RU Healthy?

Technical Documentation

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Group #2
Tahiya Chowdhury, Tina Drew,
George Koubbe, Aymen Al-Saadi,
Himabindu Paruchuri and Ramya Tadepalli

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Namespace Documentation

5.1 Package com

Packages

- package **example**

5.2 Packagecom.example

Packages

- package **RUHEALTHY**

5.3 Packagecom.example.RUHEALTHY

Packages

- package **demo1**

5.4 Packagecom.example.RUHEALTHY.demo1

Classes

- class **DashboardActivity**
- class **HeartbeatView**
- class **HeartRateMonitor**
- class **ImageProcessing**
- class **MainActivity**
- class **ProfileActivity**
- class **RegisterActivity**
- class **SensorFilter**
- class **SQLiteHelper**
- class **StepCounter**
- class **StepDetector**
- interface **StepListener**

Chapter 6

Class Documentation

6.1 com.example.RUHEALTHY.demo1.DashboardActivity Class Reference

Inherits AppCompatActivity.

Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)

Package Attributes

- String **EmailHolder**
- TextView **Email**
- Button **LogOUT**
- Button **Profile**
- Button **HRM**
- Button **Step**

6.1.1 Member Function Documentation

6.1.1.1 onCreate()

```
void    com.example.RUHEALTHY.demo1.DashboardActivity.onCreate    (
            Bundle savedInstanceState ) [protected]
```

6.1.2 Member Data Documentation

6.1.2.1 Email

```
TextView com.example.RUHEALTHY.demo1.DashboardActivity.Email [package]
```

6.1.2.2 EmailHolder

```
String com.example.RUHEALTHY.demo1.DashboardActivity.EmailHolder [package]
```

6.1.2.3 HRM

```
Button com.example.RUHEALTHY.demo1.DashboardActivity.HRM [package]
```

6.1.2.4 LogOUT

```
Button com.example.RUHEALTHY.demo1.DashboardActivity.LogOUT [package]
```

6.1.2.5 Profile

```
Button com.example.RUHEALTHY.demo1.DashboardActivity.Profile [package]
```

6.1.2.6 Step

```
Button com.example.RUHEALTHY.demo1.DashboardActivity.Step [package]
```

The documentation for this class was generated from the following file:

- **DashboardActivity.java**

6.2 com.example.RUHEALTHY.demo1.HeartbeatView ClassReference

Inherits View.

Public Member Functions

- **HeartbeatView** (Context context, AttributeSetattr)
- **HeartbeatView** (Contextcontext)

Protected Member Functions

- void **onMeasure** (int widthMeasureSpec, int heightMeasureSpec)
- void **onDraw** (Canvascanvas)

Static Private Attributes

- static final Matrix **matrix** = newMatrix()
- static final Paint **paint** = newPaint(Paint.ANTI_ALIAS_FLAG)
- static Bitmap **greenBitmap** = null
- static Bitmap **redBitmap** = null
- static int **parentWidth** = 0
- static int **parentHeight** = 0

6.2.1 Detailed Description

This class extends the View class and is designed draw the heartbeat image.

Author

Justin Wetherell `phishman3579@gmail.com`

6.2.2 Constructor & DestructorDocumentation

6.2.2.1 HeartbeatView() [1/2]

```
com.example.RUHEALTHY.demo1.HeartbeatView.HeartbeatView (
            Context context,
            AttributeSet attr )
```

6.2.2.2 HeartbeatView() [2/2]

```
com.example.RUHEALTHY.demo1.HeartbeatView.HeartbeatView (
            Context context )
```

6.2.3 Member Function Documentation

6.2.3.1 onDraw()

```
void    com.example.RUHEALTHY.demo1.HeartbeatView.onDraw    (
            Canvas canvas )  [protected]
```

6.2.3.2 onMeasure()

```
void   com.example.RUHEALTHY.demo1.HeartbeatView.onMeasure   (
            int widthMeasureSpec,
            int heightMeasureSpec )  [protected]
```

6.2.4 Member Data Documentation

6.2.4.1 greenBitmap

```
Bitmap com.example.RUHEALTHY.demo1.HeartbeatView.greenBitmap = null  [static], [private]
```

6.2.4.2 matrix

```
final Matrix com.example.RUHEALTHY.demo1.HeartbeatView.matrix = new Matrix()  [static], [private]
```

6.2.4.3 paint

```
final Paint com.example.RUHEALTHY.demo1.HeartbeatView.paint = new Paint(Paint.ANTI_ALIAS_FLAG)
[static], [private]
```

6.2.4.4 parentHeight

```
int com.example.RUHEALTHY.demo1.HeartbeatView.parentHeight = 0  [static], [private]
```

6.2.4.5 parentWidth

```
int com.example.RUHEALTHY.demo1.HeartbeatView.parentWidth = 0  [static], [private]
```

6.2.4.6 redBitmap

```
Bitmap com.example.RUHEALTHY.demo1.HeartbeatView.redBitmap = null  [static], [private]
```

The documentation for this class was generated from the following file:

- **HeartbeatView.java**

6.3 com.example.RUHEALTHY.demo1.HeartRateMonitor ClassReference

Inherits Activity.

Collaboration diagram for com.example.RUHEALTHY.demo1.HeartRateMonitor:

Classes

- enum **TYPE**

Public Member Functions

- void **onCreate** (Bundle savedInstanceState)
- void **onConfigurationChanged** (Configuration newConfig)
- void **onResume** ()
- void **onPause** ()

Static Public Member Functions

- static **TYPE** **getCurrent** ()

Static Private Member Functions

- static Camera.Size **getSmallestPreviewSize** (int width, int height, Camera.Parameters parameters)

Static Private Attributes

- static final String **TAG** = "HeartRateMonitor"
- static final AtomicBoolean **processing** = new AtomicBoolean(false)
- static SurfaceView **preview** = null
- static SurfaceHolder **previewHolder** = null
- static Camera **camera** = null
- static View **image** = null
- static TextView **text** = null
- static WakeLock **wakeLock** = null
- static int **averageIndex** = 0
- static final int **averageArraySize** = 4
- static final int [ ] **averageArray** = new int[**averageArraySize**]
- static **TYPE** **currentType** = **TYPE.GREEN**
- static int **beatsIndex** = 0
- static final int **beatsArraySize** = 3
- static final int [ ] **beatsArray** = new int[**beatsArraySize**]
- static double **beats** = 0
- static long **startTime** = 0
- static PreviewCallback **previewCallback**
- static SurfaceHolder.Callback **surfaceCallback**

6.3.1 Detailed Description

This class extends Activity to handle a picture preview, process the preview for a red values and determine a heart beat.

Author

Justin Wetherell phishman3579@gmail.com

6.3.2 Member Function Documentation

6.3.2.1 getCurrent()

```
static  TYPE com.example.RUHEALTHY.demo1.HeartRateMonitor.getCurrent ( ) [static]
```

Here is the caller graph for this function:

6.3.2.2 getSmallestPreviewSize()

```
static Camera.Size com.example.RUHEALTHY.demo1.HeartRateMonitor.getSmallestPreviewSize (
            int width,
            int height,
            Camera.Parameters parameters )  [static], [private]
```

6.3.2.3 onConfigurationChanged()

```
void     com.example.RUHEALTHY.demo1.HeartRateMonitor.onConfigurationChanged     (
            Configuration newConfig )
```

6.3.2.4 onCreate()

```
void com.example.RUHEALTHY.demo1.HeartRateMonitor.onCreate (
            Bundle savedInstanceState )
```

6.3.2.5 onPause()

```
void com.example.RUHEALTHY.demo1.HeartRateMonitor.onPause ( )
```

6.3.2.6 onResume()

```
void com.example.RUHEALTHY.demo1.HeartRateMonitor.onResume ( )
```

6.3.3 Member Data Documentation

6.3.3.1 averageArray

```
final int [ ] com.example.RUHEALTHY.demo1.HeartRateMonitor.averageArray = new int[ averageArraySize]  [static], [private]
```

6.3.3.2 averageArraySize

```
final int com.example.RUHEALTHY.demo1.HeartRateMonitor.averageArraySize = 4  [static], [private]
```

6.3.3.3 averageIndex

```
int com.example.RUHEALTHY.demo1.HeartRateMonitor.averageIndex = 0  [static], [private]
```

6.3.3.4 beats

```
double com.example.RUHEALTHY.demo1.HeartRateMonitor.beats = 0  [static], [private]
```

6.3.3.5 beatsArray

```
final int [ ] com.example.RUHEALTHY.demo1.HeartRateMonitor.beatsArray = new int[ beatsArraySize]  [static], [private]
```

6.3.3.6 beatsArraySize

```
final int com.example.RUHEALTHY.demo1.HeartRateMonitor.beatsArraySize = 3  [static], [private]
```

6.3.3.7 beatsIndex

```
int com.example.RUHEALTHY.demo1.HeartRateMonitor.beatsIndex = 0  [static], [private]
```

6.3.3.8 camera

```
Camera com.example.RUHEALTHY.demo1.HeartRateMonitor.camera = null  [static], [private]
```

6.3.3.9 currentType

```
 TYPE com.example.RUHEALTHY.demo1.HeartRateMonitor.currentType =  TYPE.GREEN  [static], [private]
```

6.3.3.10 image

```
View com.example.RUHEALTHY.demo1.HeartRateMonitor.image = null  [static], [private]
```

6.3.3.11 preview

```
SurfaceView com.example.RUHEALTHY.demo1.HeartRateMonitor.preview = null  [static], [private]
```

6.3.3.12 previewCallback

```
PreviewCallback com.example.RUHEALTHY.demo1.HeartRateMonitor.previewCallback  [static], [private]
```

6.3.3.13 previewHolder

```
SurfaceHolder  com.example.RUHEALTHY.demo1.HeartRateMonitor.previewHolder  =  null  [static],
[private]
```

6.3.3.14 processing

```
final AtomicBoolean com.example.RUHEALTHY.demo1.HeartRateMonitor.processing = new Atomic←'
Boolean(false) [static], [private]
```

6.3.3.15 startTime

```
long com.example.RUHEALTHY.demo1.HeartRateMonitor.startTime = 0 [static], [private]
```

6.3.3.16 surfaceCallback

```
SurfaceHolder.Callback com.example.RUHEALTHY.demo1.HeartRateMonitor.surfaceCallback [static],
[private]
```

6.3.3.17 TAG

```
final String com.example.RUHEALTHY.demo1.HeartRateMonitor.TAG = "HeartRateMonitor" [static],
[private]
```

6.3.3.18 text

```
TextView com.example.RUHEALTHY.demo1.HeartRateMonitor.text = null [static], [private]
```

6.3.3.19 wakeLock

```
WakeLock com.example.RUHEALTHY.demo1.HeartRateMonitor.wakeLock = null [static], [private]
```

The documentation for this class was generated from the following file:

- **HeartRateMonitor.java**

6.4 com.example.RUHEALTHY.demo1.ImageProcessing Class Reference

Static Public Member Functions

- static int **decodeYUV420SPtoRedAvg** (byte[ ] yuv420sp, int width, int height)

Static Private Member Functions

- static int **decodeYUV420SPtoRedSum** (byte[ ] yuv420sp, int width, int height)

6.4.1 Detailed Description

This abstract class is used to process images.

Author

Justin Wetherell phishman3579@gmail.com

6.4.2 Member Function Documentation

6.4.2.1 decodeYUV420SPtoRedAvg()

```
static  int  com.example.RUHEALTHY.demo1.ImageProcessing.decodeYUV420SPtoRedAvg  (
             byte [] yuv420sp,
             int width,
             int height )  [static]
```

Given a byte array representing a yuv420sp image, determine the average amount of red in the image. Note: returns 0 if the byte array is NULL.

Parameters

yuv420sp	Byte array representing a yuv420sp image
width	Width of the image.
height	Height of the image.

Returns

int representing the average amount of red in the image.

6.4.2.2 decodeYUV420SPtoRedSum()

```
static  int  com.example.RUHEALTHY.demo1.ImageProcessing.decodeYUV420SPtoRedSum  (
             byte [] yuv420sp,
             int width,
             int height )  [static], [private]
```

Here is the caller graph for this function:

The documentation for this class was generated from the following file:

- **ImageProcessing.java**

6.5 com.example.RUHEALTHY.demo1.MainActivity ClassReference

Inherits AppCompatActivity.

Collaboration diagram for com.example.RUHEALTHY.demo1.MainActivity:

Public Member Functions

- void **LoginFunction** ()
- void **CheckEditTextStatus**()
- void **CheckFinalResult** ()

Static Public Attributes

- static final String **UserEmail** = ""

Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)

Package Attributes

- Button **LogInButton**
- Button **RegisterButton**
- EditText **Email**
- EditText **Password**
- String **EmailHolder**
- String **PasswordHolder**
- Boolean **EditTextEmptyHolder**
- SQLiteDatabase **sqLiteDatabaseObj**
- **SQLiteHelper sqLiteHelper**
- Cursor **cursor**
- String **TempPassword** = "NOT_FOUND"

6.5.1 Member Function Documentation

6.5.1.1 CheckEditTextStatus()

```
void com.example.RUHEALTHY.demo1.MainActivity.CheckEditTextStatus ( )
```

Here is the caller graph for this function:

6.5.1.2 CheckFinalResult()

```
void com.example.RUHEALTHY.demo1.MainActivity.CheckFinalResult ( )
```

Here is the caller graph for this function:

6.5.1.3 LoginFunction()

```
void com.example.RUHEALTHY.demo1.MainActivity.LoginFunction ( )
```

Here is the caller graph for this function:

6.5.1.4 onCreate()

```
void    com.example.RUHEALTHY.demo1.MainActivity.onCreate    (
             Bundle savedInstanceState ) [protected]
```

6.5.2 Member Data Documentation

6.5.2.1 cursor

```
Cursor com.example.RUHEALTHY.demo1.MainActivity.cursor [package]
```

6.5.2.2 EditTextEmptyHolder

```
Boolean com.example.RUHEALTHY.demo1.MainActivity.EditTextEmptyHolder [package]
```

6.5.2.3 Email

```
EditText com.example.RUHEALTHY.demo1.MainActivity.Email [package]
```

6.5.2.4 EmailHolder

```
String com.example.RUHEALTHY.demo1.MainActivity.EmailHolder [package]
```

6.5.2.5 LogInButton

```
Button com.example.RUHEALTHY.demo1.MainActivity.LogInButton [package]
```

6.5.2.6 Password

```
EditText com.example.RUHEALTHY.demo1.MainActivity.Password [package]
```

6.5.2.7 PasswordHolder

```
String com.example.RUHEALTHY.demo1.MainActivity.PasswordHolder [package]
```

6.5.2.8 RegisterButton

```
Button com.example.RUHEALTHY.demo1.MainActivity.RegisterButton [package]
```

6.5.2.9 sqLiteDatabaseObj

```
SQLiteDatabase com.example.RUHEALTHY.demo1.MainActivity.sqLiteDatabaseObj [package]
```

6.5.2.10 sqLiteHelper

```
SQLiteHelper com.example.RUHEALTHY.demo1.MainActivity.sqLiteHelper [package]
```

6.5.2.11 TempPassword

```
String com.example.RUHEALTHY.demo1.MainActivity.TempPassword = "NOT_FOUND" [package]
```

6.5.2.12 UserEmail

```
final String com.example.RUHEALTHY.demo1.MainActivity.UserEmail = "" [static]
```

The documentation for this class was generated from the following file:

- **MainActivity.java**

6.6 com.example.RUHEALTHY.demo1.ProfileActivity Class Reference

Inherits AppCompatActivity.

Collaboration diagram for com.example.RUHEALTHY.demo1.ProfileActivity:

Public Member Functions

- void **SQLiteDataBaseBuild**()
- void **InsertDataIntoSQLiteDatabase**()
- void **CheckEditTextStatus**()

Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)

Package Attributes

- EditText **Age**
- EditText **Gender**
- EditText **Height**
- EditText **Weight**
- EditText **Target**
- Button **Submit**
- String **AgeHolder**
- String **GenderHolder**
- String **HeightHolder**
- String **WeightHolder**
- String **TargetHolder**
- String **EmailHolder**
- Boolean **EditTextEmptyHolder**
- SQLiteDatabase **sqLiteDatabaseObj**
- String **SQLiteDataBaseQueryHolder**
- **SQLiteHelper sqLiteHelper**

6.6.1 Member Function Documentation

6.6.1.1 CheckEditTextStatus()

```
void com.example.RUHEALTHY.demo1.ProfileActivity.CheckEditTextStatus ( )
```

Here is the caller graph for this function:

6.6.1.2 InsertDataIntoSQLiteDatabase()

```
void com.example.RUHEALTHY.demo1.ProfileActivity.InsertDataIntoSQLiteDatabase ( )
```

Here is the caller graph for this function:

6.6.1.3 onCreate()

```
void com.example.RUHEALTHY.demo1.ProfileActivity.onCreate (
            Bundle savedInstanceState ) [protected]
```

6.6.1.4 SQLiteDataBaseBuild()

```
void com.example.RUHEALTHY.demo1.ProfileActivity.SQLiteDataBaseBuild ( )
```

Here is the caller graph for this function:

6.6.2 Member Data Documentation

6.6.2.1 Age

```
EditText com.example.RUHEALTHY.demo1.ProfileActivity.Age [package]
```

6.6.2.2 AgeHolder

```
String com.example.RUHEALTHY.demo1.ProfileActivity.AgeHolder [package]
```

6.6.2.3 EditTextEmptyHolder

```
Boolean com.example.RUHEALTHY.demo1.ProfileActivity.EditTextEmptyHolder [package]
```

6.6.2.4 EmailHolder

```
String com.example.RUHEALTHY.demo1.ProfileActivity.EmailHolder [package]
```

6.6.2.5 Gender

```
EditText com.example.RUHEALTHY.demo1.ProfileActivity.Gender [package]
```

6.6.2.6 GenderHolder

```
String com.example.RUHEALTHY.demo1.ProfileActivity.GenderHolder [package]
```

6.6.2.7 Height

```
EditText com.example.RUHEALTHY.demo1.ProfileActivity.Height [package]
```

6.6.2.8 HeightHolder

```
String com.example.RUHEALTHY.demo1.ProfileActivity.HeightHolder [package]
```

6.6.2.9 sqLiteDatabaseObj

```
SQLiteDatabase com.example.RUHEALTHY.demo1.ProfileActivity.sqLiteDatabaseObj [package]
```

6.6.2.10 SQLiteDataBaseQueryHolder

```
String com.example.RUHEALTHY.demo1.ProfileActivity.SQLiteDataBaseQueryHolder [package]
```

6.6.2.11 sqLiteHelper

```
SQLiteHelper com.example.RUHEALTHY.demo1.ProfileActivity.sqLiteHelper [package]
```

6.6.2.12 Submit

```
Button com.example.RUHEALTHY.demo1.ProfileActivity.Submit [package]
```

6.6.2.13 Target

```
EditText com.example.RUHEALTHY.demo1.ProfileActivity.Target [package]
```

6.6.2.14 TargetHolder

```
String com.example.RUHEALTHY.demo1.ProfileActivity.TargetHolder [package]
```

6.6.2.15 Weight

```
EditText com.example.RUHEALTHY.demo1.ProfileActivity.Weight [package]
```

6.6.2.16 WeightHolder

```
String com.example.RUHEALTHY.demo1.ProfileActivity.WeightHolder [package]
```

The documentation for this class was generated from the following file:

- **ProfileActivity.java**

6.7 com.example.RUHEALTHY.demo1.RegisterActivity ClassReference

Inherits AppCompatActivity.

Collaboration diagram for com.example.RUHEALTHY.demo1.RegisterActivity:

Public Member Functions

- void **SQLiteDataBaseBuild**()
- void **SQLiteTableBuild**()
- void **InsertDataIntoSQLiteDatabase**()
- void **EmptyEditTextAfterDataInsert**()
- void **CheckEditTextStatus**()
- void **CheckingEmailAlreadyExistsOrNot**()
- void **CheckFinalResult**()

Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)

Package Attributes

- EditText **Email**
- EditText **Password**
- EditText **Name**
- Button **Register**
- String **NameHolder**
- String **EmailHolder**
- String **PasswordHolder**
- Boolean **EditTextEmptyHolder**
- SQLiteDatabase **sqLiteDatabaseObj**
- String **SQLiteDataBaseQueryHolder**
- **SQLiteHelper sqLiteHelper**
- Cursor **cursor**
- String **F_Result** = "Not_Found"

6.7.1 Member Function Documentation

6.7.1.1 CheckEditTextStatus()

```
void com.example.RUHEALTHY.demo1.RegisterActivity.CheckEditTextStatus ( )
```

Here is the caller graph for this function:

6.7.1.2 CheckFinalResult()

```
void com.example.RUHEALTHY.demo1.RegisterActivity.CheckFinalResult ( )
```

Here is the caller graph for this function:

6.7.1.3 CheckingEmailAlreadyExistsOrNot()

```
void com.example.RUHEALTHY.demo1.RegisterActivity.CheckingEmailAlreadyExistsOrNot ( )
```

Here is the caller graph for this function:

6.7.1.4 EmptyEditTextAfterDataInsert()

```
void com.example.RUHEALTHY.demo1.RegisterActivity.EmptyEditTextAfterDataInsert ( )
```

Here is the caller graph for this function:

6.7.1.5 InsertDataIntoSQLiteDatabase()

```
void com.example.RUHEALTHY.demo1.RegisterActivity.InsertDataIntoSQLiteDatabase ( )
```

Here is the caller graph for this function:

6.7.1.6 onCreate()

```
void com.example.RUHEALTHY.demo1.RegisterActivity.onCreate (
             Bundle savedInstanceState ) [protected]
```

6.7.1.7 SQLiteDataBaseBuild()

```
void com.example.RUHEALTHY.demo1.RegisterActivity.SQLiteDataBaseBuild ( )
```

Here is the caller graph for this function:

6.7.1.8 SQLiteTableBuild()

```
void com.example.RUHEALTHY.demo1.RegisterActivity.SQLiteTableBuild ( )
```

Here is the caller graph for this function:

6.7.2 Member Data Documentation

6.7.2.1 cursor

```
Cursor com.example.RUHEALTHY.demo1.RegisterActivity.cursor [package]
```

6.7.2.2 EditTextEmptyHolder

```
Boolean com.example.RUHEALTHY.demo1.RegisterActivity.EditTextEmptyHolder [package]
```

6.7.2.3 Email

```
EditText com.example.RUHEALTHY.demo1.RegisterActivity.Email [package]
```

6.7.2.4 EmailHolder

```
String com.example.RUHEALTHY.demo1.RegisterActivity.EmailHolder [package]
```

6.7.2.5 F_Result

```
String com.example.RUHEALTHY.demo1.RegisterActivity.F_Result = "Not_Found" [package]
```

6.7.2.6 Name

```
EditText com.example.RUHEALTHY.demo1.RegisterActivity.Name [package]
```

6.7.2.7 NameHolder

```
String com.example.RUHEALTHY.demo1.RegisterActivity.NameHolder [package]
```

6.7.2.8 Password

```
EditText com.example.RUHEALTHY.demo1.RegisterActivity.Password [package]
```

6.7.2.9 PasswordHolder

```
String com.example.RUHEALTHY.demo1.RegisterActivity.PasswordHolder [package]
```

6.7.2.10 Register

```
Button com.example.RUHEALTHY.demo1.RegisterActivity.Register [package]
```

6.7.2.11 sqLiteDatabaseObj

```
SQLiteDatabase com.example.RUHEALTHY.demo1.RegisterActivity.sqLiteDatabaseObj [package]
```

6.7.2.12 SQLiteDataBaseQueryHolder

```
String com.example.RUHEALTHY.demo1.RegisterActivity.SQLiteDataBaseQueryHolder [package]
```

6.7.2.13 sqLiteHelper

```
SQLiteHelper com.example.RUHEALTHY.demo1.RegisterActivity.sqLiteHelper [package]
```

The documentation for this class was generated from the following file:

- **RegisterActivity.java**

6.8 com.example.RUHEALTHY.demo1.SensorFilter ClassReference

Static Public Member Functions

- static float **sum** (float[ ] array)
- static float [ ] **cross** (float[ ] arrayA, float[ ] arrayB)
- static float **norm** (float[ ] array)
- static float **dot** (float[ ] a, float[ ] b)
- static float [ ] **normalize** (float[ ] a)

Private Member Functions

- **SensorFilter** ()

6.8.1 Detailed Description

Created by aymoo on 9/19/2017.

6.8.2 Constructor & Destructor Documentation

6.8.2.1 SensorFilter()

```
com.example.RUHEALTHY.demo1.SensorFilter.SensorFilter ( ) [private]
```

6.8.3 Member Function Documentation

6.8.3.1 cross()

```
static float [ ] com.example.RUHEALTHY.demo1.SensorFilter.cross (
            float [] arrayA,
            float [ ] arrayB ) [static]
```

6.8.3.2 dot()

```
static float com.example.RUHEALTHY.demo1.SensorFilter.dot (
            float [] a,
            float [ ] b ) [static]
```

Here is the caller graph for this function:

6.8.3.3 norm()

```
static float com.example.RUHEALTHY.demo1.SensorFilter.norm (
            float [ ] array ) [static]
```

Here is the caller graph for this function:

6.8.3.4 normalize()

```
static float [ ] com.example.RUHEALTHY.demo1.SensorFilter.normalize (
            float [ ] a ) [static]
```

6.8.3.5 sum()

```
static float com.example.RUHEALTHY.demo1.SensorFilter.sum (
            float [ ] array ) [static]
```

Here is the caller graph for this function:

The documentation for this class was generated from the following file:

- **SensorFilter.java**

6.9 com.example.RUHEALTHY.demo1.SQLiteHelper ClassReference

Inherits SQLiteOpenHelper.

Public Member Functions

- **SQLiteHelper** (Context context)
- void **onCreate** (SQLiteDatabase database)
- void **onUpgrade** (SQLiteDatabase db, int oldVersion, int newVersion)

Static Public Attributes

- static final String **TABLE_NAME** ="usertable"
- static final String **Table_Column_1_Name** ="name"
- static final String **Table_Column_2_Email** ="email"
- static final String **Table_Column_3_Password** ="password"
- static final String **Table_Column_4_Age** ="age"
- static final String **Table_Column_5_Gender** ="gender"
- static final String **Table_Column_6_Height** ="height"
- static final String **Table_Column_7_Weight** ="weight"
- static final String **Table_Column_8_Target** ="target"

Static Package Attributes

- static String **DATABASE_NAME** ="UserDataBase"

6.9.1 Detailed Description

Created by RUHEALTHY on 10/27/2017.

6.9.2 Constructor & Destructor Documentation

6.9.2.1 SQLiteHelper()

```
com.example.RUHEALTHY.demo1.SQLiteHelper.SQLiteHelper       (
            Context context )
```

6.9.3 Member Function Documentation

6.9.3.1 onCreate()

```
void    com.example.RUHEALTHY.demo1.SQLiteHelper.onCreate    (
            SQLiteDatabase database )
```

Here is the caller graph for this function:

6.9.3.2 onUpgrade()

```
void        com.example.RUHEALTHY.demo1.SQLiteHelper.onUpgrade        (
             SQLiteDatabase db,
             int oldVersion,
             int newVersion )
```

6.9.4 Member Data Documentation

6.9.4.1 DATABASE_NAME

```
String com.example.RUHEALTHY.demo1.SQLiteHelper.DATABASE_NAME ="UserDataBase"  [static], [package]
```

6.9.4.2 Table_Column_1_Name

```
final String com.example.RUHEALTHY.demo1.SQLiteHelper.Table_Column_1_Name ="name" [static]
```

6.9.4.3 Table_Column_2_Email

```
final String com.example.RUHEALTHY.demo1.SQLiteHelper.Table_Column_2_Email ="email" [static]
```

6.9.4.4 Table_Column_3_Password

```
final    String    com.example.RUHEALTHY.demo1.SQLiteHelper.Table_Column_3_Password    ="password"
[static]
```

6.9.4.5 Table_Column_4_Age

```
final String com.example.RUHEALTHY.demo1.SQLiteHelper.Table_Column_4_Age ="age" [static]
```

6.9.4.6 Table_Column_5_Gender

```
final String com.example.RUHEALTHY.demo1.SQLiteHelper.Table_Column_5_Gender ="gender" [static]
```

6.9.4.7 Table_Column_6_Height

```
final String com.example.RUHEALTHY.demo1.SQLiteHelper.Table_Column_6_Height ="height" [static]
```

6.9.4.8 Table_Column_7_Weight

```
final String com.example.RUHEALTHY.demo1.SQLiteHelper.Table_Column_7_Weight ="weight" [static]
```

6.9.4.9 Table_Column_8_Target

```
final String com.example.RUHEALTHY.demo1.SQLiteHelper.Table_Column_8_Target ="target" [static]
```

6.9.4.10 TABLE_NAME

```
final String com.example.RUHEALTHY.demo1.SQLiteHelper.TABLE_NAME ="usertable" [static]
```

The documentation for this class was generated from the following file:

- **SQLiteHelper.java**

6.10 com.example.RUHEALTHY.demo1.StepCounter ClassReference

Inheritance diagram for com.example.RUHEALTHY.demo1.StepCounter:

Collaboration diagram for

com.example.RUHEALTHY.demo1.StepCounter:

Public Member Functions

- void **onSensorChanged** (SensorEventevent)
- void **onAccuracyChanged** (Sensor sensor, int accuracy)
- void **step** (long timeNs)

Protected Member Functions

- void **onCreate** (BundlesavedInstanceState)

Private Attributes

- TextView **TvMiles**
- TextView **TvSteps**
- TextView **TvCalories**
- **StepDetector simpleStepDetector**
- SensorManager **sensorManager**
- Sensor **accel**
- double **numSteps**
- double **miles**
- double **calories**

Static Private Attributes

- static final String **TEXT_NUM_STEPS** = "STEP"
- static final String **TEXT_Miles_STEPS** = "MILE"
- static final String **TEXT_Miles_Calorie** = "CALORIES PER MILE "

6.10.1 Member Function Documentation

6.10.1.1 onAccuracyChanged()

```
void    com.example.RUHEALTHY.demo1.StepCounter.onAccuracyChanged    (
             Sensor sensor,
             int accuracy )
```

6.10.1.2 onCreate()

```
void    com.example.RUHEALTHY.demo1.StepCounter.onCreate    (
             Bundle savedInstanceState ) [protected]
```

6.10.1.3 onSensorChanged()

```
void     com.example.RUHEALTHY.demo1.StepCounter.onSensorChanged     (
             SensorEvent event )
```

6.10.1.4 step()

```
void   com.example.RUHEALTHY.demo1.StepCounter.step   (
             long timeNs )
```

Implements **com.example.RUHEALTHY.demo1.StepListener** (p. **??**).

6.10.2 Member Data Documentation

6.10.2.1 accel

```
Sensor com.example.RUHEALTHY.demo1.StepCounter.accel [private]
```

6.10.2.2 calories

```
double com.example.RUHEALTHY.demo1.StepCounter.calories [private]
```

6.10.2.3 miles

```
double com.example.RUHEALTHY.demo1.StepCounter.miles [private]
```

6.10.2.4 numSteps

```
double com.example.RUHEALTHY.demo1.StepCounter.numSteps [private]
```

6.10.2.5 sensorManager

```
SensorManager com.example.RUHEALTHY.demo1.StepCounter.sensorManager [private]
```

6.10.2.6 simpleStepDetector

```
StepDetector com.example.RUHEALTHY.demo1.StepCounter.simpleStepDetector [private]
```

6.10.2.7 TEXT_Miles_Calorie

```
final String com.example.RUHEALTHY.demo1.StepCounter.TEXT_Miles_Calorie = "CALORIES PER MILE "
[static], [private]
```

6.10.2.8 TEXT_Miles_STEPS

```
final String com.example.RUHEALTHY.demo1.StepCounter.TEXT_Miles_STEPS = "MILE " [static], [private]
```

6.10.2.9 TEXT_NUM_STEPS

```
final String com.example.RUHEALTHY.demo1.StepCounter.TEXT_NUM_STEPS = "STEP " [static], [private]
```

6.10.2.10 TvCalories

```
TextView com.example.RUHEALTHY.demo1.StepCounter.TvCalories [private]
```

6.10.2.11 TvMiles

```
TextView com.example.RUHEALTHY.demo1.StepCounter.TvMiles [private]
```

6.10.2.12 TvSteps

```
TextView com.example.RUHEALTHY.demo1.StepCounter.TvSteps [private]
```

The documentation for this class was generated from the following file:

- **StepCounter.java**

6.11 com.example.RUHEALTHY.demo1.StepDetector ClassReference

Collaboration diagram for com.example.RUHEALTHY.demo1.StepDetector:

Public Member Functions

- void **registerListener** (**StepListener listener**)
- void **updateAccel** (long timeNs, float x, float y, float z)

Private Attributes

- int **accelRingCounter** =0
- float [ ] **accelRingX** = new float[**ACCEL_RING_SIZE**]
- float [ ] **accelRingY** = new float[**ACCEL_RING_SIZE**]
- float [ ] **accelRingZ** = new float[**ACCEL_RING_SIZE**]
- int **velRingCounter** = 0
- float [ ] **velRing** = new float[**VEL_RING_SIZE**]
- long **lastStepTimeNs** = 0
- float **oldVelocityEstimate** = 0
- **StepListener listener**

Static Private Attributes

- static final int **ACCEL_RING_SIZE** = 50
- static final int **VEL_RING_SIZE** = 10
- static final float **STEP_THRESHOLD** = 50f
- static final int **STEP_DELAY_NS** = 250000000

6.11.1 Detailed Description

Created by aymoo on 9/19/2017.

6.11.2 Member Function Documentation

6.11.2.1 registerListener()

```
void com.example.RUHEALTHY.demo1.StepDetector.registerListener (
              StepListener listener )
```

Here is the caller graph for this function:

6.11.2.2 updateAccel()

```
void com.example.RUHEALTHY.demo1.StepDetector.updateAccel (
             long timeNs,
             float  x,
             float  y,
             float z )
```

Here is the caller graph for this function:

6.11.3 Member Data Documentation

6.11.3.1 ACCEL_RING_SIZE

```
final int com.example.RUHEALTHY.demo1.StepDetector.ACCEL_RING_SIZE = 50  [static], [private]
```

6.11.3.2 accelRingCounter

```
int com.example.RUHEALTHY.demo1.StepDetector.accelRingCounter =0 [private]
```

6.11.3.3 accelRingX

```
float [ ] com.example.RUHEALTHY.demo1.StepDetector.accelRingX = new float[ ACCEL_RING_SIZE]
[private]
```

6.11.3.4 accelRingY

```
float [ ] com.example.RUHEALTHY.demo1.StepDetector.accelRingY = new float[ ACCEL_RING_SIZE]
[private]
```

6.11.3.5 accelRingZ

```
float [ ] com.example.RUHEALTHY.demo1.StepDetector.accelRingZ = new float[ ACCEL_RING_SIZE]
[private]
```

6.11.3.6 lastStepTimeNs

```
long com.example.RUHEALTHY.demo1.StepDetector.lastStepTimeNs = 0 [private]
```

6.11.3.7 listener

```
 StepListener com.example.RUHEALTHY.demo1.StepDetector.listener [private]
```

6.11.3.8 oldVelocityEstimate

```
float com.example.RUHEALTHY.demo1.StepDetector.oldVelocityEstimate = 0 [private]
```

6.11.3.9 STEP_DELAY_NS

```
final int com.example.RUHEALTHY.demo1.StepDetector.STEP_DELAY_NS = 250000000  [static], [private]
```

6.11.3.10 STEP_THRESHOLD

```
final float com.example.RUHEALTHY.demo1.StepDetector.STEP_THRESHOLD = 50f  [static], [private]
```

6.11.3.11 VEL_RING_SIZE

```
final int com.example.RUHEALTHY.demo1.StepDetector.VEL_RING_SIZE = 10  [static], [private]
```

6.11.3.12 velRing

```
float [ ] com.example.RUHEALTHY.demo1.StepDetector.velRing = new float[ VEL_RING_SIZE] [private]
```

6.11.3.13 velRingCounter

```
int com.example.RUHEALTHY.demo1.StepDetector.velRingCounter = 0 [private]
```

The documentation for this class was generated from the following file:

- **StepDetector.java**

6.12 com.example.RUHEALTHY.demo1.StepListener InterfaceReference

Inheritance diagram for com.example.RUHEALTHY.demo1.StepListener:

Public Member Functions

- void **step** (long timeNs)

6.12.1 Detailed Description

Created by aymoo on 9/19/2017.

6.12.2 Member Function Documentation

6.12.2.1 step()

```
void com.example.RUHEALTHY.demo1.StepListener.step (
            long timeNs )
```

Implemented in **com.example.RUHEALTHY.demo1.StepCounter** (p. **??**). Here is the caller graph for this function:

The documentation for this interface was generated from the following file:

- **StepListener.java**

6.13 com.example.RUHEALTHY.demo1.HeartRateMonitor.TYPE Enum Reference

Public Attributes

- **GREEN**
- **RED**

6.13.1 Member Data Documentation

6.13.1.1 GREEN

```
com.example.RUHEALTHY.demo1.HeartRateMonitor.TYPE.GREEN
```

6.13.1.2 RED

```
com.example.RUHEALTHY.demo1.HeartRateMonitor.TYPE.RED
```

The documentation for this enum was generated from the following file:

- **HeartRateMonitor.java**

Chapter 7

File Documentation

7.1 DashboardActivity.java File Reference

Classes

- class **com.example.RUHEALTHY.demo1.DashboardActivity**

Packages

- package **com.example.RUHEALTHY.demo1**

7.2 HeartbeatView.java File Reference

Classes

- class **com.example.RUHEALTHY.demo1.HeartbeatView**

Packages

- package **com.example.RUHEALTHY.demo1**

7.3 HeartRateMonitor.java File Reference

Classes

- class **com.example.RUHEALTHY.demo1.HeartRateMonitor**
- enum **com.example.RUHEALTHY.demo1.HeartRateMonitor.TYPE**

Packages

- package **com.example.RUHEALTHY.demo1**

7.4 ImageProcessing.java FileReference

Classes

- class **com.example.RUHEALTHY.demo1.ImageProcessing**

Packages

- package **com.example.RUHEALTHY.demo1**

7.5 MainActivity.java File Reference

Classes

- class **com.example.RUHEALTHY.demo1.MainActivity**

Packages

- package **com.example.RUHEALTHY.demo1**

7.6 ProfileActivity.java File Reference

Classes

- class **com.example.RUHEALTHY.demo1.ProfileActivity**

Packages

- package **com.example.RUHEALTHY.demo1**

7.7 RegisterActivity.java File Reference

Classes

- class **com.example.RUHEALTHY.demo1.RegisterActivity**

Packages

- package **com.example.RUHEALTHY.demo1**

7.8 SensorFilter.java FileReference

Classes

- class **com.example.RUHEALTHY.demo1.SensorFilter**

Packages

- package **com.example.RUHEALTHY.demo1**

7.9 SQLiteHelper.java FileReference

Classes

- class **com.example.RUHEALTHY.demo1.SQLiteHelper**

Packages

- package **com.example.RUHEALTHY.demo1**

7.10 StepCounter.java FileReference

Classes

- class **com.example.RUHEALTHY.demo1.StepCounter**

Packages

- package **com.example.RUHEALTHY.demo1**

7.11 StepDetector.java FileReference

Classes

- class **com.example.RUHEALTHY.demo1.StepDetector**

Packages

- package **com.example.RUHEALTHY.demo1**

7.12 StepListener.java FileReference

Classes

- interface **com.example.RUHEALTHY.demo1.StepListener**

Packages

- package **com.example.RUHEALTHY.demo1**

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