package edu.vt.dr

AboutUs: Class
- -raw: ImageButton
- -movement: ImageButton
- -trackButton: ImageButton
- #onCreate(Bundle b): void

Responsibilities
- -- Displays aboutus.xml
- -- Extends Activity

CircleMap: Class
- #onCreate(Bundle b): void

Responsibilities
- -- Displays circle.xml
- -- Extends Activity

ListVMenu: Class
- -PAM3010: String
- -STRAIGHT: String
- -CIRCLE: String
- -LSHAPE: String
- +onCreate(Bundle b): void

Responsibilities
- -- Displays maplist.xml
- -- Extends Activity

LShapeMap: Class
- #onCreate(Bundle b): void

Responsibilities
- -- Displays lshape.xml
- -- Extends Activity

mainActivity: Class
- -LISTVMENU: String
- -ABOUTUS: String
- +onCreate(Bundle b): void

Responsibilities
- -- Displays mainmenu.xml
- -- Extends Activity

Pam3010Map: Class
- -mGLView: GLSurfaceView
- -sysOk: boolean
- -SU: SensorUtil
- -tv: TextView
- #onCreate(Bundle b): void
- #onPause(): void
- #onResume(): void
- #onTouchEvent(MotionEvent event): void

Responsibilities
- -- Extends Activity
- -- Implement SensorEventListener

MovementActivity: Class
- -mSensorManager: SensorManager
- -mAccelerometer: Sensor
- -mMagnet: Sensor
- -mLinearAccel: Sensor
- -xyBox: TextView
- -angleBox: TextView
- -linearAccelBox: TextView
- -accelArray[]: float
- -magneticArray[]: float
- -rotationArray[]: float
- -inclinationArray[]: float
- -worldAccelArray[]: float
- -linearAccelArray[]: float
- -positionArray[]: float
- -velocityArray[]: float
- #buttonStateStart: bool
- +onCreate(): void
- +onAccuracyChanged(arg0:Sensor, arg1:int): void
- +onSensorChanged(event:SensorEvent): void

Responsibilities
- -- Displays movement.xml
- -- Extends Activity
- -- Implements SensorEventListener

Splash: Class
- spashChime:MediaPlayer
- #onCreate(Bundle b): void
- #onPause(): void

Responsibilities
- -- Displays splash.xml
- -- Extends Activity

StraightMap: Class
- #onCreate(Bundle b): void

Responsibilities
- -- Displays straight.xml
- -- Extends Activity

PAM3010SurfaceView: Class
- #PAM3010(context: Context)

Responsibilities
- -- Extends GLSurfaceView

CalibrateActivity: Class
- -id:
- #Operation(i: int): int

Responsibilities
- -- Resp1

package edu.vt.dr.map

GLRenderer: Class
- +room: Object
- +theman: Object
- +table: Object
- +podium: Object
- +desk0-35: Object
- -ROW1_Y: float
- -ROW2_Y: float
- -ROW3_Y: float
- -ROW4_Y: float
- -context: Context
- +GLRenderer(context: Context)
- +onDrawFrame(gl: GL10): void
- +onSurfaceChanged(gl: GL10, width: int, height: int): void
- +onSurfaceCreated(gl: GL10, config: EGLConfig): void

Responsibilities
- -- Draws PAM3010 map on screen
- -- Implements Renderer
- -- Imports OpenGL

Object: Class
- -vertexBuffer: FloatBuffer
- -textureBuffer: FloatBuffer
- +boundaries_: Wall
- -iconID_: int
- -texture[]: float
- -texture[]: vertices
- +Object(iconID: int, dimension_x: float, dimension_y: float, dimension_z: float, position_x: float, position_y: float, position_z: float)
- +draw(gl: GL1)
- +loadGLTexture(gl: GL10, context: Context)

Responsibilities
- -- Holds Wall object class

Wall: Class
- +top_: float
- +bottom_: float
- +left_: float
- +right_: float
- +Wall(top: float, bottom: float, left: float, right: float)

TheFloor.java
- -vertexBuffer: FloatBuffer
- -texture[]: vertices
- +TheFloor()
- +draw(gl: GL10)

Responsibilities
- -- Creates object of the Floor
- -- Imports Kronos GL10

package edu.vt.testing.utilities

AccelerationHandler: Class
- +service(e: SensorEvent): void
- -- Implements Event Handler

EventHandler: Class
- +service(e: SensorEvent): void

RotationHandler: Class
- +service(e: SensorEvent): void

FloatPoint: Class
- -x: float
- -y: float
- +getX(): float
- +getY(): float
- +FloatPoint(ix: float,iy: float)
- +set(newx: float, newy: float): void
- +offset(dx: float, dy: float): void
- +distance(): float
- +distanceFrom(other FloatPoint): float

SensorUtil: Class
- -mSensorManager: SensorManager
- -mListener: SensorEventListener
- -mAccelerometer: Sensor
- -mVector: Sensor
- -mHandlers: Map<Integer, EventHandler>
- +SensorUtil(a: Activity)
- +systemMeetsRequirements(): boolean
- +registerListeners(): void
- +unregisterListeners(): void
- +registerHandlers(): void
- +unregisterHandlers(): void
- +routeEvent(e: SensorEvent): void

LocationUtil: Class
- -STEP_INCREMENT: float
- -STEP_ACCEL_THRESHOLD: float
- -NUM_ACCEL_SAMPLES: int
- -SCALE_TO_FEET: float
- -CRUMB_RADIUS: float
- -MAX_POINTS: int
- -mLocation: FloatPoint
- -mRotationVector[]: float[]
- -mRotationMatrix[]: float[]
- -mAccelerationAvg: float
- -mAzimuth: float
- -mSpeed: float
- -mTotalDistance: float
- -mBreadCrumbs: Deque<FloatPoint>
- -crumbBuffer: FloatPoint
- -crumbCoords[]: float[]
- -sampleIndex: int
- -averageReady: boolean
- -samples[]: float[]
- +init(): void
- +reset(): void
- +rotationUpdate(e: SensorEvent): void
- +accelerationUpdate(e: SensorEvent): void
- +takeStep(): void
- +speedDecay(): void
- +updateLocation(): void
- +getCurrentRotationMatrix(): float[]
- +getCurrentRotationVector(): float[]
- +getCurrentAzimuth(): float
- +getCurrentAzimuthDegrees(): float
- +getCurrentSpeed(): float
- +getCurrentLocation(): FloatPoint
- +getAverageAcceleration(): float
- +getCrumbBuffer(): FloatBuffer
- +getCrumbBufferSize(): int
- +getTotalDistance(): float
- +getTotalDistanceFeet(): float

package edu.vt.dr.testing

GLAndSensorsActivity: Class
- -GLView: MySurfaceView
- -sysOk: boolean
- -SU: SensorUtil
- +onCreate(Bundle b): void
- +onPause(): void
- +onResume(): void
- +onTouchEvent(event: MotionEvent): void
- +onAccuracyChanged(sensor: Sensor, accuracy: int): void
- +onSensorChanged(event: SensorEvent): void

Responsibilities
- -- Implements SensorEventListener
- -- Extends Activity

MySurfaceView: Class
- +MySurfaceView(context: Context)

Responsibilites
- -- Extends GLSurfaceView

MySurfaceRenderer: Class
- -shapeBuffer: FloatBuffer
- +onSurfaceCreated(gl: GL10, config:EGLConfig)
- +onSurfaceChanged(gl: GL10, width: int, height: int)
- -initShapes(): void
- +onDrawFrame(gl: GL10): void

Responsibilites
- --Implements GLSurfaceView.Renderer

PedometerActivity: Class
- -distanceText: TextView
- -SU: SensorUtil
- #onCreate(Bundle b): void
- +onPause(): void
- +onResume(): void
- +onTouchEvent(event: MotionEvent): void
- +onAccuracyChanged(sensor: Sensor, accuracy: int): void
- +onSensorChanged(event: SensorEvent): void

Responsibilites
- -- Extends Activity
- -- Implements SensorEventListener

SelectionActivity: Class
- -pedButton: Button
- -trackButton: Button
- #onCreate(Bundle b): void
- +onPause(): void
- +onResume(): void

Responsibilities
- -- Displays selectmode.xml
- -- Extends Activity