UML Class Diagram

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| Bird |
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| <<constructor>>+Bird(x: float, y: float, radius: float, timer: QTimer \*, pixmap: QPixmap, world: b2World\*, scene: QGraphicsScene\*)  +setLinearVelocity(velocity: b2Vec2)  +getBirdXPos(): float  +getBirdYPos(): float |

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| Button |
| -text: QGraphicsTextItem\* |
| <<constructor>>+Button(name: QString, parent: QGraphicsItem\*)  +mousePressEvent(event: QGraphicsSceneMouseEvent\*)  +hoverEnterEvent(event: QGraphicsSceneHoverEvent\*)  +hoverLeaveEvent(event: QGraphicsSceneHoverEvent\*) |

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

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

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| MainWindow |
| - ui: MainWindow \*  - scene: QGraphicsScene \*  - world: b2World \*  - itemList: QList<GameItem \*>  - timer: QTimer  - slingshot: QGraphicsPixmapItem \*  - score: Score \*  - invisibleBox: Wood \*  - species: int  - redBirdie: Bird \*  - blueBirdie: Bird \*  - newBlueBirdie: Bird \*  - yellowBirdie: Bird \*  - whiteBirdie: Bird \*  - newEgg: Bird \*  - verticalWood1: Wood \*  - verticalWood2: Wood \*  - verticalWood3: Wood \*  - verticalWood4: Wood \*  - verticalWood5: Wood \*  - horizontalWood1: Wood \*  - horizontalWood2: Wood \*  - piggy1: Pig \*  - piggy2: Pig \*  - piggy3: Pig \*  - piggy4: Pig \*  -ground: Land\* |
| <<constructor>>+MainWindow(parent: QWidget\*)  +~ MainWindow ()  + showEvent()  + eventFilter(event: QEvent \*): bool  + closeEvent()  +gameOver()  +start()  +drawPanel(x: int, y: int, width: int, height: int, color: QColor, opacity: double) |

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| Pig |
| +eliminate: bool |
| <<constructor>>+Pig(x: float, y: float, radius: float, timer: QTimer \*, pixmap: QPixmap, world: b2World\*, scene: QGraphicsScene\*) |

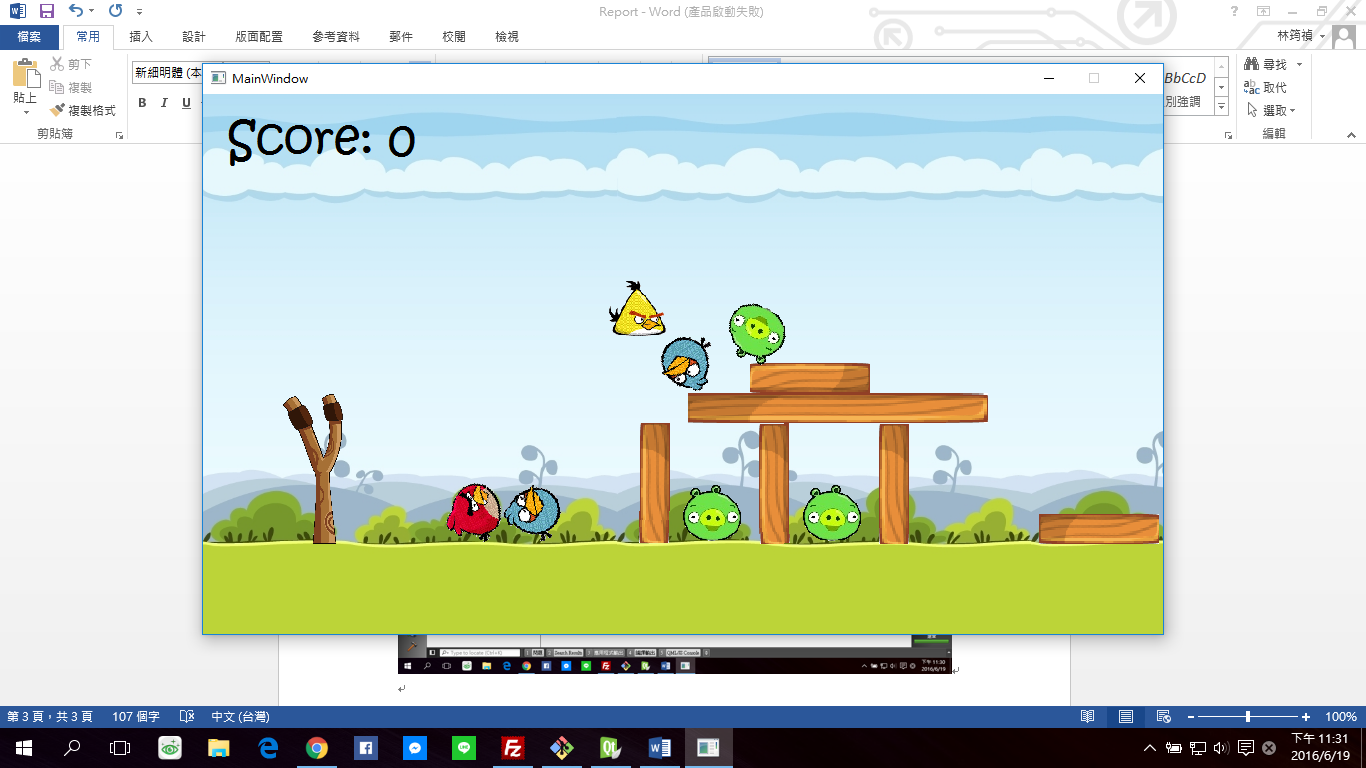
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| Score |
| -score: Integer |
| <<constructor>>+Score(parent: QGraphicsItem\*)  +increase()  +getScore(): Integer |

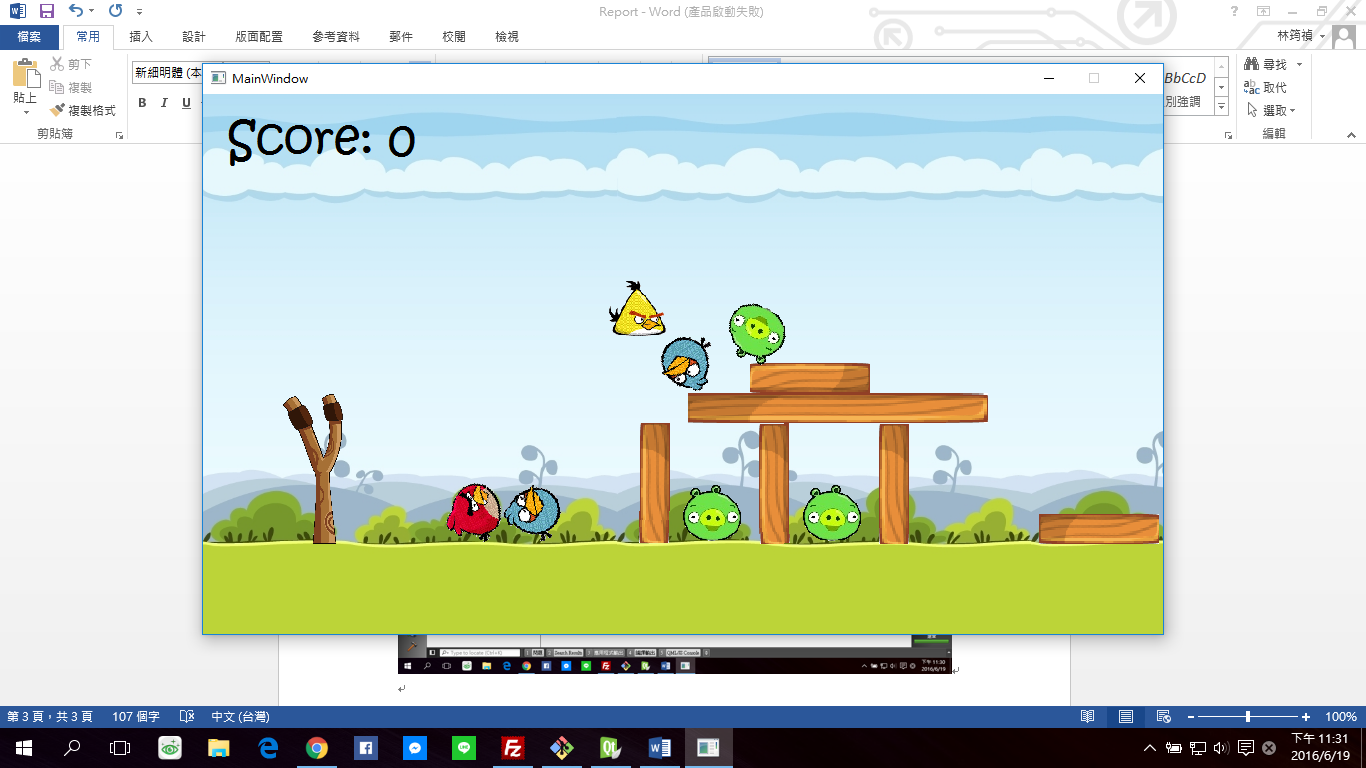
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| --- |
| Wood |
| +bodydef: b2BodyDef |
| <<constructor>>+Wood (x: float, y: float, w: float, h: float, timer: QTimer \*, pixmap: QPixmap, world: b2World\*, scene: QGraphicsScene\*) |

Screen Shot









How To Play

Press mouse button to shoot the bird and press key button to show the abilities of different kinds of birds.

Bonus

1. Backgound music
2. Sound effect when shooting birds
3. Buttons change color when the cursor hovers over them