

CSE 324: Software Development sessional

# Children Monitoring System

## Non-technical documentation

### Group members:

1. Rasheduzzaman (0805045)
2. Mohammad Minhazul Haq (0805051)

**The problem to be solved**

### ❑ What is the problem?

The lack of monitoring the child while they are not at home causes serious hamper to the child. The kids may be detached from their regular study and chose the path of destroying himself/herself(i.e. drug addiction, getting stacked in a relationship in an early age etc.). So remotely monitoring child activities is badly needed now a days.

### ❑ What is the scope and limitations that can be used to solve this problem?

Since the parents need to know the location of their kids while they are outside from home, we need to use a GPS device or an Android phone to track the kid and get his location. The parents may want to know his kid's location anytime, so we need a secured database to store the location of that device.

### ❑ Who will be the client?

The parents around the world will be the active client of that system. And their kids will be the passive client of the system.

# **Project in a brief**

## ❑ Capturing kid's location

We will make an Android application that will continually send the kid's location data to our server.

## ❑ Showing location to parent

The parents can see their kids position logging on to our website.

## ❑ Calls dialed/received & messages send/received

Besides, the parents can monitor all the data related to the calls dialed, calls received, message sent, message received. These data will be sent from the kid's Android device.

## ❑ Blocking dialing unwanted numbers

The parent may also wish to block any number to be dialed from his kid's phone. We will provide parents with this facilities.

# Functionality details

## ❑ The Server

- The data send by the device will be saved into database on the server.
- Parents can log in to their account to see the data of the kids.
- They can see the locations of their child in a Google Map.
- They can provide the phone numbers of the call blockings.

## ❑ 24 hour tracker

- A software which will run in the phone as a service and track the location of the phone.
- It will send the location data to a database with Http client.
- It also helps to track the phone call and messages of the kid's phone and send the required data to the server.
- It can also block the phone calls of specific mobile numbers provided by the parents.

# User Interface



# Children Monitoring System

Username:

Password:

Login

New user? Click [here](#)

Login page

Name:	<input type="text" value="Mohammad Minhazul Haq"/>
Address:	<input type="text" value="Kallyanpur, Dhaka"/>
Mobile no.:	<input type="text" value="01716451393"/>
Username:	<input type="text" value="userABCDE"/>
Password:	<input type="password" value="••••••••"/>
Retype password:	<input type="password" value="•••••••• "/>
<input type="button" value="Submit"/>	

**New user page**

**Congrats!**

**Your account has been created. Click [here](#) to go to Login page**

**User created**

**Location tracker**

**Phonecall tracker**

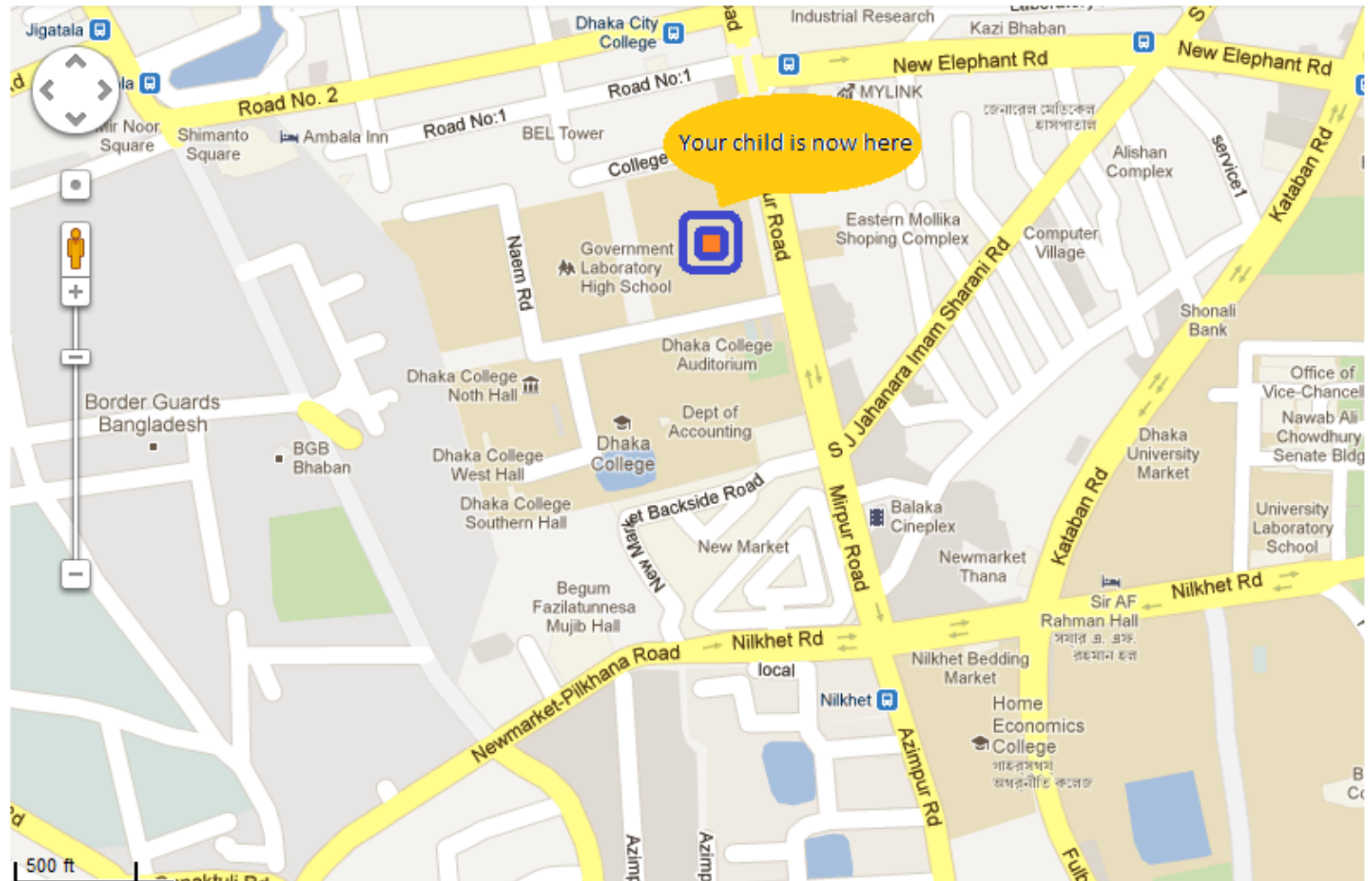
**Message tracker**

**Phonecall blockings**

**Archives**

**Edit account settings**

**Logout**



# Location tracker

- Location tracker
- Phonecall tracker
- Message tracker
- Phonecall blockings
- Archives
- Edit account settings
- Logout

#### Phonecall dialled today:

Sr.	Dialled to	Time	Duration
1.	01715343432	11:15 AM	2:15 mins
2.	01912121443	5:59 PM	4:33 mins
3.	01612365423	7:12 PM	3:41 mins
4.	01712215323	08:25 PM	3:14 mins
5.	01912121443	11:18 PM	1:24 mins

#### Phonecall received today:

Sr.	Caller	Time	Duration
1.	01715343432	10:12 AM	2:12 mins
2.	01812221123	5:54 PM	3:14 mins
3.	01912121443	7:59 PM	1:24 mins

# Phonecall tracker

Location tracker

Phonecall tracker

Message tracker

Phonecall blockings

Archives

Edit account settings

Logout

#### Message sent today:

Sr.	Send to	Text	Time
1.	01715343432	asdgfdasdsdgdfasdasd	11:15 AM
2.	01912121443	aaasddfdfgdfggfgedfg	5:59 PM
3.	01612365423	fghfgfdfsdfsdf	7:12 PM
4.	01712215323	sdfsdf	08:25 PM
5.	01912121443	sgdfghfgh	11:18 PM

#### Message received today:

Sr.	Received from	Text	Time
1.	01715343432	sdsdf	10:12 AM
2.	01812221123	gggfd	5:54 PM
3.	3322	service message	7:59 PM

# Message tracker

**Location tracker**

**Phonecall tracker**

**Message tracker**

**Phonecall blockings**

**Archives**

**Edit account settings**

**Logout**

**Phonecall blocking list:**

Sr.	Phone no.	Delete
1.	01711111123	<input type="button" value="X"/>
2.	01912643455	<input type="button" value="X"/>
3.	01612365332	<input type="button" value="X"/>
4.	01712211523	<input type="button" value="X"/>
5.	01912177534	<input type="button" value="X"/>

**Add a number to list:**

# Phonecall blockings

[Location tracker](#)[Phonecall tracker](#)[Message tracker](#)[Phonecall blockings](#)[Archives](#)[Edit account settings](#)[Logout](#)

Archive for: 15 May, 2012 ▾

[Show](#)**Phonecall dialled:**

Sr.	Dialled to	Time	Duration
1.	01715343432	11:15 AM	2:15 mins
2.	01912121443	5:59 PM	4:33 mins
3.	01612365423	7:12 PM	3:41 mins
4.	01712215323	08:25 PM	3:14 mins
5.	01912121443	11:18 PM	1:24 mins

**Phonecall received:**

Sr.	Caller	Time	Duration
1.	01715343432	10:12 AM	2:12 mins
2.	01812221123	5:54 PM	3:14 mins
3.	01912121443	7:59 PM	1:24 mins
4.	01712215323	10:21 PM	4:33 mins
5.	01811123142	11:14 PM	3:41 mins

**Messages sent:**

Sr.	Receiver	Time
1.	01715343212	9:12 AM
2.	01812221144	3:14 PM
3.	01912121421	4:44 PM
4.	01712215342	10:26 PM

# Archives



**Technology to be used**

## ❑ Language

- JAVA
- PHP
- HTML
- XML
- JAVA-script
- AJAX

## ❑ Database

- MySQL
- SQLite

## ❑ Framework

- Zend Framework for PHP
- Spring Framework for Android

## ❑ IDE

- Eclipse IDE for Android
- NetBeans IDE for website

**How it works**

Parent will create an account to our site with an username & password

We will send a link to his email address

He needs to visit the link to activate the account

The account is now activated

The parent will login and provide us with his child's name, dob etc.

The parent will now try to install our software on his child's mobile

The parent must provide with his username, password & child's name at the 1st step of installation

If provided 3 data is correct, then the installation will be complete & the child\_id will be saved on phone

Anytime, when needed to read from our server or write to database the software will use this child\_id

The parent can monitor his child's location, phonecalls & messages anytime he wants

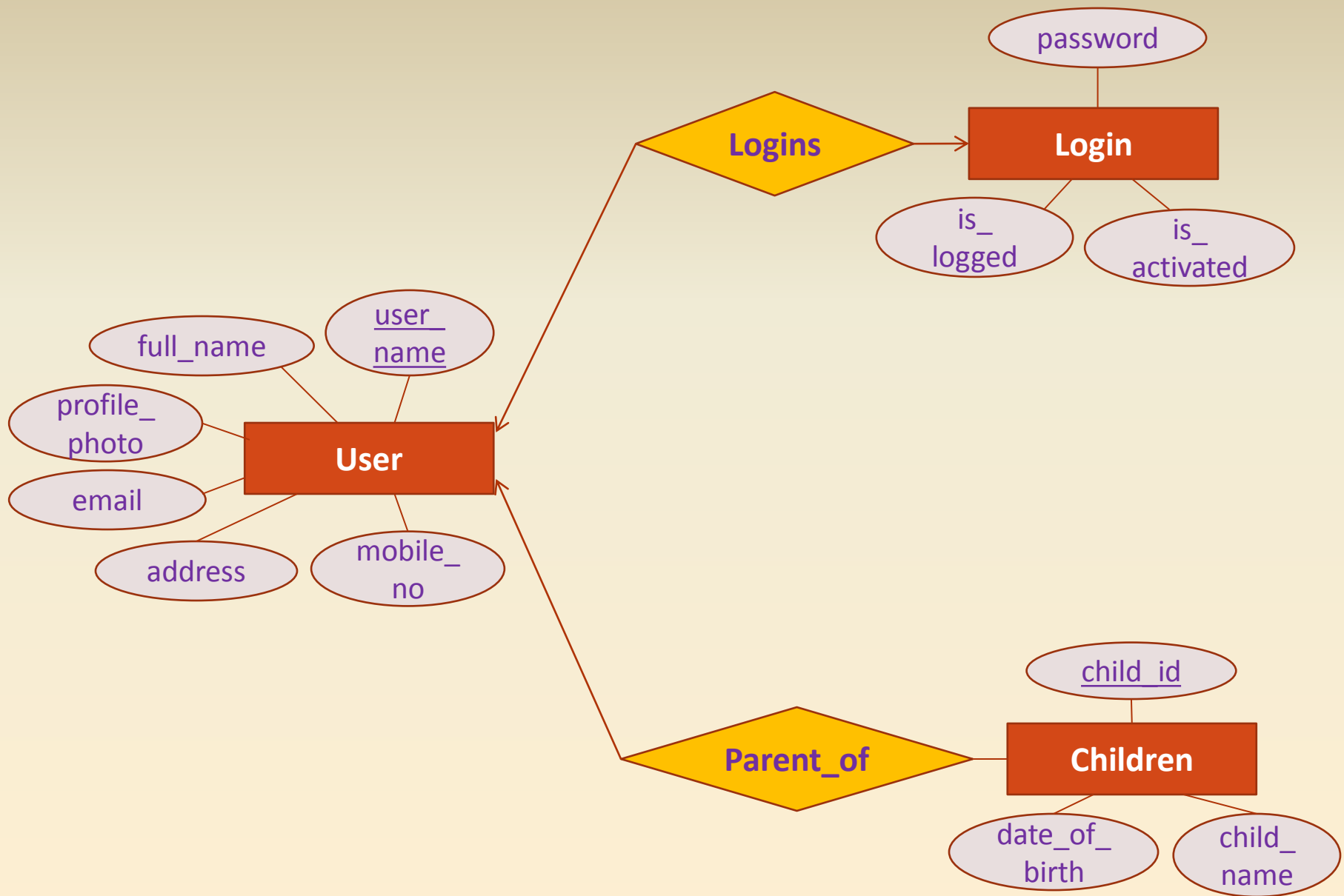
The below data will be read from server:

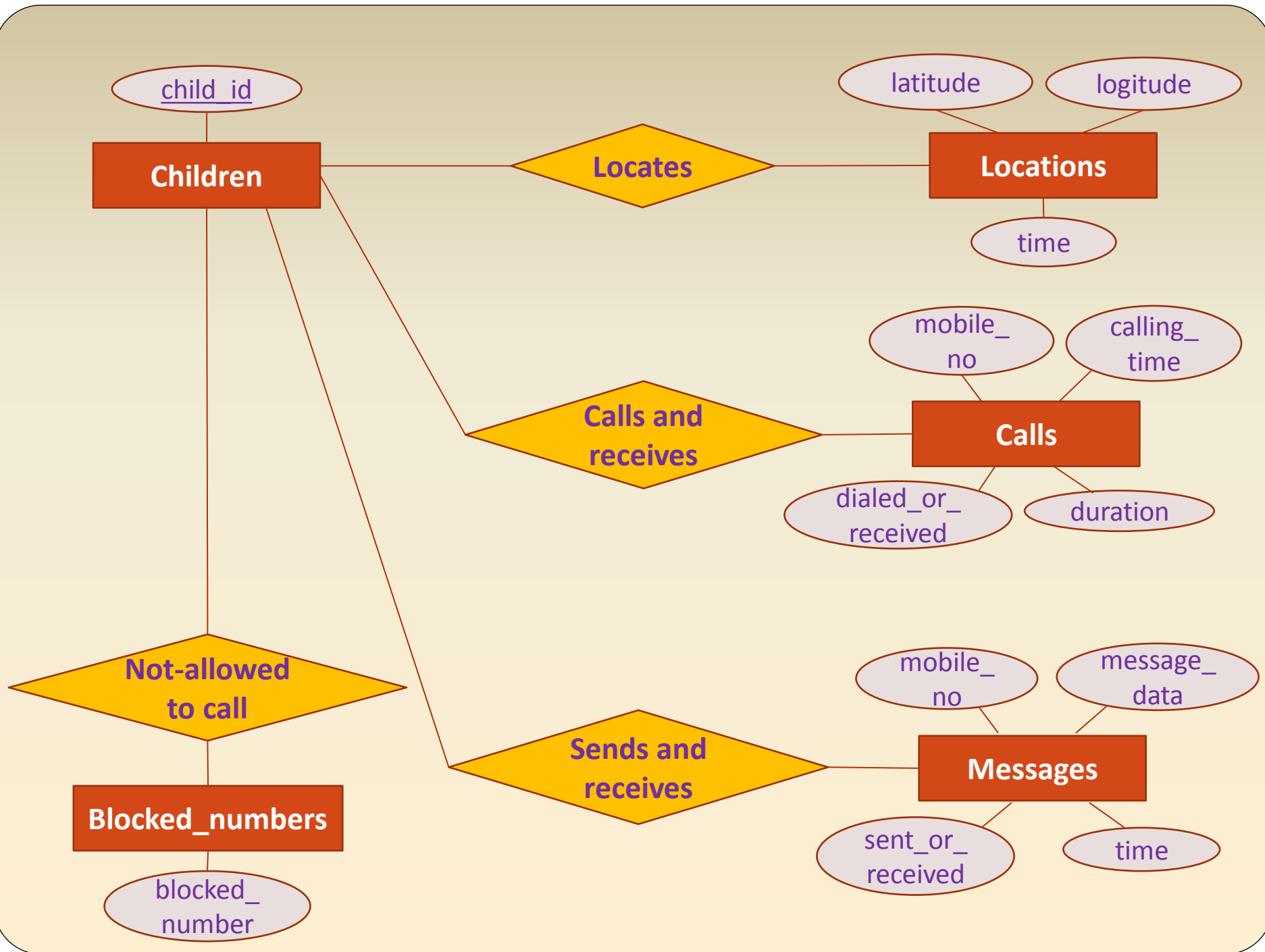
1. Blocked caller list once or twice a day or at the right moment when parent changes & saves the list

The below data will be sent to server:

1. Child's location repeatedly after 5-10 minutes
2. Mobile no., time ,duration when child dials someone
3. Mobile no., time, duration when child receive a call
4. Mobile no., message content, time when child receives a message
5. Mobile no., message content, time when child send a message
6. A blocked caller calls the child
7. Child's attempt to dialing a blocked caller
8. Child's attempt to close the running software

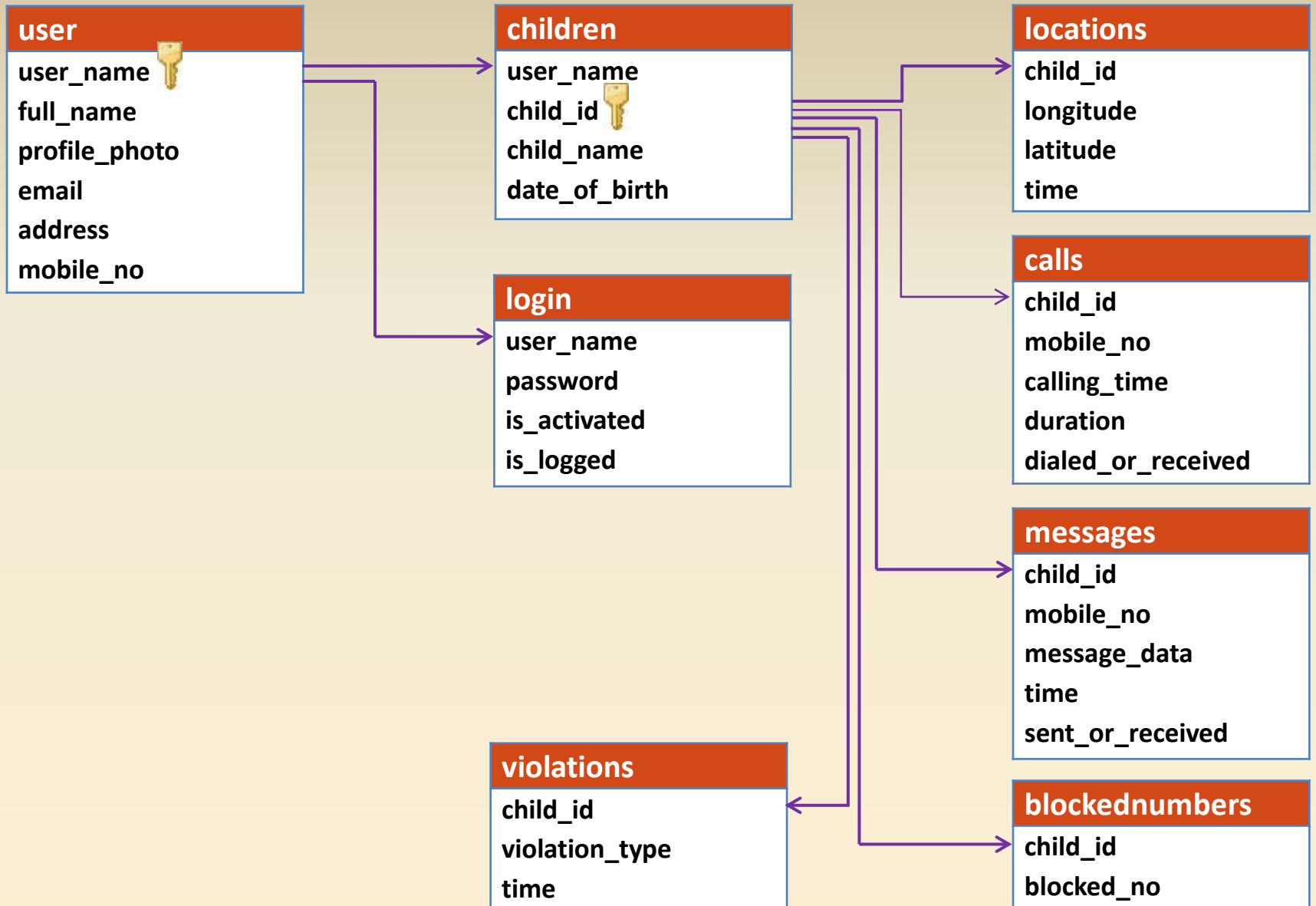
# Entity Relationship Diagram of Server





# Table Schema of Server





# SQL code for DDL

## □ user :

```
create table user(  
  user_name varchar(15) primary key,  
  full_name varchar(50),  
  email varchar(50),  
  address varchar(100),  
  mobile_no varchar(20));
```

## □ children :

```
create table children(  
  user_name varchar(15) references user(user_name),  
  child_id varchar(15) primary key,  
  child_name varchar(50),  
  date_of_birth date);
```

## □ login :

```
create table login(  
  user_name varchar(15) references user(user_name),  
  password varchar(15),  
  is_activated bool default 0,  
  is_logged bool default 0);
```

## □ locations :

```
create table locations(  
  child_id varchar(15) references children(child_id),  
  logitude double,  
  latitude double,  
  time datetime);
```

## □ calls :

```
create table calls(  
  child_id varchar(15) references children(child_id),  
  mobile_no varchar(15),  
  calling_time datetime,  
  duration smallint,  
  dialed_or_received bool);
```

## □ messages :

```
create table messages(  
  child_id varchar(15) references children(child_id),  
  mobile_no varchar(15),  
  message_data varchar(160),  
  time datetime,  
  sent_or_received bool);
```



## □ blockednumbers :

```
create table blockednumbers(  
  child_id varchar(15) references children(child_id),  
  blocked_no varchar(15));
```

## □ violations :

```
create table violations(  
  child_id varchar(15) references children(child_id),  
  violation_type smallint,  
  time datetime);
```



End of slides