pd2-Angrybird Report

H34016144 許欣穎

【How to play】

* 每次遊戲開始都有三隻豬（圖１），總共有四種鳥各出現一次，點住鳥往後拉放開候鳥就會往前飛，石頭或鳥打到豬都會得一分，豬就會消失（圖２）。
* 按Ｓ鍵即可換下一隻鳥，飛行中按下Ａ鍵，就會出現那隻鳥的功能

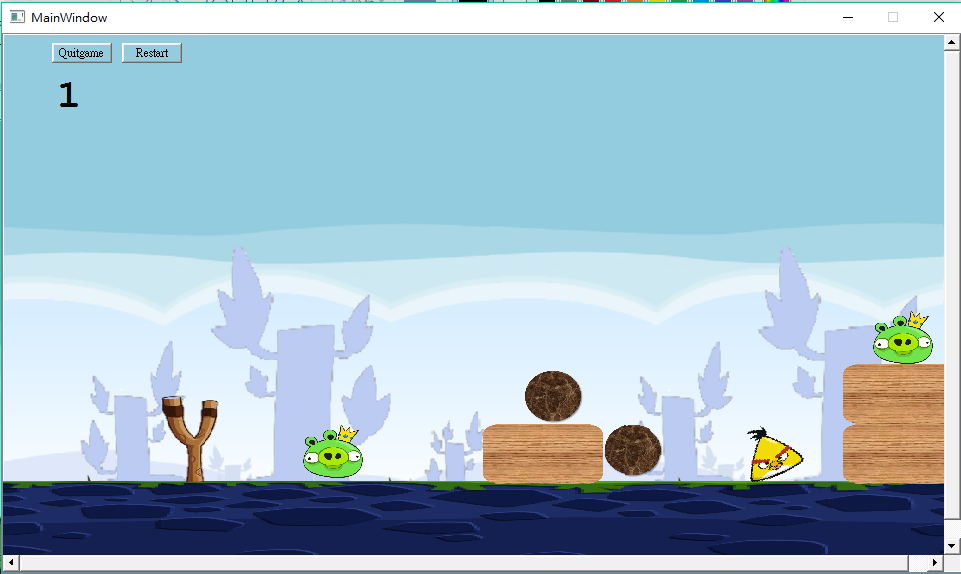
黃鳥：垂直降落（圖３）／紅鳥：往右下飛（圖４）

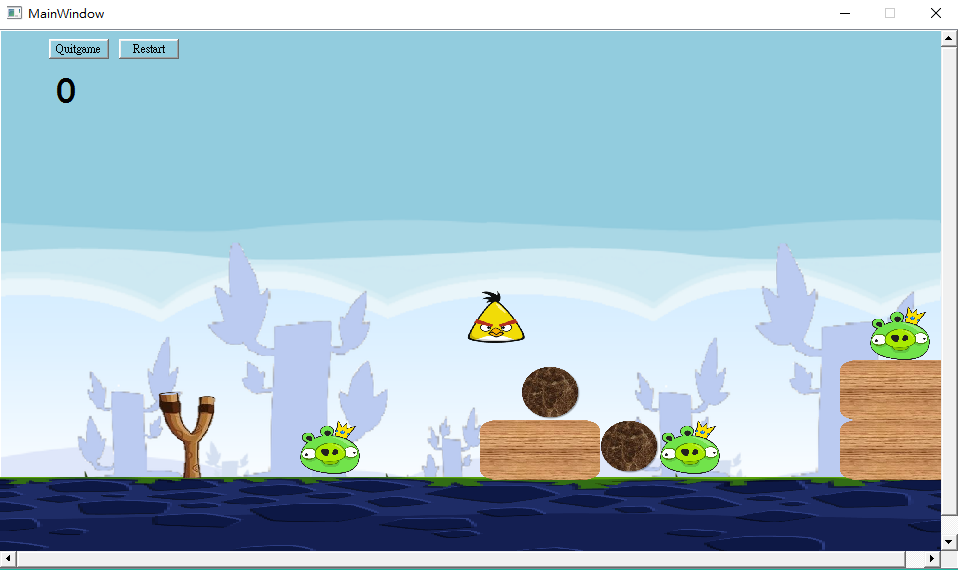
藍鳥：出現另外兩隻藍鳥（圖５）／綠鳥：往回飛（圖６）

* 按下Restart鍵整個遊戲重新開始，關掉視窗或按下Quitgame就會結束

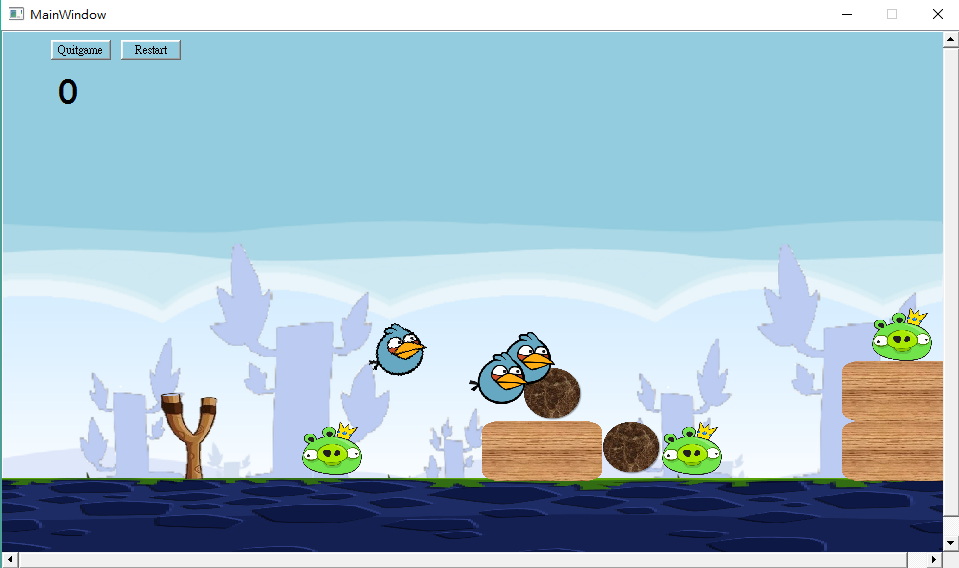
【Screen shot】

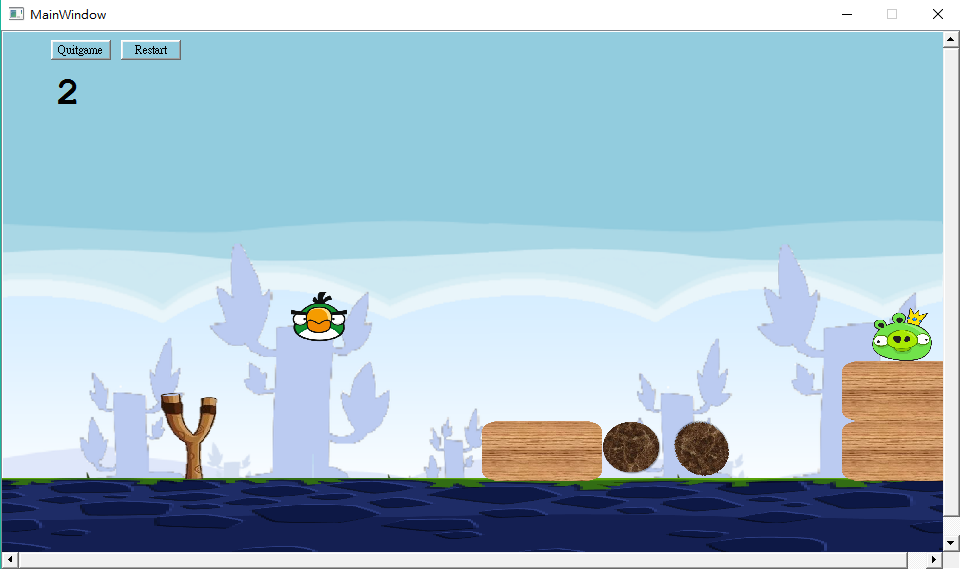
(圖1) 

(圖2) 

(圖3) 

(圖4)

(圖5) 

(圖6) 

【UML】

|  |
| --- |
| Bird |
| +bluebirdpress : bool  -canmove : bool  - func : bool  - flied : bool  - \* bluebird1 : Bird  - \* bluebird2 : Bird |
| <<constructor>>+Bird(id:int , x : float ,y:float , radius : float, \*timer : QTimer , pixmap : QPixmap, \*world = b2World,\*scene : QGraphicsScene)  +setLinearVelocity(velocity : b2Vec2)  + *press*()  + getPositionX():doubla  + getPositionY():double  + deleteblue() |

|  |
| --- |
| Stone |
|  |
| <<constructor>> +Stone(id:int , x : float ,y:float , radius : float, \*timer : QTimer , pixmap : QPixmap, \*world = b2World,\*scene : QGraphicsScene)  + *press*() |

|  |
| --- |
| Pig |
| +m\_contacting : bool |
| <<constructor>> +Stone(id: int , x : float ,y:float , radius : float, \*timer : QTimer , pixmap : QPixmap, \*world = b2World,\*scene : QGraphicsScene)  + *press*()  +startContact() |

|  |
| --- |
| redbird |
|  |
| <<constructor>> + redbird (id : int , x : float ,y:float , radius : float, \*timer : QTimer , pixmap : QPixmap, \*world = b2World,\*scene : QGraphicsScene)  + *press*() |

|  |
| --- |
| yellowbird |
|  |
| <<constructor>> + redbird (id : int ,x : float ,y:float , radius : float, \*timer : QTimer , pixmap : QPixmap, \*world = b2World,\*scene : QGraphicsScene)  + *press*() |

|  |
| --- |
| greenbird |
|  |
| <<constructor>> + redbird (id : int , x : float ,y:float , radius : float, \*timer : QTimer , pixmap : QPixmap, \*world = b2World,\*scene : QGraphicsScene)  + *press*() |

|  |
| --- |
| bluebird |
|  |
| <<constructor>> + redbird (id : int , x : float ,y:float , radius : float, \*timer : QTimer , pixmap : QPixmap, \*world = b2World,\*scene : QGraphicsScene )  + *press*() |

|  |
| --- |
| GameItem |
| #\*g\_body:b2Body  # g\_pixmap : QGraphicsPixmapItem  # g\_size : QSizeF  #\*g\_world : b2World  # g\_worldsize, g\_windowsize : static QSizeF |
| <<constructor>> + GameItem(\*world: b2World)  + ~*GameItem*()  + setGlobalSize(worldsize:QSizeF, windowsize:QSizeF):static void  <<slot>> + paint() |

|  |
| --- |
| Land |
|  |
| <<constructor>> + Land(x : float , y:float,w: float, h:float,pixmap: QPixmap ,\*world : b2World,\*scene: QGraphicsScene,ispig:bool) |

|  |
| --- |
| MainWindow |
| -\*ui : Ui::MainWindow  -\*scene:QGraphicsScene  -\*world:b2World  -\*itemList : QList<GameItem\*>  QTimer timer;  Bird\* thisbird;  int count;  Pig \* pig1 ;  Pig \* pig2 ;  Pig \* pig3 ;  b2Fixture\* GetFixtureA();  b2Fixture\* GetFixtureB();  MyContactListener \*myContactListenerInstance;  QGraphicsTextItem\* score;  bool check1;  bool check2;  bool check3;  QPushButton \*quit;  QPushButton \*restart;  Stone\* stone1;  Stone\* stone2;  QPoint p;  double x1,y1,x2,y2,bluex1,bluey1;  bool checkblue; |
| <<constructor>> + MainWindow(\*parent : QWidget);  +~*MainWindow*();  +*showEvent*(QShowEvent \*)  +*eventFilter*(QObject \*,\*event : QEvent):bool  +*keyPressEvent*(QKeyEvent\* event);  +*closeEvent*(QCloseEvent \*)  +deletepig()  <<slot>>+newbird()  <<signal>> quitGame()  <<slot>>-tick()  <<slot>>-QUITSLOT()  <<slot>>-quitgame()  <<slot>>-restartgame() |

【Program Architecture】