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**The Problem**

Paper based data collection is time consuming and prone to human error.

Each Nurse keeps a record of everything they do. The nurse then goes into the city for a monthly meeting, where he/she turns in the forms.

Once a month the nurse aggregates the data, and fills out a form.

A data clerk enters the forms into a computer, which gets sent to DHIS.

**What is DHIS?**

District Health Information System

Open Source Health Information system
- Database designed to store and analyze health information
- Currently in use in Africa and Asia
- Covers 300~400 million people

**Why Smartphone Application?**

- View Data as well as Reporting it
- Provides way of reporting data anywhere
- Manage Power and Connectivity Issues
- Hardware is cheap and easily available

**Server Tasks**
- Threaded Tasks
- Interacts with DHIS API
- Parses Data (JSON to Internal Objects)

**Application Cache**
- Holds all Forms + Reports
- Emulates DHIS data structures
- Responsible for saving changed data to disk

**User Interface**
- Interacts with user to get data

**Solution**

Data collection through a smartphone application.

Each Nurse keeps a record of everything they do. The nurse selects the forms to submit, which gets sent to DHIS.

Once a month the nurse aggregates the data, and enters it into the phone.

The nurse then goes into an area where there is internet connectivity.

**Architecture**

Main System Components

**DHIS-ODK**

- Save Data to Disk
- Read State to Display
- Save Data to Memory
- Start Tasks
- Query DHIS

**Get Data from the User**

**Reports**

- Form
- Data

- SQLite

- DHIS-ODK

- Open Data Kit

- HISP INDIA

- CSE Department

- May 2012

- 234

- Inventory Form

Organization Name: CSE Department

Time Period: May 2012

How many computers are there? 234

http://www.cs.washington.edu/education/courses/cse481k/12sp/