# Easy Deposit

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# Outline

# Introduction

- Smart phones have greatly penetrated the population, and they can be used to solve many problems.
- One such problem faced by daily wage workers is their inability to make any savings.
- We intend to solve this with our project.

# Outline

# Abstract


- The idea is to introduce a mechanism for depositing cash in the bank accounts using recharge coupons.
- The user can buy coupons of various denominations.

# Outline

# Existing System

- Cash Deposit Machines are the most common solution.
- The user may deposit money to their accounts using CDMs.
- Many banks provides CDM service.

# Outline

# Literature Survey

- Generation of Pseudo Random Numbers is required for coupon generator.
- The system should be resistant to active attacks.
- In order to do this, select a set of initial Random Number set called feed.
- Can use Mersenne Twister (MT) algorithm for the same.

1

[1] Mersenne Twister: A 623-Dimensionally Equidistributed Uniform Pseudo-Random Number Generator

# Literature Survey

- Implements SSL protection for RESTful API, in order to avoid Data Hijacking attacks.
- Security certificates are maintained by Apache HTTPS server for SSL implementation.
- We use software based Approach.

2

[2] Inside SSL: Accelerating Secure Transactions

# Literature Survey

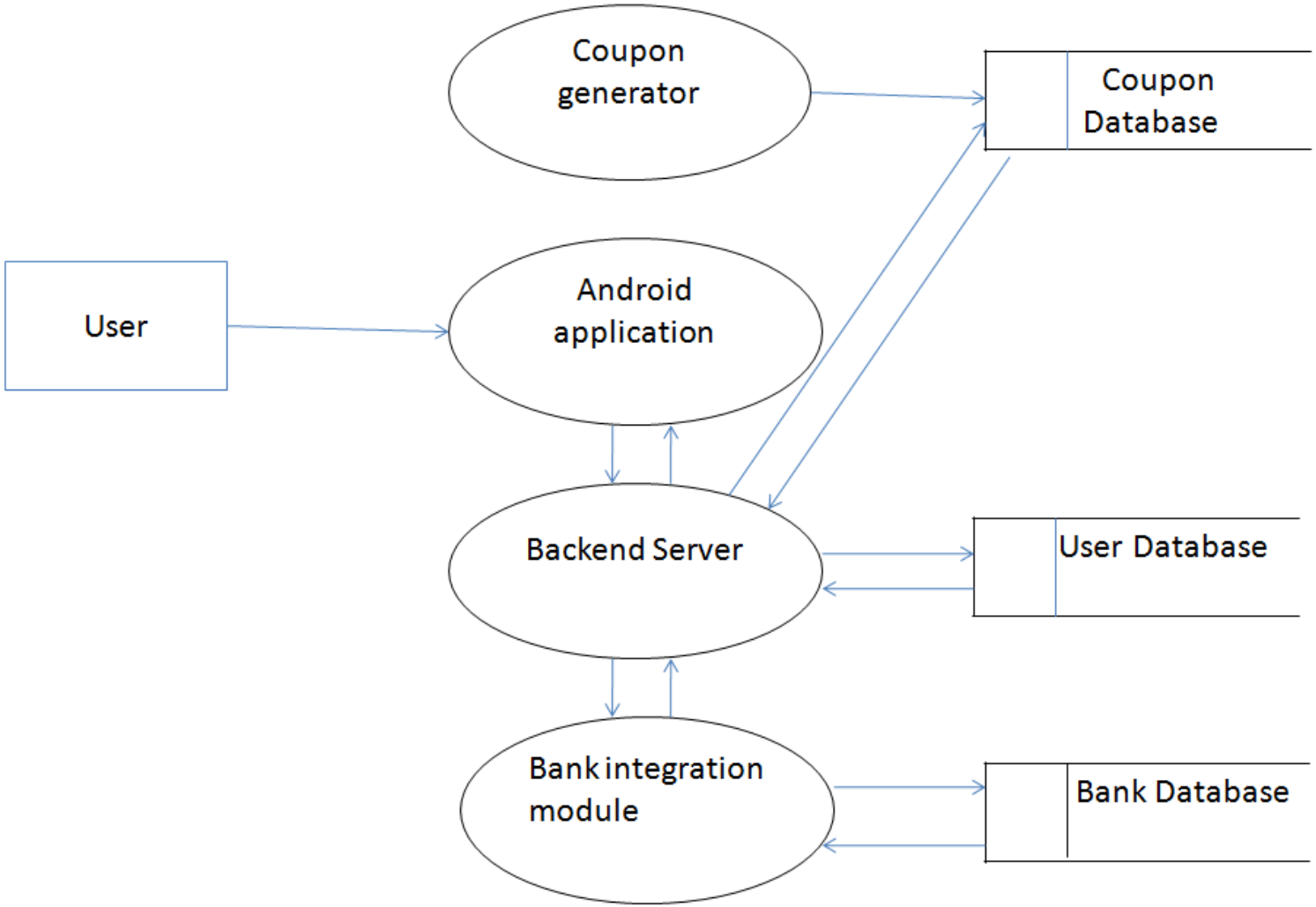
- The API of backend server is implemented using RESTful API.
- Uses Node.JS for platform.
- Application data can be represented in JSON (Javascript Object Notation) format.

3

[3] A Resource Oriented Architecture for the Web of Things.

# Outline

# Data Flow Diagram level 1



# Outline

# Module Description

The system consists of 4 modules

- Android application
- Backend Server
- Coupon generator
- Bank integration module

# Android application

- The application communicates with the Backend server using REST call.
- The response from the Backend server to Android application are provided in JSON format.

# Backend Server

- Backend server is used to serve data to the front end applications, such as the Android application.
- The application provides data and queries the server using REST calls.
- The Backend server is hosted on a fully equipped cloud infrastructure with secure certificates.

# Coupon generator

- Coupon generator is used to generate unique coupon codes by a descrete algorithm that avoids collision.
- The coupon generator also connects to the server to save the generated coupons to the data storage.

# Bank integration module

- Bank integration module is the system that is built to mock the working of a bank.
- This is used to get the information about the users bank account such as their account balance.
- The backend server contacts this module using REST requests.

# Outline

# Hardware Requirements

- Server
  - Processor : Any Quad Core ( > 3 GHz)
  - Memory : 8 GB or higher
  - Disk : 20 GB or higher
- Android Application
  - Processor : Any
  - Memory : 1 GB or higher

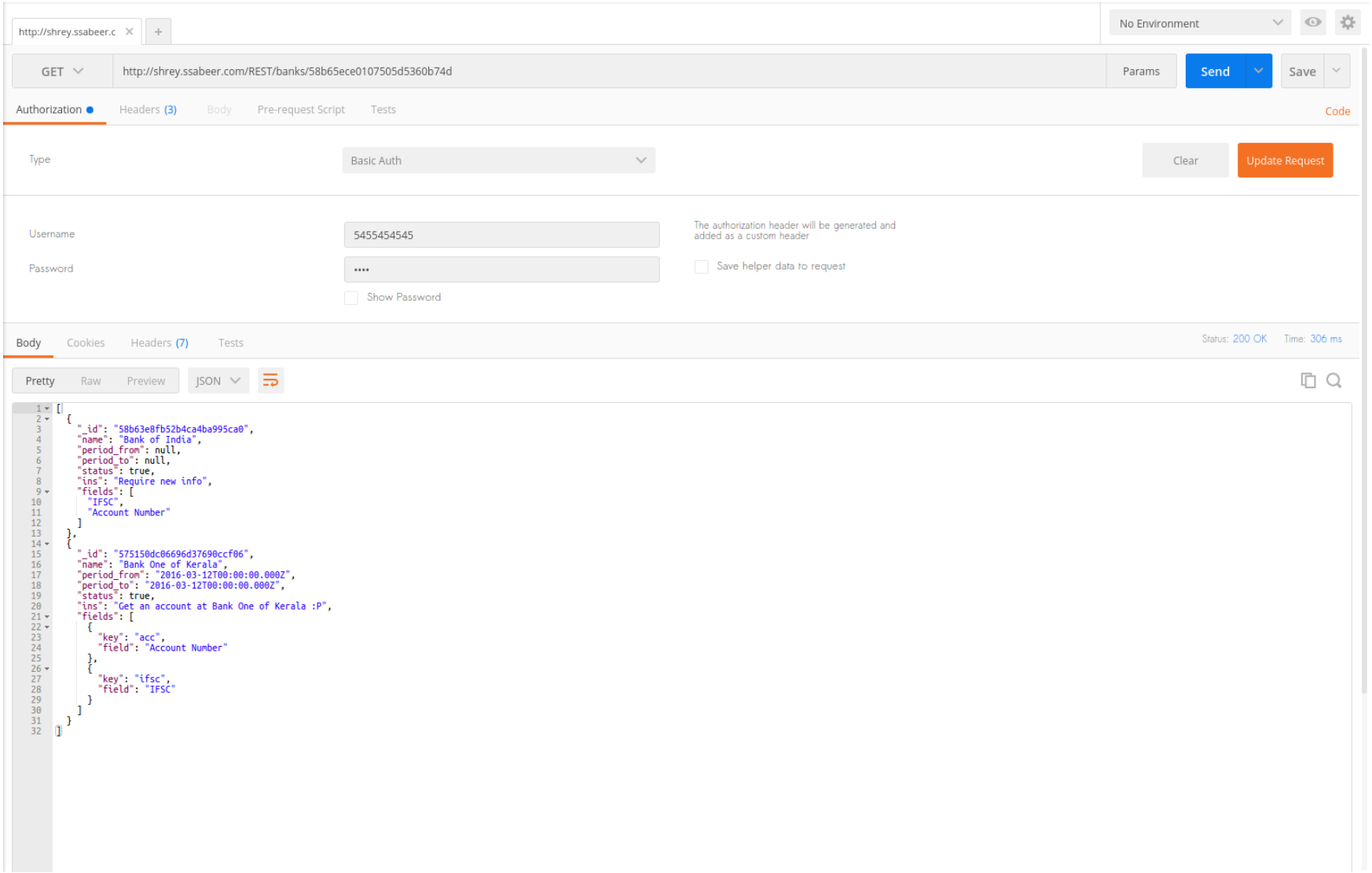
# Software Requirements

- Android application
  - Android Studio
- Backend server
  - IDE : WebStorm
  - OS : Ubuntu(Linux)

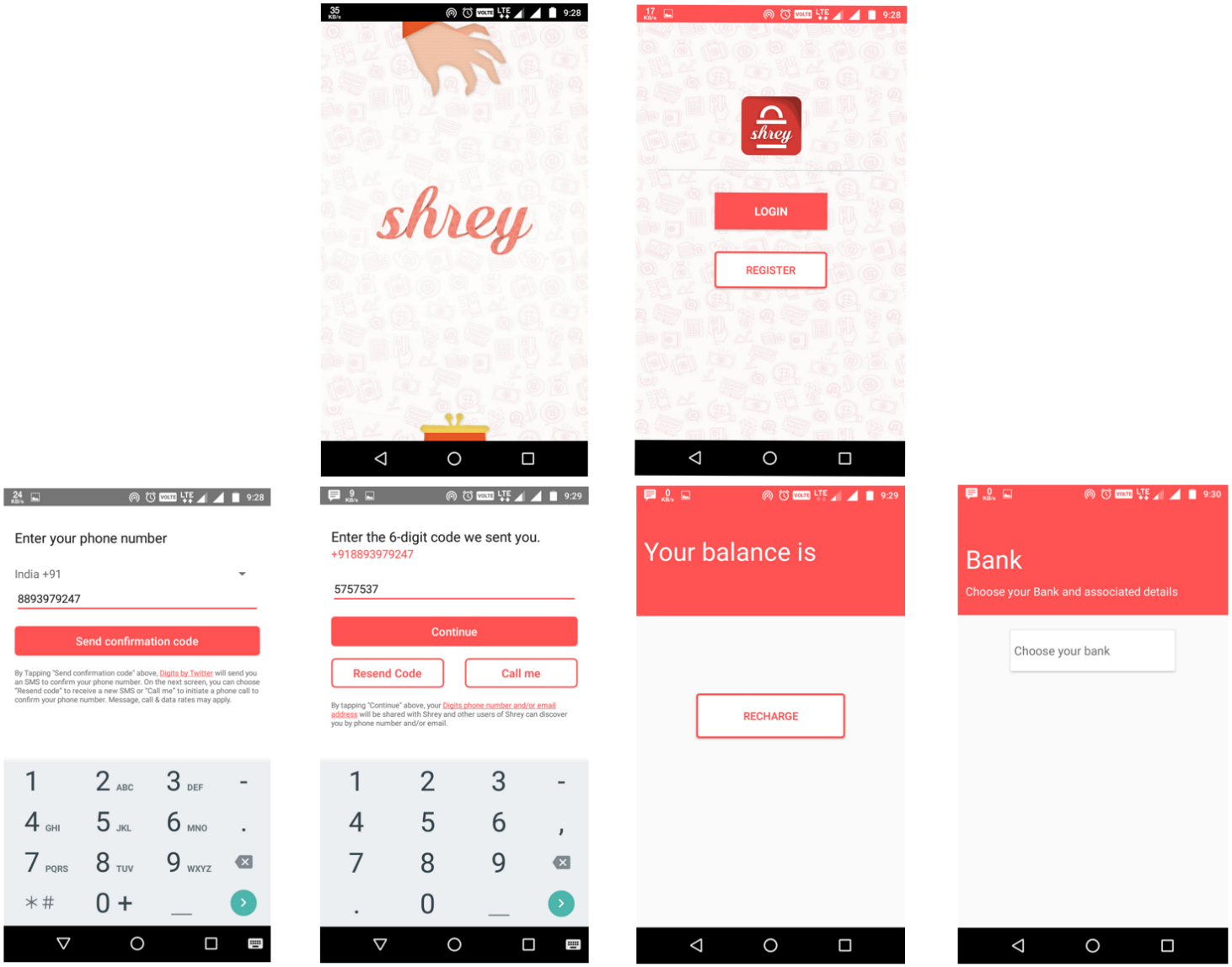
# Outline

# Server Configuration

# NodeJS Backend



# Android Application



# Outline

# Conclusion

- Our project will serve as a way to easily deposit money in bank accounts.
- Its cloud based architecture will help to accommodate a large amount of users.

# Outline

# References

[1] Dominique Guinard, Vlad Trifa, Erik Wilde "A Resource Oriented Architecture for the Web of Things ", *Internet of Things (IOT) Conference, April 2011*.

[2] MAKOTO MATSUMOTO, TAKUJI NISHIMURA "Mersenne Twister: A 623-Dimensionally Equidistributed Uniform Pseudo-Random Number Generator", *ACM Transactions on Modeling, October 2010* .

[3] Wesley Chou "Inside SSL: Accelerating Secure Transactions", *ITPro IEEE, September | October 2002*.

Thank You