## MainWindows

- -scene:QGraphicsScene \*
- -world:b2world \*
- -itemList:QList
- -timer:QTimer
- -quitbutton:QPushButton \*
- -restartbutton:QPushButton \*
- -block0 ,block1, block2 ,block3, block4,block5,

block6 ,block7, block8, block9, block10, block11: block \*

- -pig0,pig1,pig2,pig3:pig \*
- redlaunched, bluelaunched, blacklaunched,

yellowlaunched, whitelaunched,tmp1,tmp2,tmp3,tmp4:int/

- -redbird: Bird \*
- -blackbird: blackbird \*
- -bluebirdo :bluebird \*
- -yellowbirdo:yellowbird \*
- -whitebirdo:whitebird \*
- +<<explicit>> MainWindow(QWidget \*parent = 0): void
- +~MainWindow()
- +showEvent(QShowEvent \*):void
- +eventFilter(QObject \*,QEvent \*event):void
- +closeEvent(QCloseEvent \*):void
- +<<signals>>quitGame():void
- -<<slot>>tick():void
- -<<slot>> QUITSLOT():void
- -<<slot>>quitbuttonfun():void
- -<<slot>>restartbuttonfun():void

### Gameltem

#g\_body:b2Body\*

#g pixmap: QGraphicsPixmapItem

#g\_size : QSizeF

#g\_worldsize,# g\_windowsize : static QSize F

#g world:b2World\*

- +GameItem( world : b2World \*)
- +~GameItem():virtual
- +getBody():b2Body&
- +setGlobalSize(QSizeF worldsize, QSizeF windowsize):static

void

+paint():void

#### Bird

+Bird(float x, float y, float radius, QTimer \*timer, QPixmap pixmap, b2World \*world,

QGraphicsScene \*scene)

QGraphicsScene "scene)

+ setLinearVelocity(b2Vec2 velocity):void

### Land

+Land(float x, float y, float w, float h, QPixmap pixmap, b2World \*world, QGraphicsScene \*scene)

#### whitebird

+whitebird(float x, float y, float radius, QTimer

\*timer, QPixmap pixmap, b2World \*world,

QGraphicsScene \*scene)

+setLinearVelocity(b2Vec2 velocity):void

# yellowbird

+yellowbird(float x, float y, float radius, QTimer

\*timer, QPixmap pixmap, b2World \*world,

QGraphicsScene \*scene)

fsetLinearVelocity(b2Vec2 velocity):void

#### bluebird

→bluebird(float x, float y, float radius, QTimer)

 $^{\prime}$ \*timer, QPixmap pixmap, b2World \*world,

QGraphicsScene \*scene)

+setLinearVelocity(b2Vec2 velocity):void

## block

+block(float x, float y, float w,float h, QTimer

\*timer, QPixmap pixmap, b2World \*world,

QGraphicsScene \*scene)

+etLinearVelocity(b2Vec2 velocity):void

# blackbird

+blackbird(float x, float y, float radius, QTimer

\*timer, QPixmap pixmap, b2World \*world,

QGraphicsScene \*scene)

+setLinearVelocity(b2Vec2 velocity):void