# CLASS DIAGRAM

DataPack Tracker

**Prepared by Tracknet**
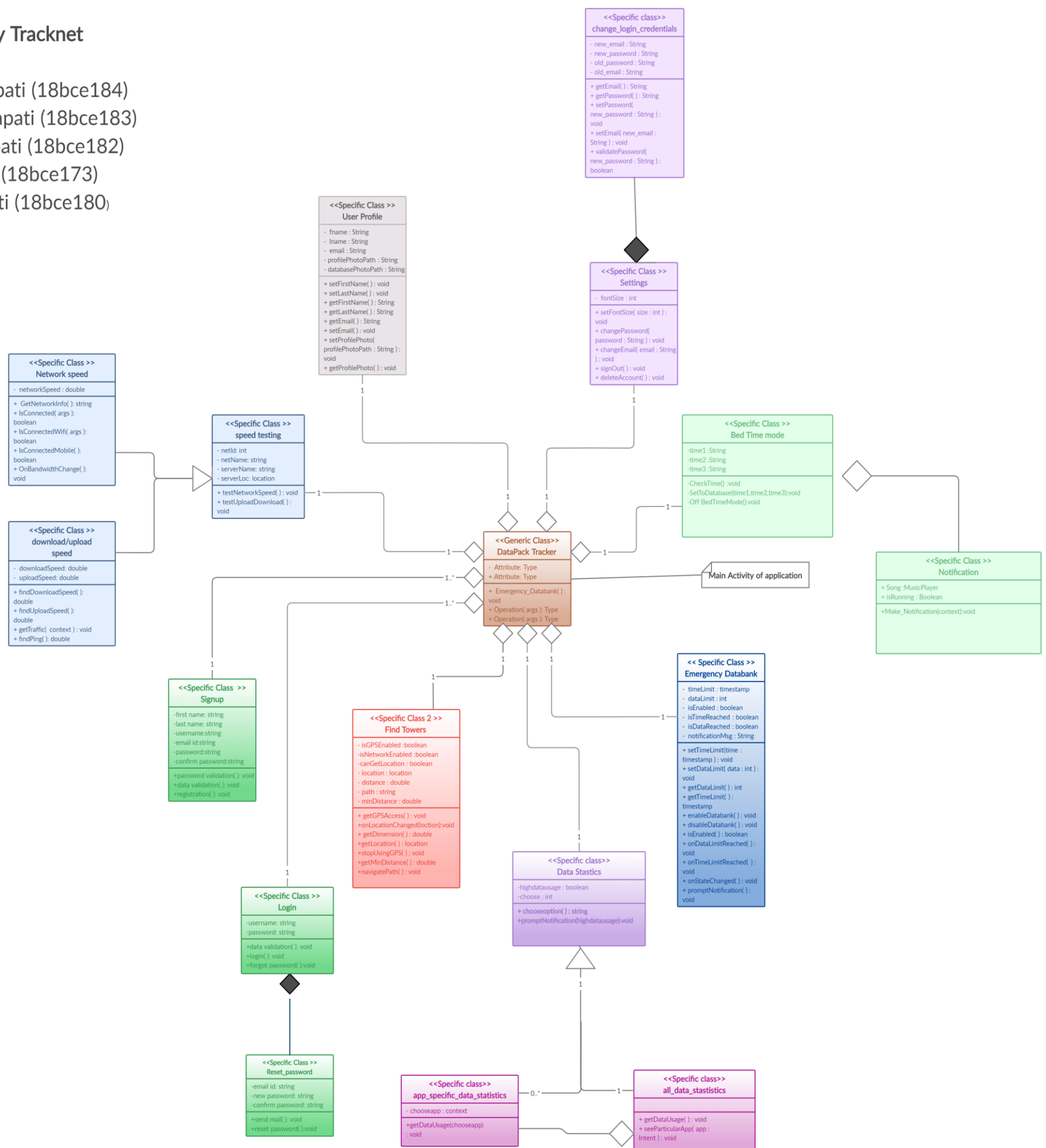
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**<<Specific class>> change_login_credentials**
- new_email : String
- new_password : String
- old_password : String
- old_email : String

+ getEmail ( ) : String
+ getPassword ( ) : String
+ setPassword( new_password : String ) : void
+ setEmail( new_email : String ) : void
+ validatePassword( new_password : String ) : boolean

**<<Specific Class >> User Profile**
- fname : String
- lname : String
- email : String
- profilePhotoPath : String
- databasePhotoPath : String

+ setFirstName( ) : void
+ setLastName( ) : void
+ getFirstName( ) : String
+ getLastName( ) : String
+ getEmail( ) : String
+ setEmail( ) : void
+ setProfilePhoto( profilePhotoPath : String ) : void
+ getProfilePhoto( ) : void

**<<Specific Class >> Settings**
- fontSize : int

+ setFontSize( size : int ) : void
+ changePassword( password : String ) : void
+ changeEmail( email : String ) : void
+ signOut( ) : void
+ deleteAccount( ) : void

**<<Specific Class >> Network speed**
- networkSpeed : double

+ GetNetworkInfo( ) : string
+ IsConnected( args ) : boolean
+ IsConnectedWifi( args ) : boolean
+ IsConnectedMobile( ) : boolean
+ OnBandwidthChange( ) : void

**<<Specific Class >> speed testing**
- netId: int
- netName: string
- serverName: string
- serverLoc: location

+ testNetworkSpeed( ) : void
+ testUploadDownload( ) : void

**<<Specific Class >> download/upload speed**
- downloadSpeed: double
- uploadSpeed: double

+ findDownloadSpeed( ) : double
+ findUploadSpeed( ) : double
+ getTraffic( context ) : void
+ findPing( ) : double

**<<Generic Class>> DataPack Tracker**
- Attribute: Type
+ Attribute: Type

+ Emergency_Databank( ) : void
+ Operation( args ) : Type
+ Operation( args ) : Type

Main Activity of application

**<<Specific Class >> Bed Time mode**
- time1 :String
- time2 :String
- time3 :String

- CheckTime() :void
- SetToDatabase(time1,time2,time3):void
- Off BedTimeMode():void

**<<Specific Class >> Notification**
+ Song :MusicPlayer
+ IsRunning : Boolean

+Make_Notification(context):void

**<<Specific Class >> Signup**
-first name: string
-last name: string
-username: string
-email id:string
-password:string
-confirm password:string

+password validation( ): void
+data validation( ): void
+registration( ): void

**<<Specific Class 2 >> Find Towers**
- isGPSEnabled :boolean
- isNetworkEnabled :boolean
- canGetLocation : boolean
- location : location
- distance : double
- path : string
- minDistance : double

+ getGPSAccess( ) : void
+onLocationChanged(loction):void
+ getDimension( ) : double
+getLocation( ) : location
+stopUsingGPS( ) : void
+getMinDistance( ) : double
+navigatePath( ) : void

**<<Specific Class >> Emergency Databank**
- timeLimit : timestamp
- dataLimit : int
- isEnabled : boolean
- isTimeReached : boolean
- isDataReached : boolean
- notificationMsg : String

+ setTimeLimit( time : timestamp ) : void
+ setDataLimit( data : int ) : void
+ getDataLimit( ) : int
+ getTimeLimit( ) : timestamp
+ enableDatabank( ) : void
+ disableDatabank( ) : void
+ isEnabled( ) : boolean
+ onDataLimitReached( ) : void
+ onTimeLimitReached( ) : void
+ onStateChanged( ) : void
+ promptNotification( ) : void

**<<Specific class>> Data Stastics**
-highdatausage : boolean
-choose : int

+ chooseoption( ) : string
+promptNotification(highdatausage):void

**<<Specific Class >> Login**
-username: string
-password: string

+data validation( ): void
+login( ): void
+forgot password( ):void

**<<Specific Class >> Reset_password**
-email id: string
-new password: string
-confirm password: string

+send mail ( ): void
+reset password( ):void

**<<Specific class>> app_specific_data_statistics**
- chooseapp : context

+getDataUsage(chooseapp) : void

**<<Specific class>> all_data_statistics**
+ getDataUsage( ) : void
+ seeParticularApp( app : Intent ) : void

1   1   1   1..*   1..*   0..*

| Abstract | | |
|---|---|---|
| **DATAPACK TRACKER** | | |
| • User registration<br>• User authentication<br>• Bed time mode<br>• Emergency databank<br>• Network speed<br>• Download/Upload speed<br>• Tower Navigation<br>• Show Data Statistics<br>• Mange Settings<br>• Show User Profile | | • User<br>• Databank<br>• Network Speed<br>• Downloading/Uploading Speed<br>• Speed Testing<br>• Login<br>• Signup<br>• Find Towers<br>• Data Statistics<br>• Setting |

| | DATAPACK TRACKER |
|---|---|
| **LOGIN** | |
| • Password<br>• Username | • Firebase Database |

| | DATAPACK TRACKER |
|---|---|
| **SIGN UP** | |
| • First Name<br>• Last Name<br>• User Name<br>• Email ID<br>• Password<br>• Confirm Password | • Firebase Database |

| RESET PASSWORD | DATAPACK TRACKER |
|---|---|
| <ul><li>Email ID</li><li>New Password</li><li>Confirm Password</li></ul> | <ul><li>Firebase Dsatabase</li></ul> |

| BED TIME MODE | DATAPACK TRACKER |
|---|---|
| <ul><li>Check Time And Make Notification And Turn On/Off Data</li><li>Set Database</li><li>Off Bed Time Mode</li></ul> | <ul><li>SQL Lite Database</li><li>Notification</li></ul> |

| NOTIFICATION | DATAPACK TRACKER |
|---|---|
| <ul><li>Make Notification</li></ul> | <ul><li>System Files</li></ul> |

| FIND TOWERS | DATAPACK TRACKER |
|---|---|
| <ul><li>Turn on GPS</li><li>Find Network of Connection</li><li>Find Location Of Tower</li><li>Get Total Distance</li><li>Navigate Path</li><li>Turn Off GPS</li></ul> | <ul><li>System</li><li>GPS</li></ul> |

| EMERGENCY DATABANK | DATAPACK TRACKER |
|---|---|
| • Set Data Limit<br>• Set Time Limit<br>• Provide Notification When Limits Exceeded<br>• On/Off Databank | • Notification<br>• Alarmclock<br>• sqlite database |

| Data statistics | DATAPACK TRACKER<br>all app statistics, particular app statistics |
|---|---|
| • show option for choosing app | • all app statistics<br>• particular app statistics |

| all app statistics | Data Statistics |
|---|---|
| • show data statistics of all app | • ActivityManager<br>• TrafficStats<br>• particular app statistics |

| particular app statistics | Data Statistics |
|---|---|
| • show data statistics of a particular app | • ActivityManager<br>• NetworkStatsManager |

| Settings | DATAPACK TRACKER |
|---|---|
| • change password<br>• change email<br>• change font<br>• change theme | • Firebase |

| User | DATAPACK TRACKER |
|---|---|
| • user details<br>• user photo | • Firebase |

| Speed Testing<br>Network speed, download/upload speed | DATAPACK TRACKER |
|---|---|
| • check network connection<br>• collect network info | • ConnectivityManager<br>• NetworkInfo<br>• Network speed<br>• download/upload speed |

| Network Speed | Speed Testing |
|---|---|
| • check network speed | • ConnectivityManager |

| download/upload speed | Speed Testing |
|---|---|
| • check download/upload speed | • ConnectivityManager |