

HSU Campus

Description

Campus App for the Hochschule Ulm providing User-Login (Moodle Mockup) to view Schedule, show Assignments + Events for Lessons (+notifications on due assignments), possibility to create new events for specific courses, show directions to specific lessons or home (Google Maps transit directions, location-aware), Account editing (password, avatar, local app options (auto-login, ...)). Home Screen widget to show schedule and highlight next lesson (+ notify on lesson start if enabled).

Features

- **User-Login System** (Moodle DB Mockup) using “DummyAPI” to interface SQLite DB (local)
- Showing **Schedule** for indiv. User for different studies (Database with Users, Studies, Schedules, Assignments), add events in lesson dialog (onClick)
- Add local **events/notifications** for specific lessons (CalendarAPI with intents to view, edit, delete Calendar events from device → no showcase “dummy” events possible)
- **Show Directions** (transit) to lesson with specific arrival time (Google Maps)
- **FAB** to quickly show directions to uni / home (Location-Aware! GoogleApiClient requesting location to determine if user is at home (FAB->directions to uni) or if user is at uni (FAB->directions home))
- **Assignments-Tab** showing and highlighting due assignments (from DummyDB), also notifies in notif. bar if an assignment is due tomorrow (with intent to show assignment), for showcase purpose assignments are generated that are due 2 days from init.)
- **Account-Tab** ability to edit DB User, change password, avatar (ImageChooser intent), validate and submit changes to DB
- **Other-Tab** Edit Local preferences (Auto-Login, notify on start of a lesson, set “home” location with GooglePlacePicker (for FAB location-awareness))
- **Widget for Home Screen** showing Schedule and highlighting current/next lesson (updates every 15mins. Using AppWidgetProvider, RemoteViewsService (see widget package), notifies when lesson is about to start (if enabled in Options-Tab in MainApp))
- **English /German Language selection** at Login Screen

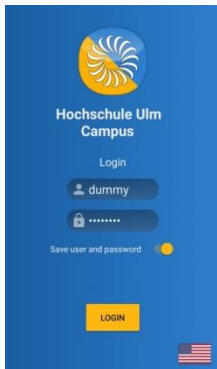
Utilities: Layouts: DrawerLayout + NavigationView, GridView (Schedule), ListView (Notifications, Assignments), Fragments to fill content of NavigationView (MainActivity), ConstraintLayouts; Intents: GoogleMaps, PlacePicker, Calendar, ImageChooser, ...; Ressource files: layouts for activities, fragments, dialogs, drawables for buttons, backgrounds, gridViews, menus using gradients, layer-lists, state-selectors (selecting/highlighting); settings for appwidget, strings.xml for different languages; use of custom defined colors/themes; use of Java Date/Time library, StreamsAPI to modify collections, SqliteOpenHelper library, AsyncTask (Login Dialog)

Conclusion

I enjoyed building the app for the most part, it was quite easy to adapt some new things that go beyond what we learned in class even though a bit more clarification on specifics about the magnitude and rating of the app would have been helpful. Also after this project I now know that the Java Time/Date library is absolute rubbish.

Showcase

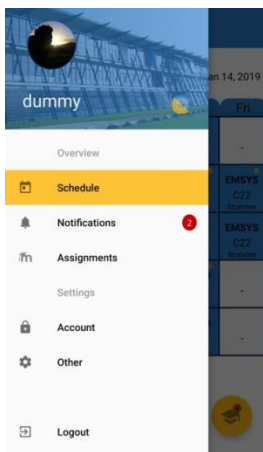
LoginActivity:



-Login (Mockup DB: "DummyDB")

-Change language (→ "strings.xml")

MainActivity

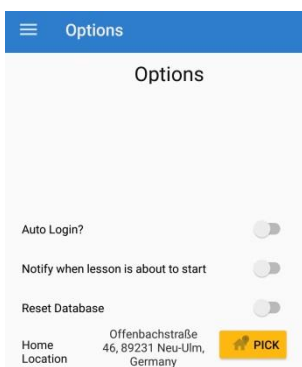


-NavigationView + Fragments

-Menu to access Fragments/logout

-Notifications indicator for today's notification.

OptionsFragment (Local Device Options)



-change local preferences

-reset dummyDB on next start

-GooglePlacePicker for choosing home location

Schedule Fragment



-Shows weekly Schedule infos

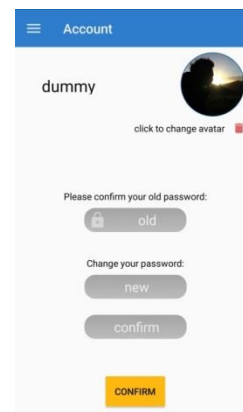
-Highlights current/next lesson

-Shows Dialogs on click on a lesson

-indicates notifications

-FAB for quick directions to uni/home (Location-Aware!)

Account Options Fragment



-Edit User via "DummyAPI", change Avatar(ImageChooser intent with return val)

-validate changes and confirm to DB

USERS:

Name	Password	Studies
dummy	dummy123	INF3
dummy2	dummy123	INF3
dummy3	dummy123	INF2