

## Design Document

### Instructions:

- Space bar to start
- P to pause
- Press up to make the helicopter go up
- Get the plus sign to get more lives
- The bombs make you lose lives
- Avoid the obstacles

### Game

- Establishes game rules
- Pieces all the different objects together

```
public:
    game(QWidget *parent = 0);
    ~game();

protected:
    void paintEvent(QPaintEvent *event);
    void timerEvent(QTimerEvent *event);
    void keyPressEvent (QKeyEvent *event);
    void keyReleaseEvent(QKeyEvent *event);

    void startGame();
    void pauseGame();
    void stopGame();
    void victory();
    void checkCollision();

private:
    int x;
    int xdir, ydir, xchp, ychp;
    float ang;
    int timerId;
    chopper *Chop;
    float wall *FW;
    bullet *Bul;
    enemy *enem;
    life *yolo;
    bomb *boom;
    int enemycount;
    bool gameOver;
    bool gameWon;
    bool gameStarted;
    bool paused;
    bool goingUp;
    bool bulletShot;
    bool juststarted;
    int Lives;
    int points;
```

```
int maxcount,netcount;  
int Level;  
int fwcount;  
int counter;  
bool doubler;
```

#### Chopper

Move up function chopper goes up  
Auto move to simulate gravity

```
public:  
    chopper();  
    virtual ~chopper();  
    void resetState();  
    void moveUp(int);  
    void autoMove();  
    QRect getRect();  
    QImage &getImage();
```

protected:

private:

```
    QImage image;  
    QRect rect;  
    int speed;  
    int ydir;
```

#### Obstacle

Base class

Get rect

Get image

#### Float wall

Inherits obstacle

#### Bullet

Auto move

Get rect

Get image

#### Item

Base class

#### Life

Inherits item

#### Bomb

Inherits item

#### Enemy

Shoots stuff

Auto moves

Each Level gets increasingly difficult with more enemies at greater frequencies