

APPLICATION DEVELOPMENT FOR MOBILE AND UBIQUITOUS COMPUTING

AGRIPLANNER

SEMINAR PRESENTATION – 1

Group No. – 3

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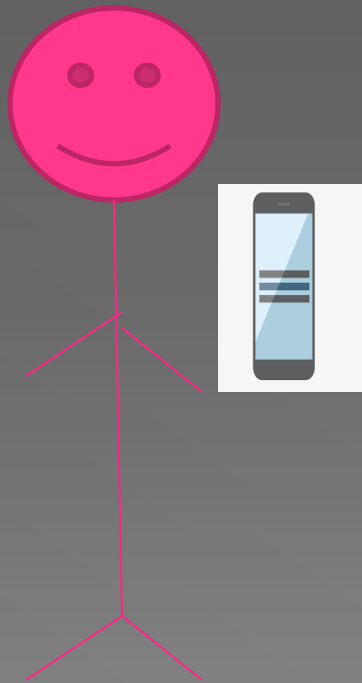
- Application Scenario
- Use Cases and Few Mockups
- Challenges Identified
- Idea for Two Adaptations
- Technology Used
- Architecture
- Work Plan

SCENARIO FOR THE APP

- ◉ Designed app materializes idea of management for transactions in the area of agriculture .
- ◉ Idea/Platform of app wide and modular. Scope of many extensions as technology updates/changed needs.
- ◉ We highlight portion of this conceptually vast idea to demonstrate specific scenario helping farmers improve and optimize their yield / minimize waste / fetch best price .

- Designed app serves two motives
 - a.to help farmers have effective information that can guide them for best time to sow,water and harvest .
- Many times farmers have information and plan but many times they do activity by assumptions depending on the cultures across the world.
- Location services to determine and monitor the weather of field location and compare statistics of forecast with database which defines different conditions of weather recommended for different activities of agriculture and let the farmer know which time will be best for sowing ,watering and harvesting and also recommend crops based on data of weather from previous years.
- This helps farmers operating on low cost to prepare in advance crops which will yield high and sunlight days and dark days needing sunlight or water.
- B.second motive is to find best prices for crops based on neighboring vicinity crops and help maintain balance of crops in a geographical area.

USE CASES / MOCKUP



Add crop details
to sow

Access
maintainence
schedule of
crops and
recommendatio
ns

Access prices of
crops at local
market

Access weather
information

CHALLENGES IDENTIFIED

Offline challenges:

- Storing data in Database
- Load new data if connection is available again

Usability Challenge:

- Easy to use
- Intuitive
- Local notifications with the most important alerts

IDEAS FOR ADAPTATIONS

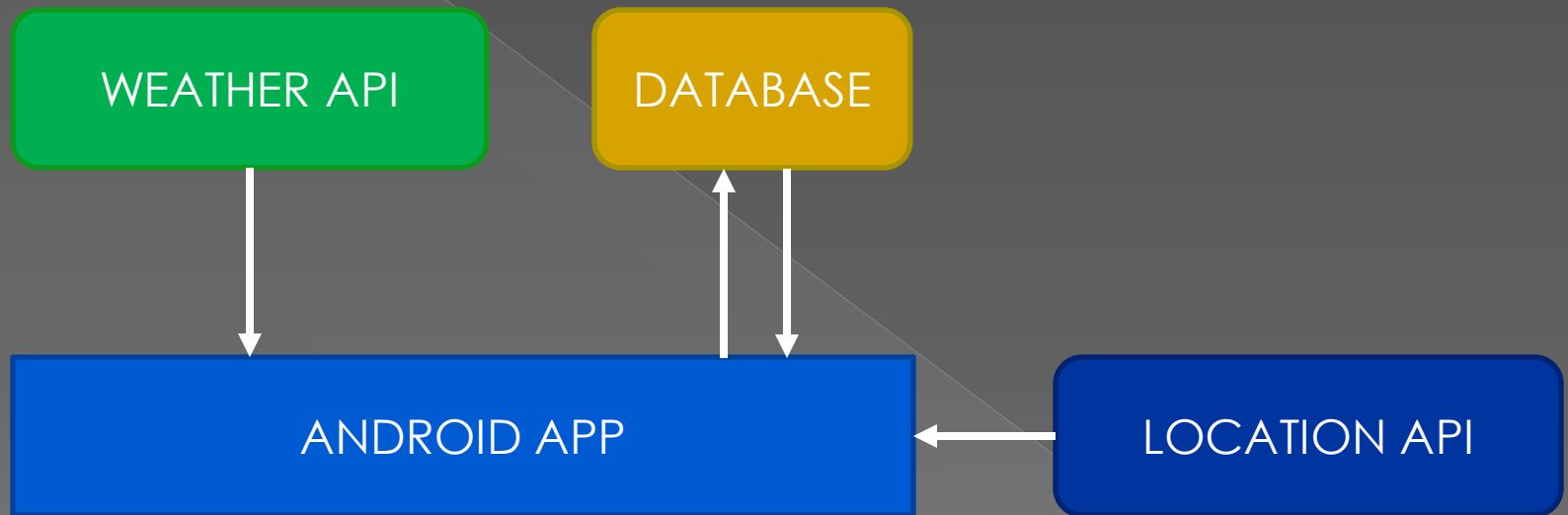
Our app uses two ideas of context based adaptation to make decisions

- First idea -App on device uses built in GPS radio to communicate the location information of the subject area, to the server via internet for analysis by server AND comparison to database of sever containing ideal conditions and cases for recommendations which are then decided and forwarded to the device of the user .This includes best days for sowing and harvesting for desired crop after weather analysis and also days when more irrigation required depending on heat and raining schedules , manuring and other manitainance schedules for specific crops.
- The second adaptation is also based on location but different in the sense where many users input data about the crops they have sowed and prices they sold crops in local markets .This data can be analysed in a geography or town to give recommendations based on demand and supply of the areas thus giving farmers options to grow crops which can give them best selling prices at the local market and prevent flooding the market with similar crops which may then be not required and wasted.

TECHNOLOGIES USED

- ◉ Android Studio (Java/Kotlin)
- ◉ Location API
- ◉ Web API: Weather API
- ◉ GitHub

ARCHITECTURE



WORK PLAN

● **First Presentation: 02.11.2018**

November:

- Mockups, UI Design
- Project Prototype
- Implement first features and Rest API Service

● **Presentation of Adaptation Concepts:14.12.2018**

December:

- Finish Prototype
- Implement other features

January:

- Testing
- Bugfixing
- Final Product

● **Final Presentation: 01.02.2019**

