**GameItem**

+ GameItem(world : b2World \*)

+ ~GameItem()

+ setGlobalSize(worldsize : QSizeF, windowsize: QSizeF): void

+ <<slots>>paint() : void

# g\_body : b2Body\*

# g\_pixmap : QGraphicsPixmapItem

# g\_size : QsizeF

# g\_world : b2world \*

# g\_worldsize : static QsizeF

# g\_windowsize : static QsizeF

**Bird**

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

+ setLinearVelocity(velocity:velocity);

+ skill\_red(): void

+ skill\_yellow(): void

+ skill\_green(): void

+ skill\_blue(): void

+ getScore(): int

+ <<slots>>paint(): void

**Block**

+ Block(x: float, y: float, w: float, d: float, timer: QTimer \*, pixmap: QPixmap, world: b2World \*, scene: QGraphicsScene \*)

+ getScore(): int

+ checkX(): bool

+ checkY(): bool

+ change(): void

**Land**

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

**MainWindow**

+ MainWindow(parent: QWidget \*)

+ ~*MainWindow*()

+ *showEvent*(: QShowEvent \*): void

+ *closeEvent*(: QCloseEvent \*): void

+ *eventFilter*(: QObject \*, event: QEvent \*): bool

+ quitGame(): void

* tick(): void
* QUITSLOT(): void
* on\_Reset\_clicked():void
* boundaryCheck(): void
* on\_pushButton\_clicked(): void
* on\_pushButton\_2\_clicked(): void
* ui: Ui::MainWindow \*
* scene: QGraphicsScene \*
* world: b2World \*
* itemLis: QList<GameItem \*>
* timer: Qtimer
* BirdR(Y/G/B): Bird \*
* pig1(2): Bird \*
* block1(2.3.4): Block \*
* xBegin: float - xEnd: float
* yBegin: float - yEnd: float
* numBird: float
* flying: bool - flag: bool
* end: bool - score: int
* Reset: QPushButton \*
* Quit: QPushButton \*



按RESTART的PushButton可以重新開始，按END的PushButton或打叉會quitSignal()

碰到障礙物跟豬都會加分，豬的分數比較高(但不會消失)。

第一隻鳥(藍色)的技能是垂直往下掉

第二隻鳥(綠色)的技能是往左下衝刺

第三隻鳥(黃色)的技能是加速

第四隻鳥(紅色)的技能是沒有