## MainWindow -scene: QGraphicsScene \* -world: b2World \* 104\_2 Final Project -music: QMediaPlayer \* -itemList: QList<GameItem \*> -pigList: QList<Pig \*> Angry Birds -obstacleList: QList<Obstacle \*> -birdList: QList<Bird \*> -eggList: QList<Bird \*> -timer: QTimer CSIE 1 Z -press: QPoint F74046187 鄧仕榆 -release: QPoint -bird num: int -flag: bool +<<explicit>>MainWindow(parent:QWidget \*=0): void Gameltem +~MainWindow() +g body: b2Body \* +showEvent(QShowEvent \*): void #g pixmap: QGraphicsPixmapItem +Object(): void #g size: QSizeF +eventFilter(QObject \*, event:QEvent): bool #g\_world: b2World \* +closeEvent(QCloseEvent \*): void #g\_worldsize: static QSizeF +<<singnals>> quitGame(): void #g\_windowsize: static QSizeF -<<slots>> tick(): void +GameItem(world:b2World \*) -<<slots>>NextBird(): void +~GameItem() -<<slots>> QUITSLOT(): void +setGlobalSize(worldsize;QSizeF,windowsize:QSizeF): -<<slots>>on\_pushButton\_clicked(): void static void -<<slots>>on\_pushButton\_2\_clicked(): void +<<slots>> paint(): void **Background** +Background(x:float,y:float,pixmap:QPi xmap,world:b2World \*,scene: QGraphicsScene \*) Land Bird +ready: bool +Land(x:float,y:float,w:float,h:float,pix +shoot: shoot map:QPixmap,world:b2World \*,scene: +Bird(x:float,y:float,radius:float,timer:QTimer QGraphicsScene \*) \*,pixmap:QPixmap,world:b2World \*,scene:QGraphicsScene \*) +setLinearVelocity(velocity:b2Vec2): void Catapult + ReadyToShoot(bird: Bird \*): void +~Bird(): virtual +Catapult(x:float,y:float,pixmap:QPixm +SuperPower(): void ap,world:b2World \*,scene: QGraphicsScene \*) Pig BlackBird WhiteBird YellowBird +Pig(x:float,y:float,radius:float,timer:Q +Blackbird(x:float,y:float, +Whitebird(x:float,y:float,r +Yellowbird(x:float,y:float,r radius:float,timer:QTimer adius:float,timer:QTimer adius:float,timer:QTimer \*,pixmap:QPixmap,world:b2World \*,pixmap:QPixmap,world: \*,pixmap:QPixmap,world:b \*,pixmap:QPixmap,world:b \*,scene: QGraphicsScene \*) b2World \*,scene: 2World \*,scene: 2World \*,scene: +setLinearVelocity(velocity:b2Vec2) QGraphicsScene \*) QGraphicsScene \*) QGraphicsScene \*) +SuperPower(): void +SuperPower(): void +SuperPower(): void Obstacle +Obstacle(x:float,y:float,w:float,h:float, timer:QTimer \*,pixmap:QPixmap,world:b2World **UML** Diagram \*,scene: QGraphicsScene \*)

## How to Play?



(1) 此為開始畫面·共有 4 隻鳥、4 隻豬、2 個木塊和 1 個彈弓。左上角為restart 按鈕·右上角為關閉遊戲。

以滑鼠右鍵點擊鳥兒·拖曳並釋放· 控制速度與角度攻擊敵人。



(2) 此為紅鳥·此鳥無超能力·飛行時呈現一般拋物線。



(3) 此為黑鳥·飛行時按滑鼠右鍵啟動超能力·以高速向正下方撞擊。



(4) 此為白鳥·飛行時按滑鼠右鍵啟動超能力·從天空中召喚五顆鳥蛋攻擊敵人。



(5) 此為黃鳥·飛行時按滑鼠右鍵啟動超能力,瞬間加速以超高速飛行。

此為最後一隻鳥,攻擊結束顯示 "VICTORY"字樣。