



LifeExtender+

Group #16
Technical Documentation

github.com/SE2017/LifeExtenderPlus

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Class List

A list of all the classes (Java) are shown here. Below is the relevant information for each main tab class. As in our design, there are five tabs, each with helper classes. The main tabs are: HomeTab, StatsTab, GoalsTab, MapsTab, and SettingsTab.

Class Summary	
Class	Description
AchievedGoals	
AddActivePeriod	
AddingGoals	
AppCompatActivity	A <code>PreferenceActivity</code> which implements and proxies the necessary calls to be used with <code>AppCompat</code> .
bottomSectionFrag	
ChangeCalendar	
ChangeLocationGPS	
ChangeNotifications	
ChangeProfile	
EditGoals	
eTime	
g_graph	
GoalObjects	
GoalsTab	
h_graph	
HomeTab	
IndexObjects	
LocationObject	
LocationService	
MapsTab	
r_graph	
SettingsObject	
SettingsTab	
StatsTab	
TimeObject	
w_graph	

HomeTab

The home tab consists of fields required to set up the Google Calendar API, most of which is auto-generated code.

Field Summary

Fields

Modifier and Type	Field and Description
private static java.lang.String	BUTTON_TEXT
static long	endAPSSuggestion
private android.widget.Button	mCallApiButton
(package private) com.google.api.client.googleapis.extensions.android.gms.auth.GoogleAccountCredential	mCredential
private android.widget.TextView	mOutputText
(package private) android.app.ProgressDialog	mProgress
private static java.lang.String	PREF_ACCOUNT_NAME
(package private) static int	REQUEST_ACCOUNT_PICKER
(package private) static int	REQUEST_AUTHORIZATION
(package private) static int	REQUEST_GOOGLE_PLAY_SERVICES
(package private) static int	REQUEST_PERMISSION_GET_ACCOUNTS
private static java.lang.String[]	SCOPES
static java.util.List<eTime>	sorted
static long	startAPSSuggestion
static boolean	timeAvailable

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type	Method and Description
private void	acquireGooglePlayServices() Attempt to resolve a missing, out-of-date, invalid or disabled Google Play Services installation via a user dialog, if possible.
private void	chooseAccount() Attempts to set the account used with the API credentials.
void	displayGoals(android.view.View v)
void	findOpenTimes(android.view.View v)
private void	getResultsFromApi() Attempt to call the API, after verifying that all the preconditions are satisfied.
void	gotoGoals(android.view.View v)
void	gotoHome(android.view.View v)
void	gotoMaps(android.view.View v)
void	gotoSettings(android.view.View v)
void	gotoStats(android.view.View v)

private boolean	isDeviceOnline() Checks whether the device currently has a network connection.
private boolean	isGooglePlayServicesAvailable() Check that Google Play services APK is installed and up to date.
protected void	onActivityResult (int requestCode, int resultCode, android.content.Intent data) Called when an activity launched here (specifically, AccountPicker and authorization) exits, giving you the requestCode you started it with, the resultCode it returned, and any additional data from it.
protected void	onCreate (android.os.Bundle savedInstanceState) Create the main activity.
void	onPermissionsDenied (int requestCode, java.util.List<java.lang.String> list) Callback for when a permission is denied using the EasyPermissions library.
void	onPermissionsGranted (int requestCode, java.util.List<java.lang.String> list) Callback for when a permission is granted using the EasyPermissions library.
void	onRequestPermissionsResult (int requestCode, java.lang.String[] permissions, int[] grantResults) Respond to requests for permissions at runtime for API 23 and above.
(package private) void	showGooglePlayServicesAvailabilityErrorDialog (int connectionStatusCode) Display an error dialog showing that Google Play Services is missing or out of date.

StatsTab

The stats tab contains fields required to display relevant statistics.

Field Summary

Fields

Modifier and Type	Field and Description
static int[]	current
static int[]	date
private com.google.firebase.database.DatabaseReference	fDatabase
static IndexObjects	HealthInfo
IndexObjects []	HI
static int[]	HIGH
static int[]	LOW
(package private) java.lang.String	userid

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type	Method and Description
void	calculateHI() Drafted formula to calculate the Health Index
void	gotoGoals (android.view.View v)
void	gotoHome (android.view.View v)
void	gotoMaps (android.view.View v)
void	gotoSettings (android.view.View v)
void	gotoStats (android.view.View v)
protected void	onCreate (android.os.Bundle savedInstanceState) On opening the Stats Tab, calculate and display the Health Index
void	pushHI()
void	viewGGraph (android.view.View v)
void	viewHGraph (android.view.View v)
void	viewRGraph (android.view.View v)
void	viewWGraph (android.view.View v)

GoalsTab

The goals tab contains fields to add GoalsObjects and display them.

Field Summary

Fields

Modifier and Type	Field and Description
static GoalObjects[]	CompleteGoals
private com.google.firebase.database.DatabaseReference	fDatabase
static GoalObjects[]	Goals
static int	targetGoal
(package private) java.lang.String	userid

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type	Method and Description
void	gotoGoals(android.view.View v)
void	gotoHome(android.view.View v)
void	gotoMaps(android.view.View v)
void	gotoSettings(android.view.View v)
void	gotoStats(android.view.View v)
void	makeNewGoal(android.view.View v)
void	onCreate(android.os.Bundle savedInstanceState)
void	viewAchievements(android.view.View v)

MapsTab

The maps tab contains fields that integrates Google Maps Services, most of which is auto-generated code.

Field Summary

Fields	
Modifier and Type	Field and Description
<code>com.google.firebase.database.DatabaseReference</code>	APDatabase
<code>static LocationObject[]</code>	APLocArray
<code>com.google.firebase.database.DatabaseReference</code>	currDatabase
<code>com.google.firebase.database.DatabaseReference</code>	fDatabase
<code>(package private) com.google.android.gms.maps.model.Marker</code>	mAPLocationMarker
<code>(package private) com.google.android.gms.maps.model.Marker</code>	mCurrLocationMarker
<code>(package private) com.google.android.gms.common.api.GoogleApiClient</code>	mGoogleApiClient
<code>(package private) android.location.Location</code>	mLastLocation
<code>(package private) com.google.android.gms.location.LocationRequest</code>	mLocationRequest
<code>private com.google.android.gms.maps.GoogleMap</code>	mMap
<code>static int</code>	MY_PERMISSIONS_REQUEST_LOCATION
<code>(package private) android.support.v7.app.NotificationCompat.Builder</code>	notif
<code>private static long</code>	pollingRate
<code>private static int</code>	uniqueID
<code>java.lang.String</code>	userid

Method Summary

All Methods	Instance Methods	Concrete Methods
Modifier and Type	Method and Description	
<code>protected void</code>	buildGoogleApiClient()	
<code>boolean</code>	checkLocationPermission()	
<code>protected void</code>	createLocationRequest()	
<code>boolean</code>	isNearAP()	
<code>void</code>	onConnected(android.os.Bundle bundle)	
<code>void</code>	onConnectionFailed(com.google.android.gms.common.ConnectionResult connectionResult)	
<code>void</code>	onConnectionSuspended(int i)	
<code>protected void</code>	onCreate(android.os.Bundle savedInstanceState)	
<code>void</code>	onLocationChanged(android.location.Location location)	
<code>void</code>	onMapClick(com.google.android.gms.maps.model.LatLng point)	
<code>void</code>	onMapLongClick(com.google.android.gms.maps.model.LatLng point)	
<code>void</code>	onMapReady(com.google.android.gms.maps.GoogleMap googleMap)	
<code>void</code>	onRequestPermissionsResult(int requestCode, java.lang.String[] permissions, int[] grantResults)	
<code>void</code>	sendNotification(android.view.View view)	

SettingsTab

The settings tab contains fields that save and changes the state of settings such as the time someone wakes up, their HealthIndex, mute notifications, ect.

Field Summary

Fields

Modifier and Type	Field and Description
boolean	<code>am</code>
boolean	<code>healthIndexPublic</code>
int	<code>hr</code>
int	<code>min</code>
boolean	<code>muteNotifications</code>
(package private) android.support.v7.app.NotificationCompat.Builder	<code>notif</code>
double	<code>pollingRate</code>
int	<code>travelTime</code>
private static int	<code>uniqueID</code>

Method Summary

All Methods

Instance Methods

Concrete Methods

Modifier and Type	Method and Description
void	<code>changeCalendarSettings(android.view.View v)</code>
void	<code>changeLocationGPSSettings(android.view.View v)</code>
void	<code>changeNotificationsSettings(android.view.View v)</code>
void	<code>changeProfileSettings(android.view.View v)</code>
void	<code>gotoGoals(android.view.View v)</code>
void	<code>gotoHome(android.view.View v)</code>
void	<code>gotoMaps(android.view.View v)</code>
void	<code>gotoSettings(android.view.View v)</code>
void	<code>gotoStats(android.view.View v)</code>
protected void	<code>onCreate(android.os.Bundle savedInstanceState)</code>