

Application Development for Mobile and Ubiquitous Computing

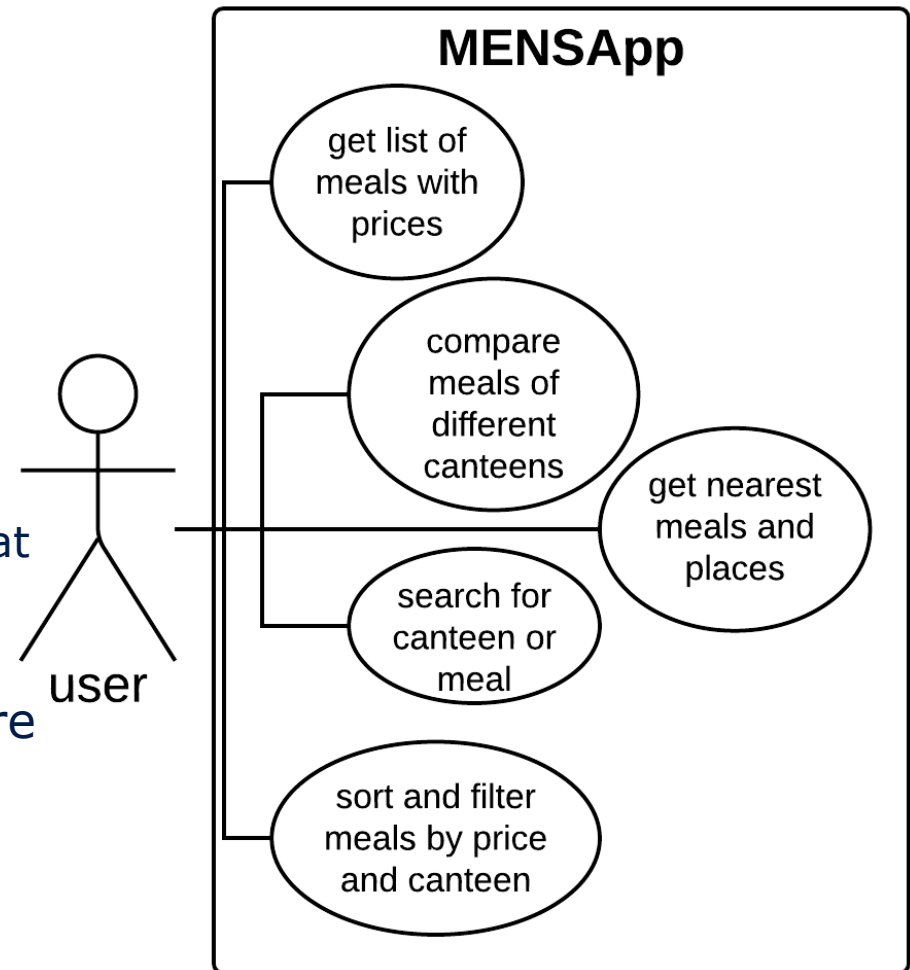
Seminar Task

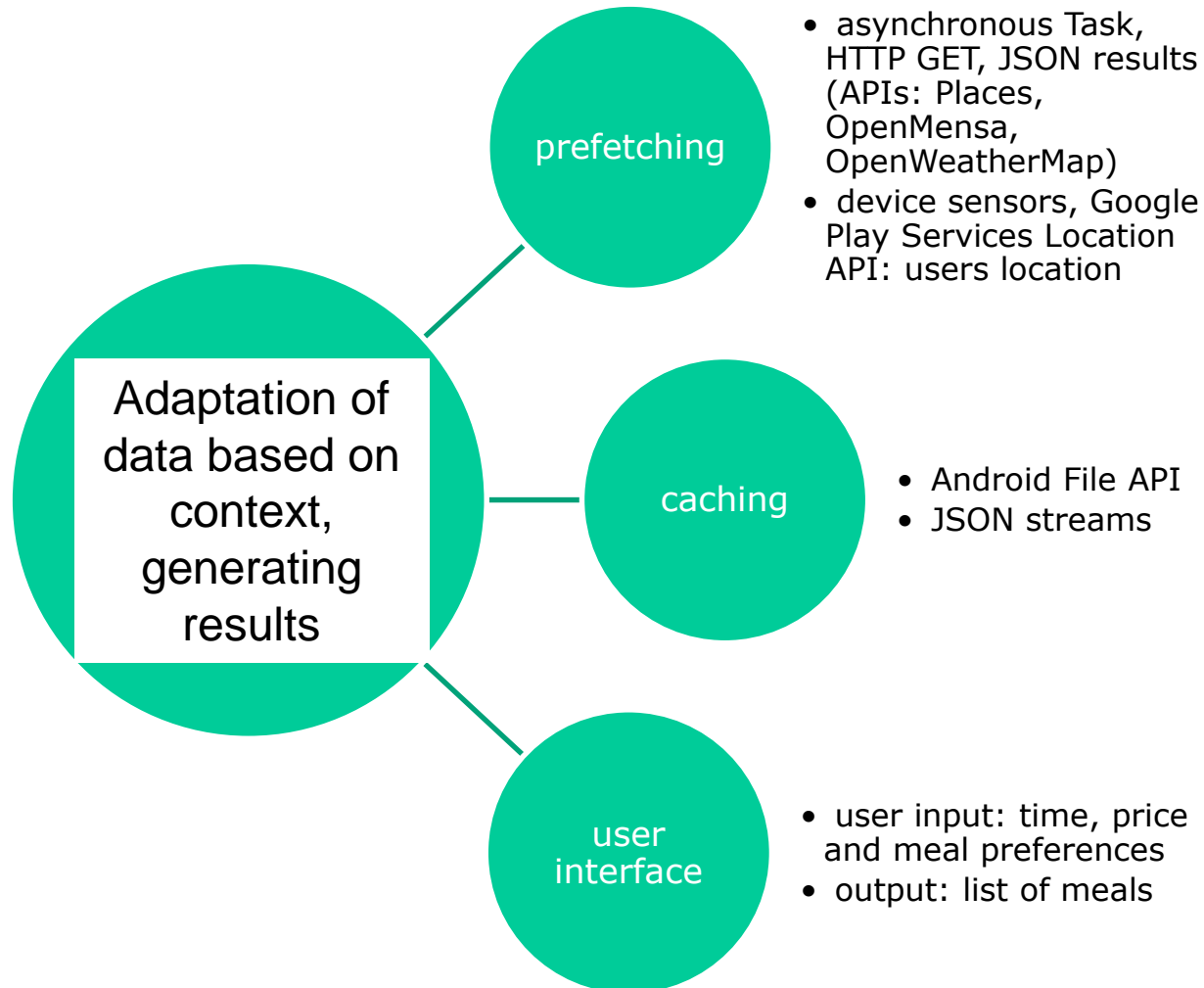
Final Presentation

Group 17

Team: Sharmin Khaleque & Philip Manja

- mensa application
 - gathering data of canteens, meals, other places
- simple interface, fast interaction
 - few buttons, no complex menus
 - provide only information that the user wants
- user-centered, context-aware
 - weather, user's time and location
 - filtering and sorting data





- Asynchronous Task
 - doInBackground()
 - onPostExecute()

- APIs:
 - OpenMensa API (Mensas & Meals)
 - OpenWeatherMap API (Weather)
 - Google Places API (Places)
 - Google Play Services Location API (User's Location)

- Results in JSON
 - parsed into Java Objects

- using Android Shared Preferences
 - key value pairs
 - saving JSON Objects and Arrays as strings

- writing cache
 - `cache = this.getSharedPreferences(Context.MODE_PRIVATE);`
 - `cacheEditor = cache.edit();`
 - `cacheEditor.putInt("time", time);`
 - `cacheEditor.apply();`

- reading cache
 - `time = cache.getInt("time", 90);`

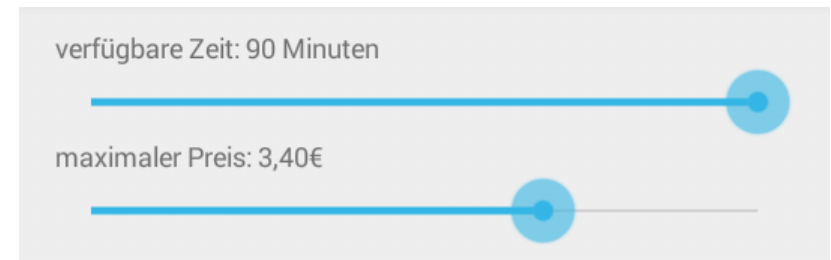
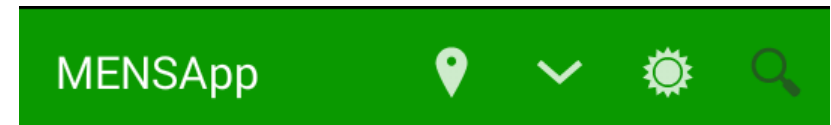
- different data
 - user's location/preferences, mensas, meals, places, weather
 - will be considered as persistent for different durations

- context features
 - user`s location, user`s time, preferences (price, mensa, meal), weather

- content
 - mensas (name, location), meals (name, price), places (name, location)

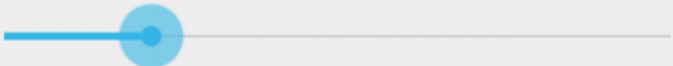
- taking context features and content to provide a result
- adapting to the user`s needs

- ActionBar
 - sort by distance/price
 - sort ascending/descending
 - toggle weather factor
 - search for mensa/meal
- SeekBars
 - user's time
 - maximum price
- ListView
 - name of meal / mensa
 - distance
 - price




MENSApp € ^ ⚙️ 🔍

verfügbare Zeit: 20 Minuten



maximaler Preis: 2,20€




Pizza Kreta mit Lauch und Hirtenkäse
Dresden, Alte Mensa
257m

Gebackene Kartoffelecken mit Sauerrahm-Dip, dazu ein bunter Salat mit Goudakäse
Dresden, Alte Mensa **2,00€**
257m


Alte Mensa, Studentenwerk Dresden
261m

Alte € ^ ⚙️ ✕

verfügbare Zeit: 90 Minuten



maximaler Preis: 5,00€



Pizza Kreta mit Lauch und Hirtenkäse
Dresden, Alte Mensa
278m

Gebackene Kartoffelecken mit Sauerrahm-Dip, dazu ein bunter Salat mit Goudakäse
Dresden, Alte Mensa **2,00€**
278m

Hausgemachte frische Pasta, heute Maccheroni rigate mit Paprika und Schinken in Tomatenragout, Parmesan
Dresden, Alte Mensa **2,30€**
278m

- contributions and tackled issues:
 - caching
 - prefetching
 - user experience

- limits:
 - battery consumption
 - internet connection
 - depending on APIs

- experiences:
 - Android API and SDK change, many deprecated functions
 - issues with layout, views and activities