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DroidNet: An Android Application Security Framework through Crowdsourcing

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CAPSTONE DESIGN EXPO 2017

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Objective

The rapid growth of the smartphone applications market raises security concerns regarding apps. Most apps request to collect data irrelevant to their main functions. Android permission control designs based on one-time decisions on installation are ineffective in protecting users' privacy and resource efficiency. DroidNet is designed to provide users with fine-grained resource control and recommendations on resource granting decisions based on expert users.

Design

- Created simple and elegant UI to guide users towards enabling and disabling permission that are deemed either safe or not.

- Features include accounts with saved information, settings, current permissions, and an algorithm running that constantly updates users with permission changes.

- Application information is backed up and updated every so often and can be set at user's preference.
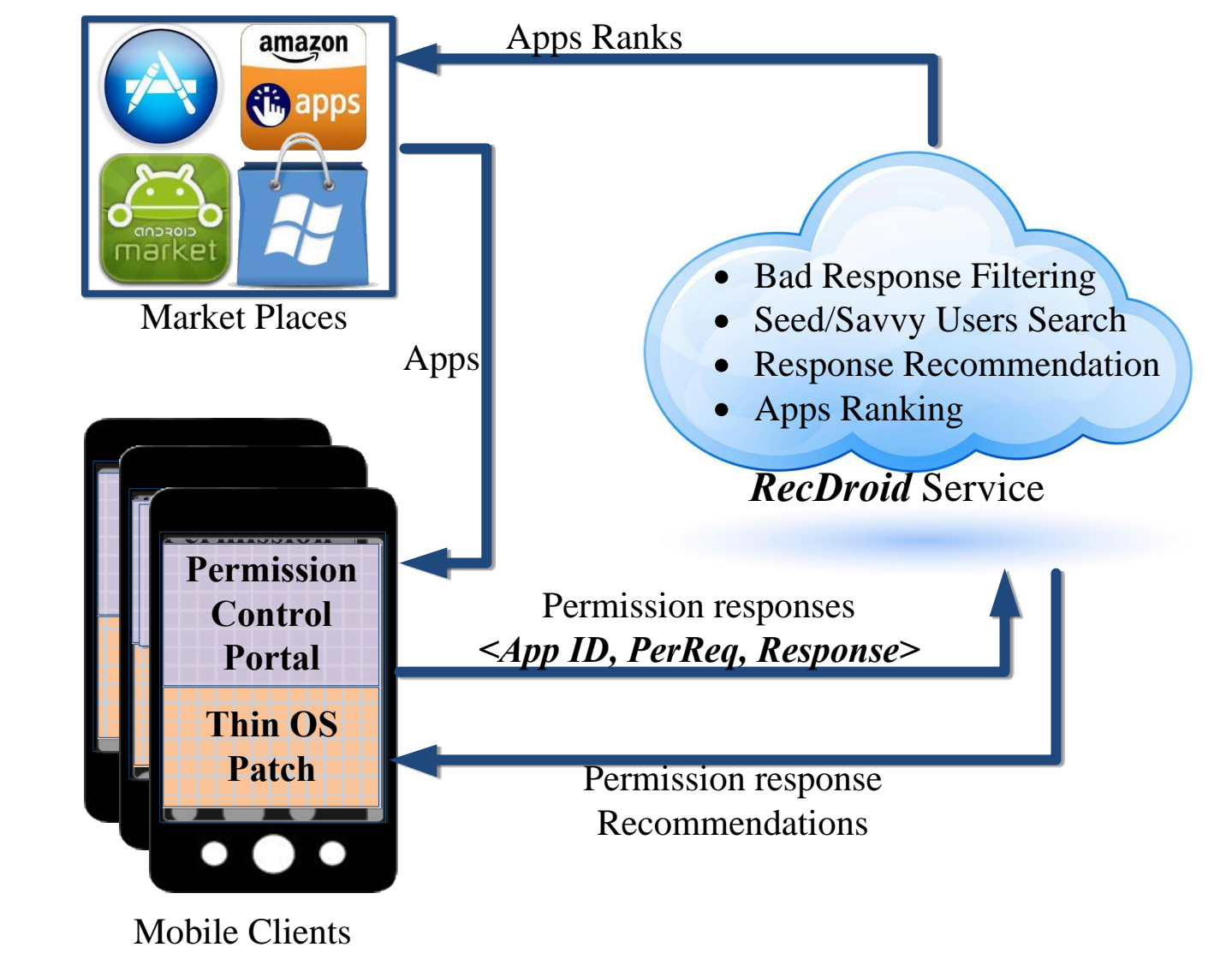
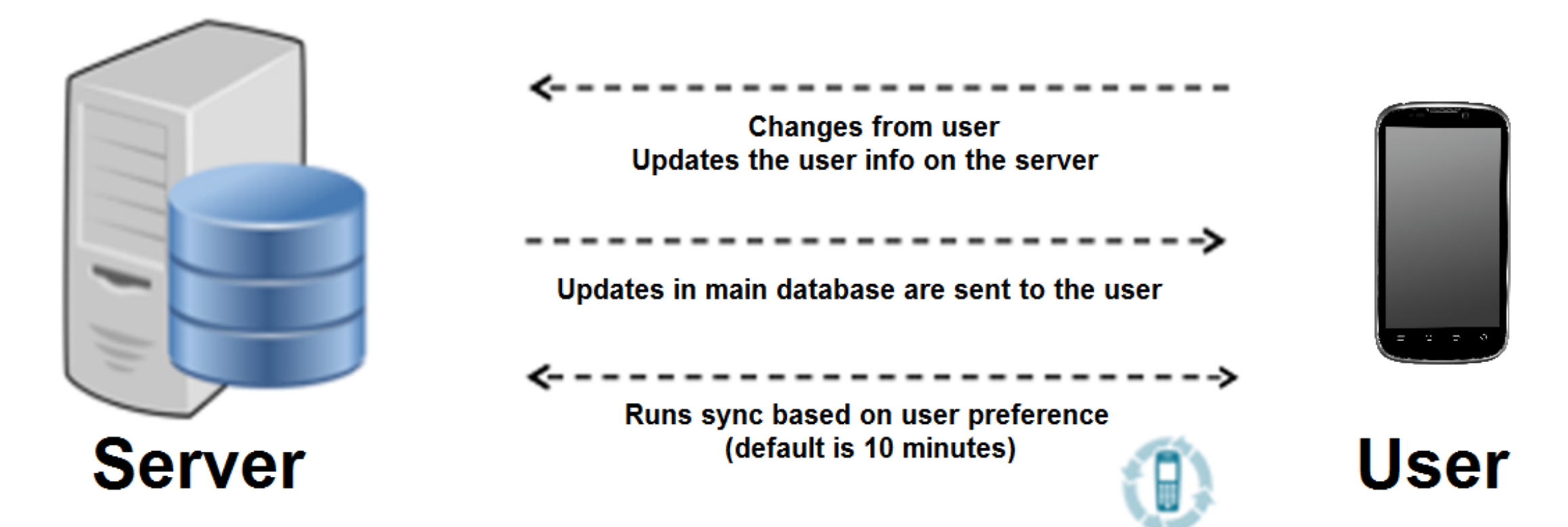## Implementation
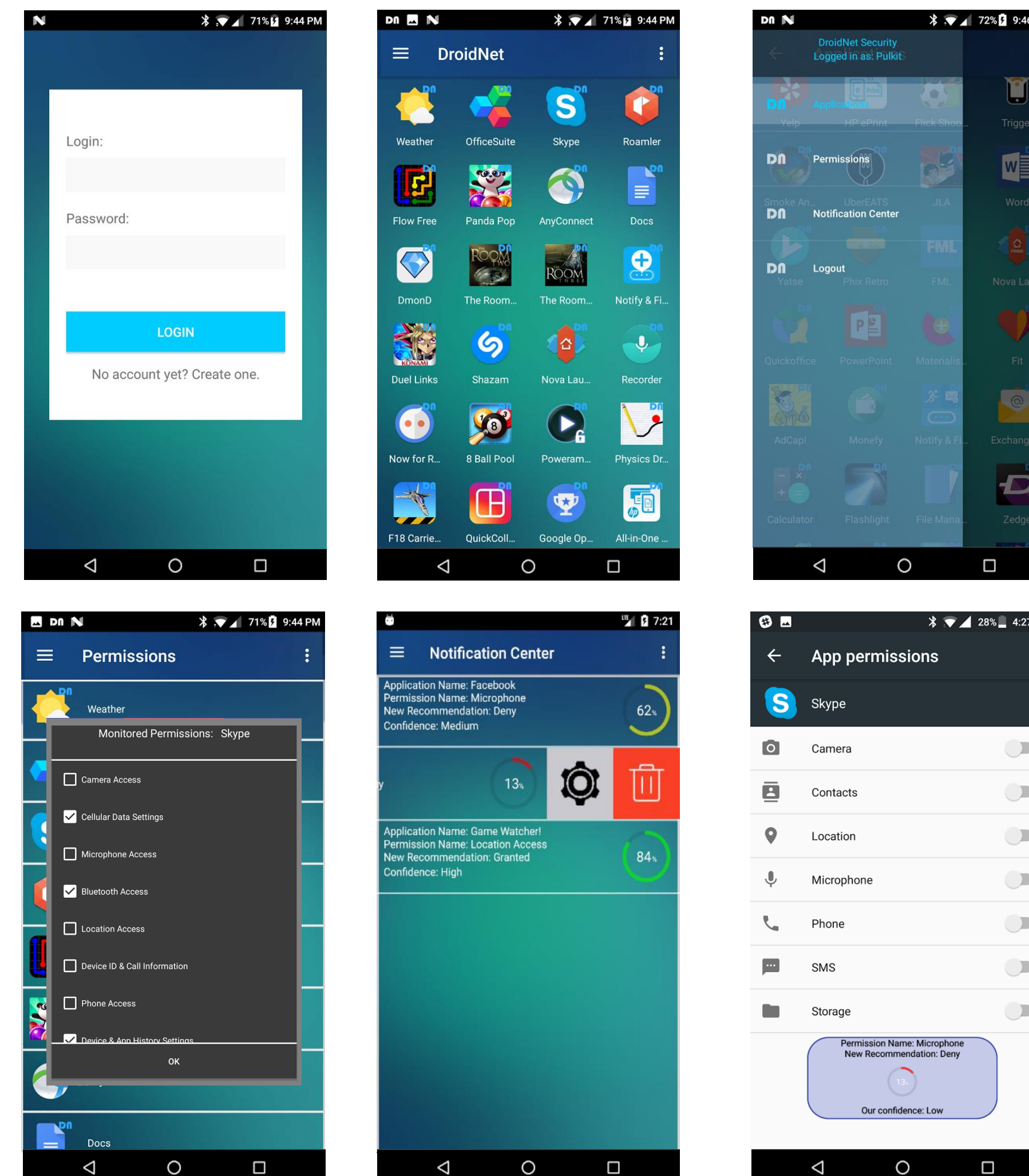
Application Flow
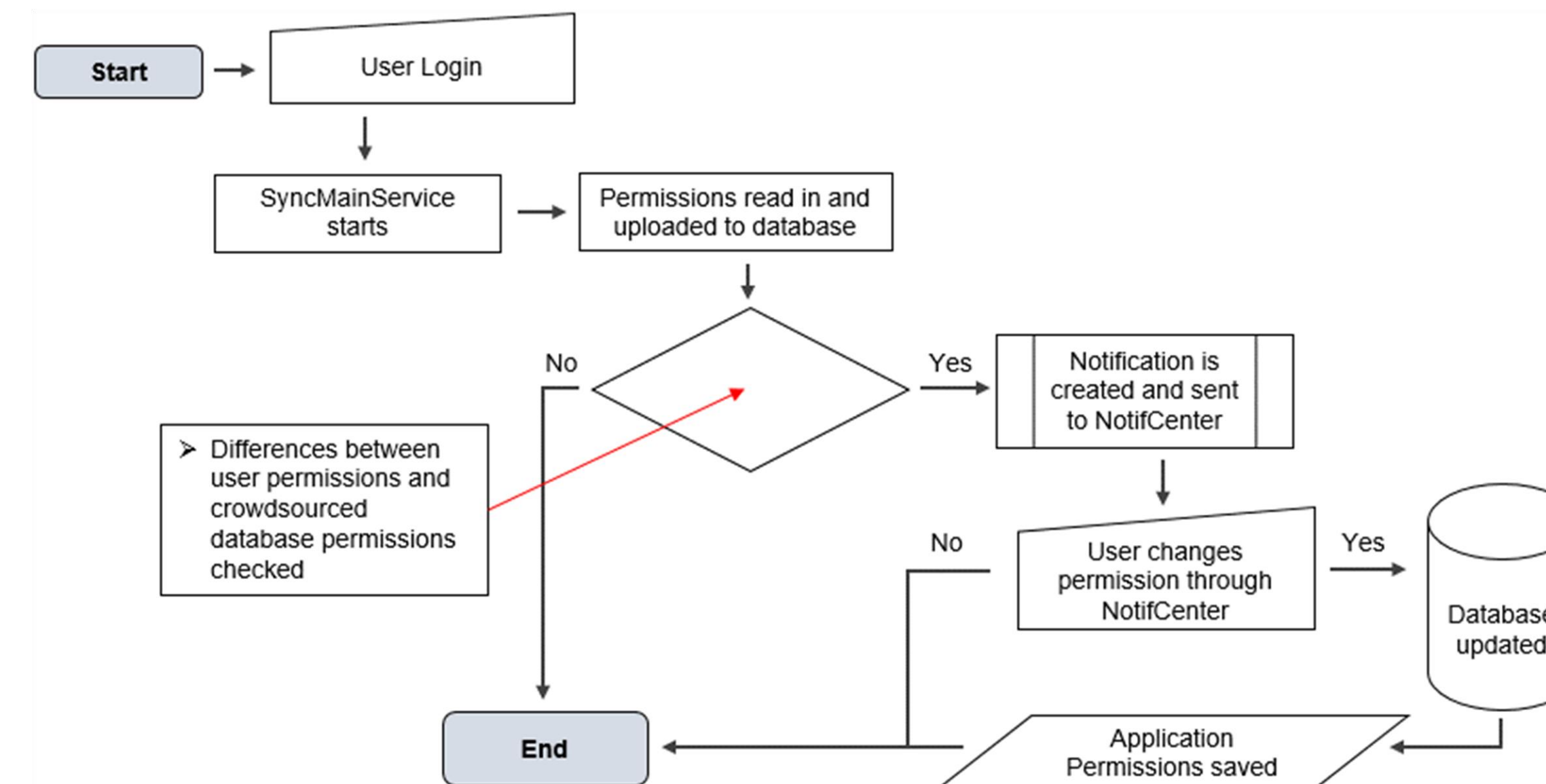
Recommendation Sys.

- Implement an application that allows permission management on Android.

- Inform normal users based on the choices that expert users make.

Database Connection

Server — **User**

The database is split into two main parts:

- The first table includes all permission responses from every user (information for algorithm comes from this table).

- The last table is updated based on the algorithm and new permission responses are sent to users.

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