attempt_2019-04-22-01-37-47_SimonLassen_au556327_ITSMAP19_spring_Assignment2.zip Assignment 2_au509802_attempt_2019-04-21-22-28-48_KristianStoustrupPetersen_au509802_ITSMAP19_spring_Assignment2.zip Assignment 2_au551825_attempt_2019-04-20-12-26-51_StanislavLunderskov_au551825_ITSMAP19_spring_Assignment2.zip Assignment 2_au556343_attempt_2019-04-14-17-02-25_LineDanielsen_au556343_ITSMAP19_spring_Assignment2.zip Assignment 2_au479361_attempt_2019-04-17-23-38-44_LarsHolm_au479361_ITSMAP19_spring_Assignment2.zip Assignment 2_au551828_attempt_2019-04-21-23-46-48_RuneBjørnLassen_au551828_ITSMAP19_spring_Assignment2.zip Assignment 2_au567765_attempt_2019-04-21-23-35-57_SoerenSchouMathiasen_au567765_Assignment2.zip Assignment 2_au567913_attempt_2019-04-11-13-01-52_FrederikLarsen_au567913_ITSMAP19_spring_Assignment2.zip Assignment 2_au558821_attempt_2019-04-22-00-02-07_TobiasSaabySteffensen_au558821_ITSMAP19_spring_Assignment2.zip Assignment 2_au567214_attempt_2019-04-21-22-26-44_JakobBondeNielsen_au567214_ITSMAP19_spring_Assignment2.zip Assignment 2_au558782_attempt_2019-04-21-23-48-31_AndersJensen_au558782_ITSMAP19_spring_Assignment2.zip Assignment 2_au567226_attempt_2019-04-21-08-18-05_JakobDybdahlAndersen_au567226_ITSMAP19_spring_Assignment2.zip Assignment 2_au561376_attempt_2019-04-21-23-16-41_SusanneOlsen_au561376_ITSMAP19_spring_Assignment2.zip Assignment 2_au559497_attempt_2019-04-21-22-30-40_StanieCheung_au559497_ITSMAP19_spring_Assignment2.zip Assignment 2_au568205_attempt_2019-04-21-22-50-28_EmmaMilverts_au568205_ITSMAP19_ISpring_Assignment2.zip Assignment 2_au563335_attempt_2019-04-20-14-37-04_JakobHansen_au563335_ITSMAP19_spring_Assignment2.zip

Assignment 2/2a: Peer feedback and code reviews

You can find your feedback and code reviews for your assignment 2 here:

Peer feedback : code review - Assignment 2 ITSMAP Spring 2019.pdf

Now it is time to fix the last bugs and get everything working. Please take you peer review into account, and also check your own solution again regardless of the reviews.

NB: You must also submit a list of the changes that you have made with your updated assignment (upload to Assignment 2) - if you are not following your peer reviews you should explain why

NB: If you have not yet handed in your empty (or optional meme) assignment in 2a, you must do so before ASAP - else we have no way of seeing who is missing their reviews and you might fail.

NB: There may be more than two reviews (or fewer) for your app (some people have uploaded updated reviews) so search for your name / AUid to find all and check if there is an updated entry.

Assignment 2a

peer reviews - remember to hand in on BB after completing your reviews in the google form!

PS: send memes

Assignment 2

Assignment 2