

Circles

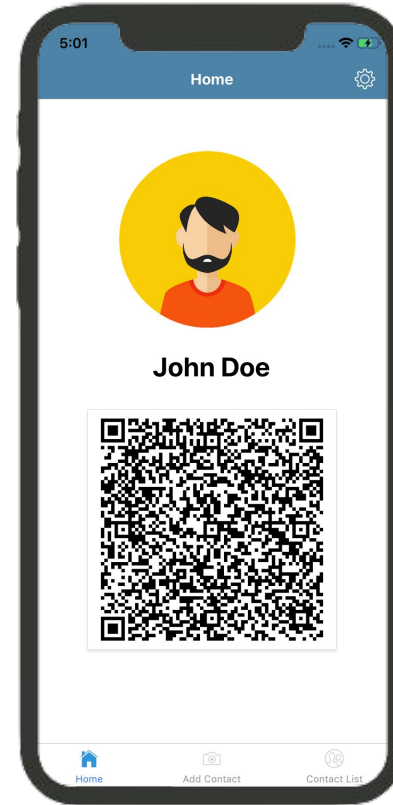
Application Development for Mobile and Ubiquitous Computing

Dresden, December 14th 2018

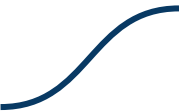


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Idea

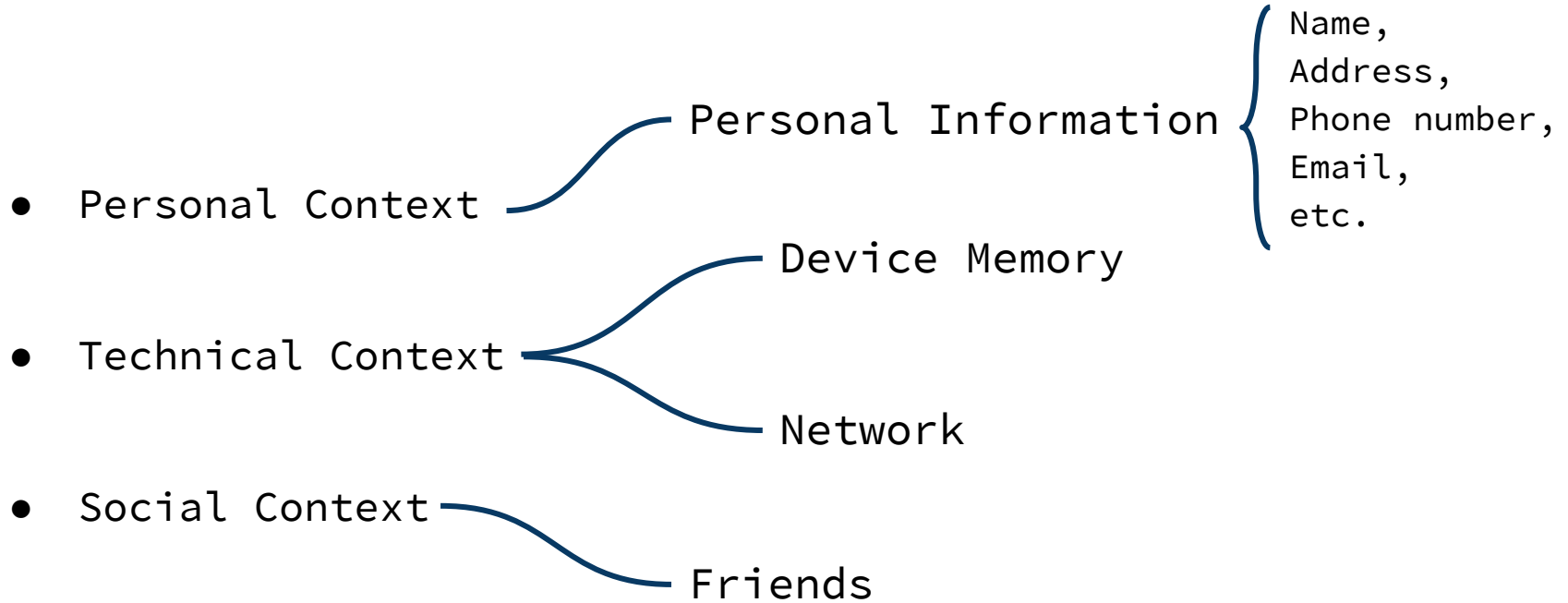
- Add contact information using QR code
- Personalize what you want to share (eg. phone number, address, facebook page...)



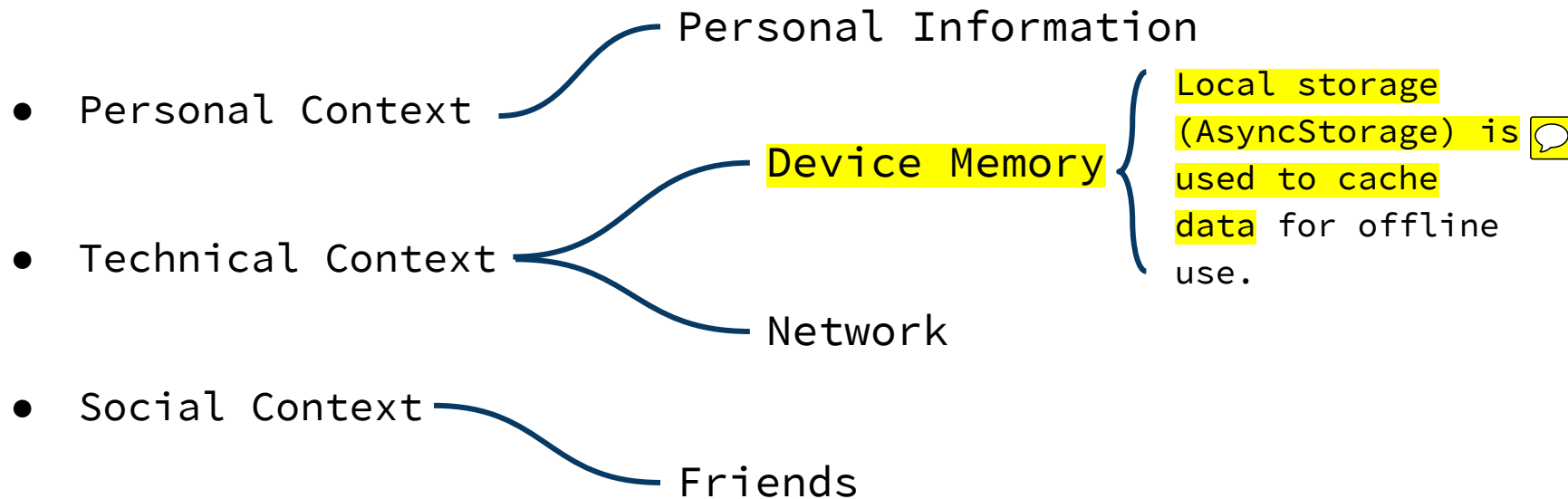
Contexts

- Personal Context  Personal Information
- Technical Context  Device Memory
Network
- Social Context  Friends

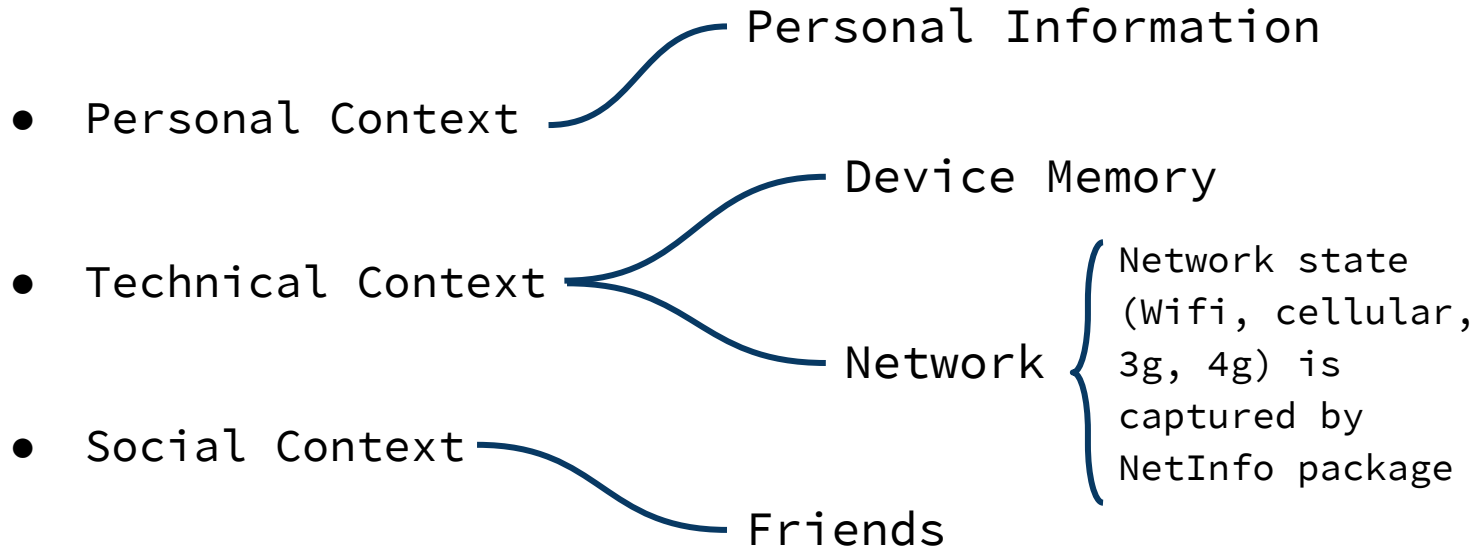
Contexts






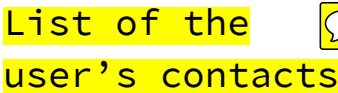

Contexts



Contexts

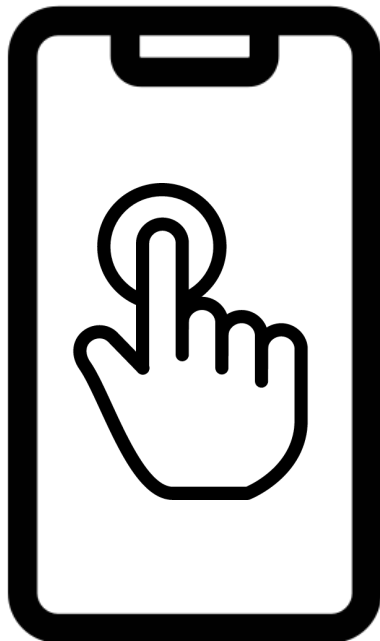


Contexts

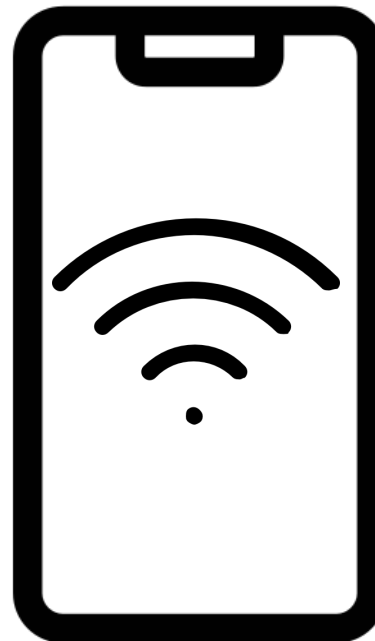
- Personal Context  Personal Information
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Challenges

Usability



Connectivity



Connectivity - Adaptation

- Use the NetInfo package to detect network state: Wifi, cellular, 2g, 3g, 4g or none.


```

checkInternetConnection = () => {
  NetInfo.getConnectionInfo().then(connectionInfo => {
    let stableConnection = false;
    if (
      connectionInfo.type === "wifi" ||
      (connectionInfo.type === "cellular" &&
        ["3g", "4g"].includes(connectionInfo.effectiveType))
    ) {
      stableConnection = true;
    }
    this.setState({
      stableConnection
    });
  });
};

```



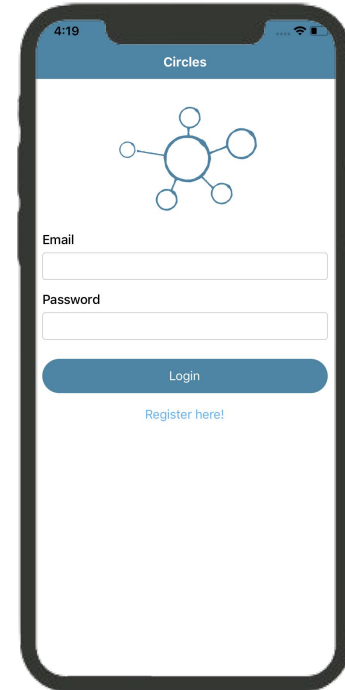
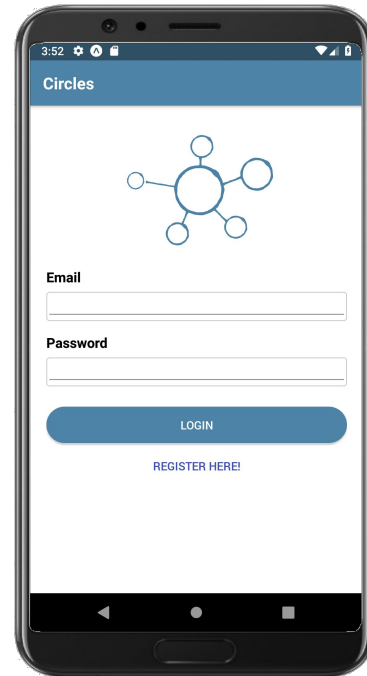
Connectivity - Adaptation

- **Delay and batch jobs,** such as adding/fetching contacts or changing contact information when there is an inexistent or slow connection and load data to/from device cache instead.
- **The device cache is considered to be always up-to-date, except in the one case where someone adds the user using his QR code. In this case, we need to fetch an updated contact list from the server.** 



Usability - Adaptation

- Using **NativeBase** ensures a native feel in both iOS and Android, as it renders native UI components for each single device.
- Create different layouts for larger screens and support for portrait and landscape mode.



Reminder: Technologies

We chose the MERN stack:

FRONTEND

- React Native / Redux

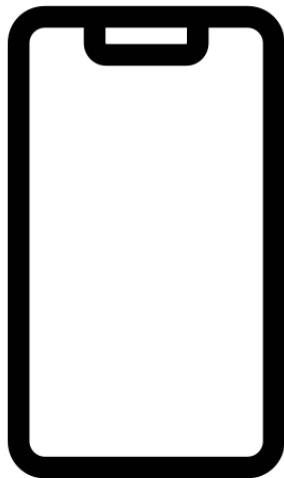
BACKEND

- Node.js / Express
- MongoDB

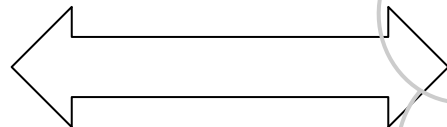
Reminder: Architecture

 **React Native**

 **Redux**



{ REST }



 **HEROKU**

 **node.js**
express

 **mongoDB**

