



TECHNISCHE
UNIVERSITÄT
DRESDEN

Application Development for Mobile and Ubiquitous Computing

PokeReport

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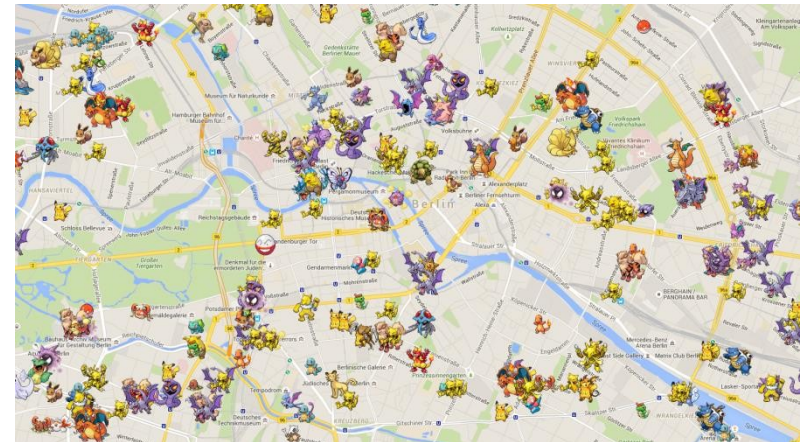
Overview :

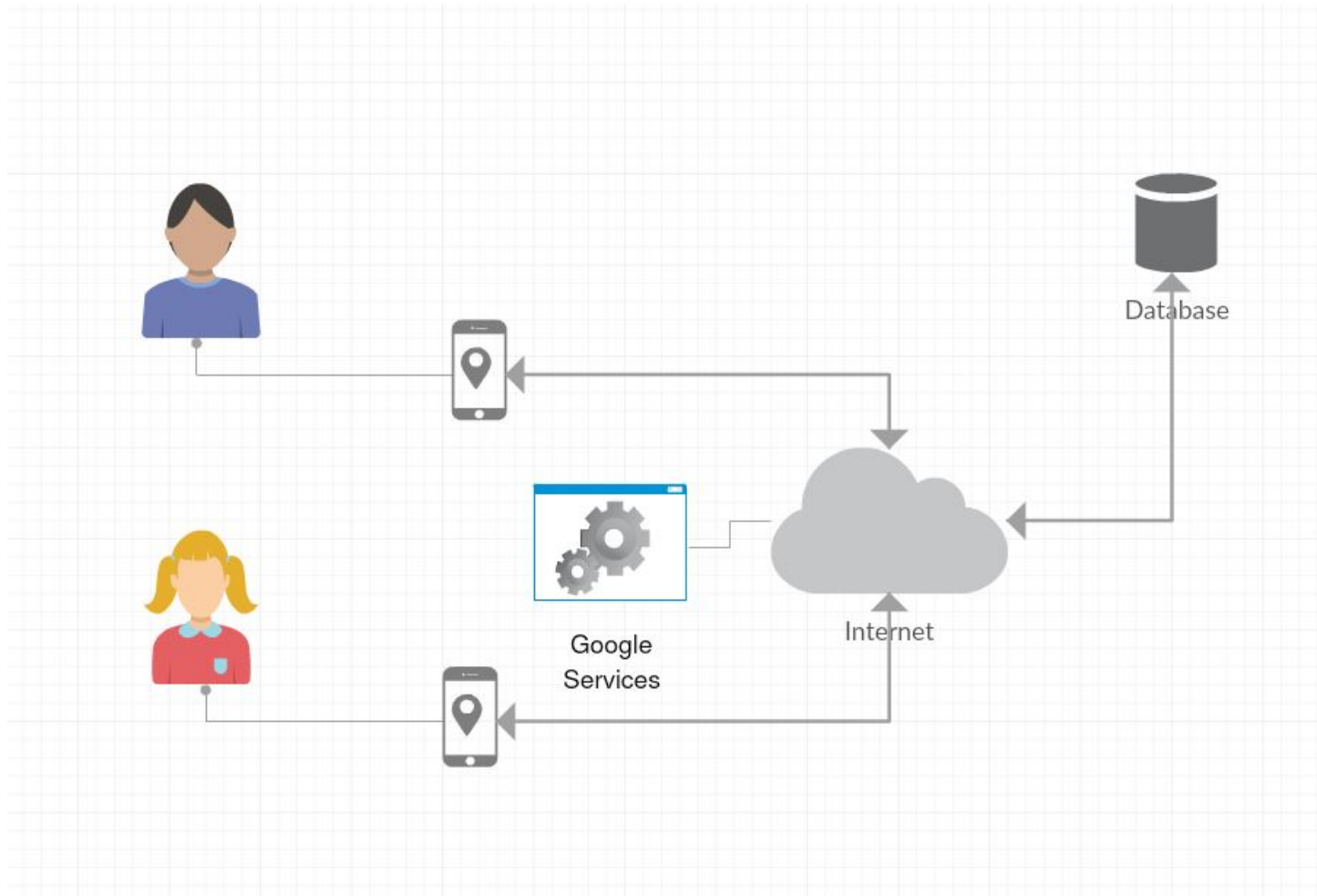
- Application Scenario
- Architecture and Technologies
- Screenshots
- Challenges and Adaptations
- Experiences and Pitfalls

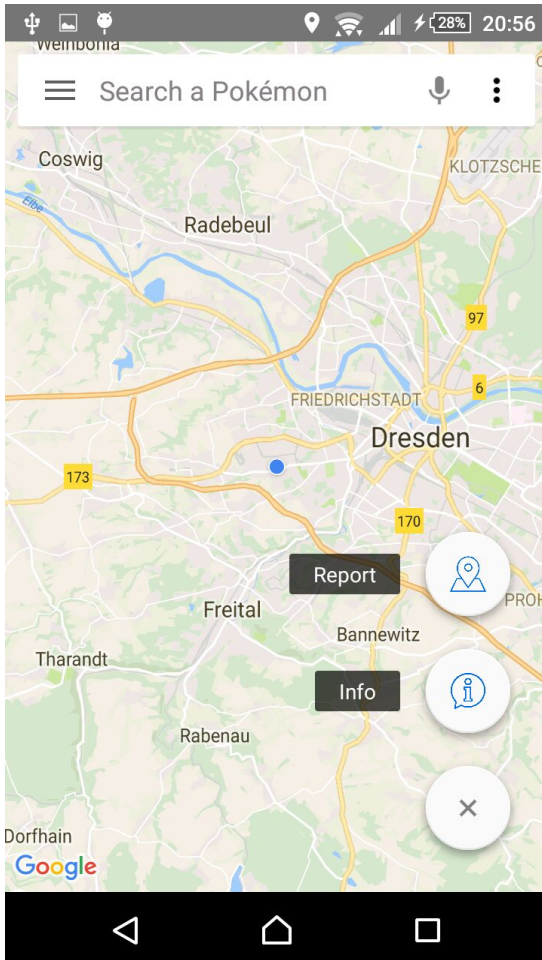
Gotta catch `em all

Curious to catch all the pokemons but do not know where to find them?

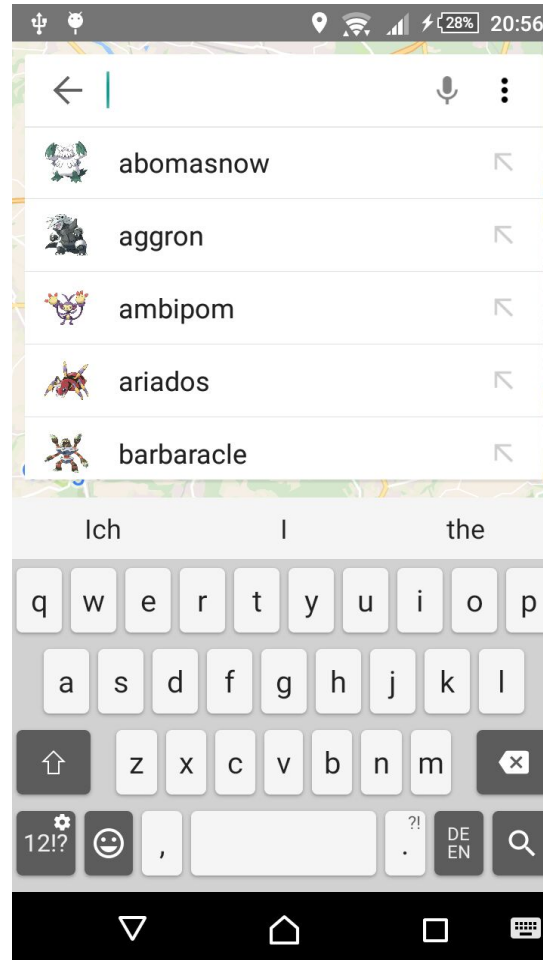
PokeReport is here for helping all the Pokemon enthusiasts who want to give and get the most accurate pokemon locations.



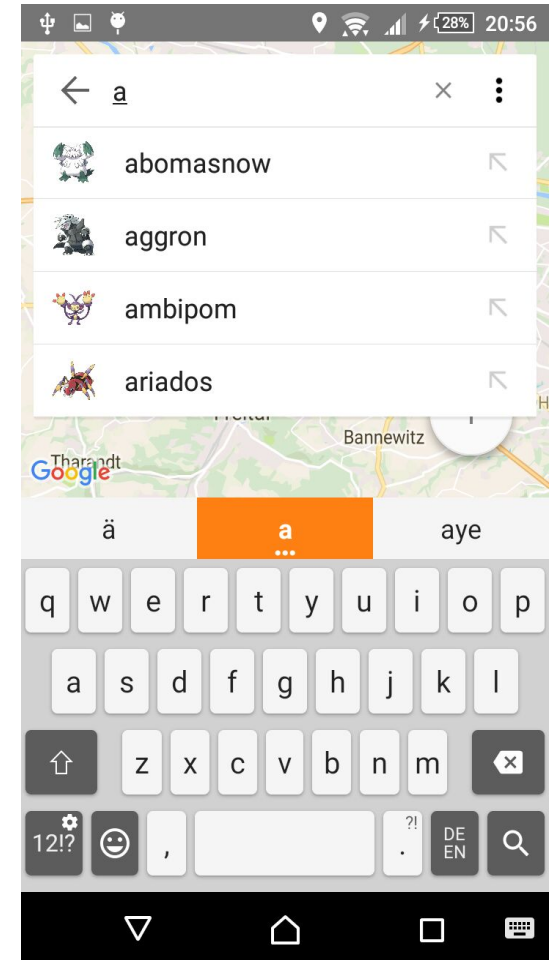




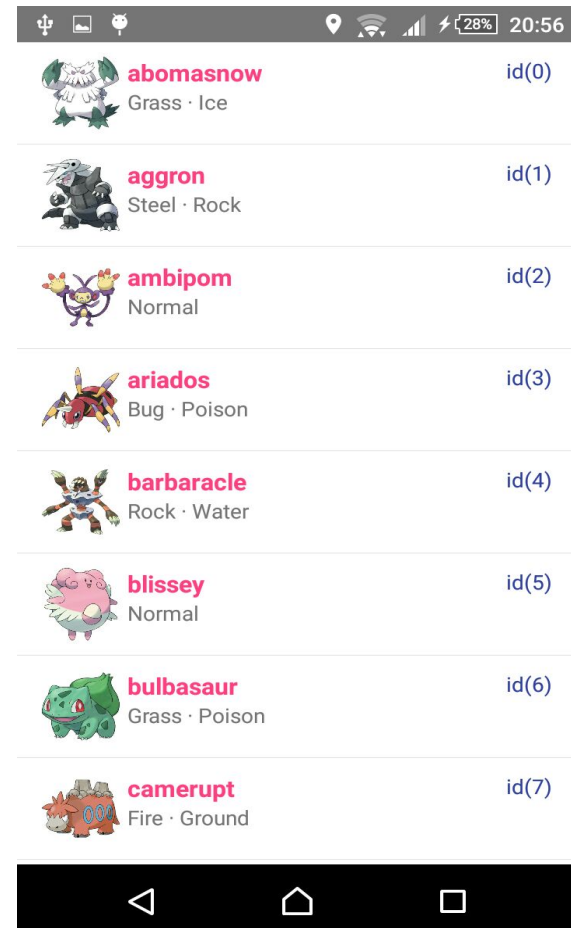
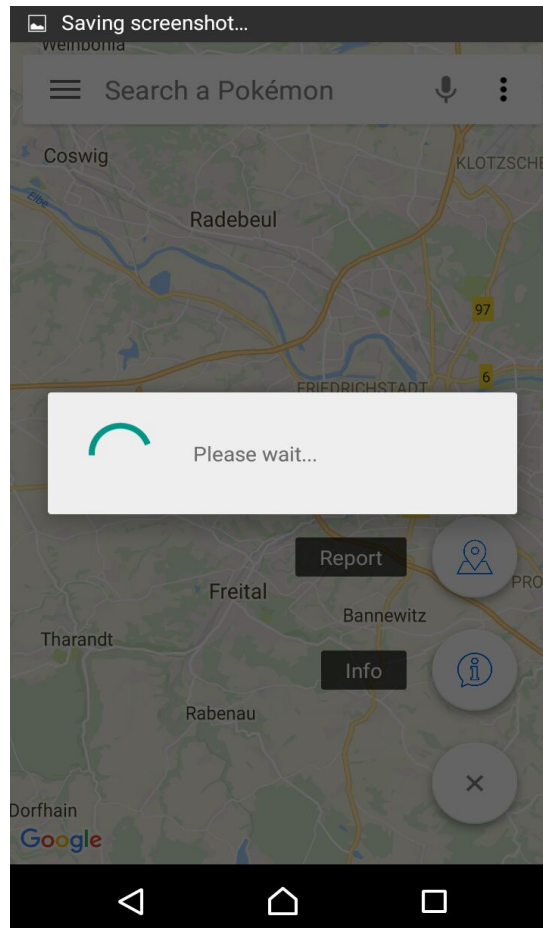
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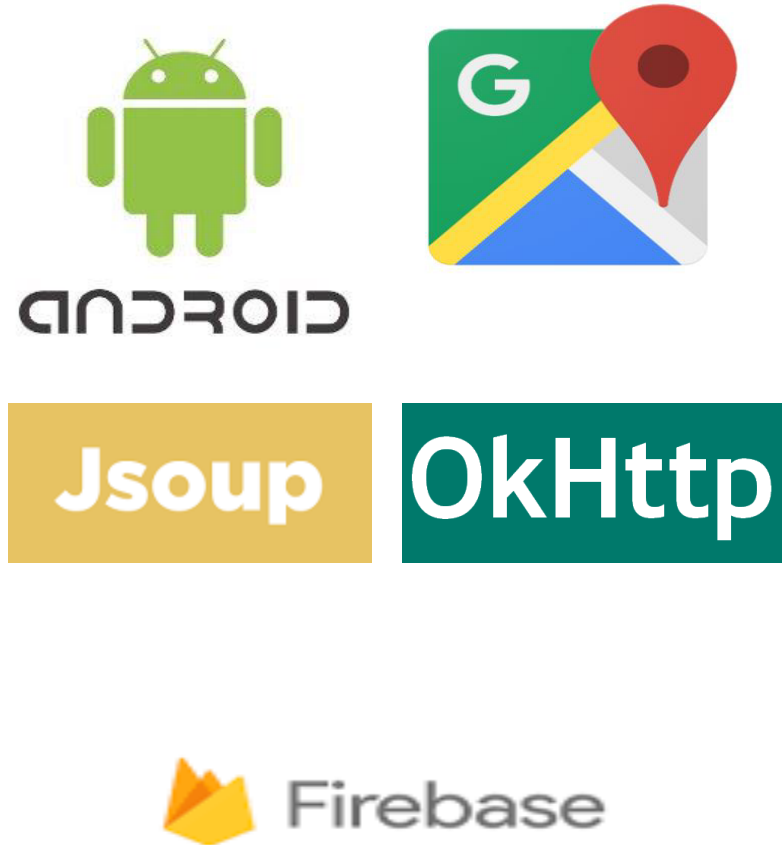
PokeReport



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- Android Studio 2.2.1
- Google Maps API
- JSOUP Parser
- OkHttp request
- Google Firebase Database



Energy Challenges :

- Power resources in mobile devices are both limited and critical.
- Energy consumed is directly proportional to the data upload.
- GPS Location consumes enormous energy.

Adaptations:

- Limit the number of Pokémon's around based on the user's situation.

```
@Override
public void onConnected(@Nullable Bundle bundle) {
    mLocationRequest = new LocationRequest();
    mLocationRequest.setInterval(1000);
    mLocationRequest.setFastestInterval(1000);
    mLocationRequest.setPriority(LocationRequest.PRIORITY_BALANCED_POWER_ACCURACY);
    if (ContextCompat.checkSelfPermission(this,
        Manifest.permission.ACCESS_FINE_LOCATION)
        == PackageManager.PERMISSION_GRANTED) {
        LocationServices.FusedLocationApi.requestLocationUpdates(mGoogleApiClient, mLocationRequest, this);
    }
}
```

- No background location querying i.e. use location only while using app.

Usability Challenge and Form factor :

- Application need to be useable in different devices with same ease.

Adaptations:

- Android native apps(cross-platform usability)
- In case of poor network connectivity, upload only the pokemon names. Upload the poke images only when the user is on Wifi ,LTE or data roaming.
- Adapt to different screen sizes (Use RelativeLayout, specify layout width, define proportions between the elements , etc.,).

Connectivity Challenge:

- Detect the type and/or quality of the internet connection and use the bandwidth wisely.

Experiences

- Everything is going to be mobile and handy and android is capturing more than 80 percent of current market . It is based on Java so easy to implement.

Pitfalls

- Google maps doesn't offer offline communication between users.

