

## Fishing\_game\_1\_0

```
Fisherman fisherman = new Fisherman(1000,800);
```

```
Line line = new Line(1000,800);
```

```
//Fish fish = new Fish(1000,800);
```

```
ArrayList<Fish> fishList;
```

```
//Shark shark = new Shark(1000,800);
```

```
ArrayList<Shark> sharkList;
```

```
int score;
```

```
int state = 0;
```

```
PImage img;
```

```
PImage img2;
```

```
Timer startTimer;
```

```
void setup(){  
    size(1000,800);  
    fishList = new ArrayList<Fish>();  
    sharkList = new ArrayList<Shark>();  
    img = loadImage("underwaterScene.jpg");  
    img2 = loadImage("gameOverShark.png");  
    startTimer = new Timer(60);  
  
}
```

```
void draw(){  
    if(state == 0){  
        startCover();  
    }else  
    if(state == 1){  
        game();  
    }else  
    if(state == 2){  
        gameOver();  
    }else if(state == 3){  
        timeUp();  
    }  
}
```

```
void startCover(){ //state 0  
    background(125,125,125);  
    image(img,0,0);  
    fill(255);  
    textSize(70);  
    text("WELCOME TO FISHING", 150,200);  
    text("PRESS 'G' TO START", 150, 400);  
}
```

```
void game(){ //state 1  
  
    background(125,125,125);  
    image(img, 0,0);
```

```
textSize(50);
fill(50,50,50);
text(score,700, 60);
fisherman.display();
line.display();
//shark.display();
//fish.display();
startTimer.countDown();
fill(50,50,50);
text(startTimer.getTime(), 50,50);
```

```
if(fishList.size()<20){
    fishList.add(new Fish(width,height));
if(sharkList.size()<5){
    sharkList.add(new Shark(width,height));
}
}
```

```
for(int i =fishList.size()-1; i>0; i--){
    Fish fish = fishList.get(i);
    fish.display();
```

```
    if(line.collideFish(fish)){
        print("fish got hit");
        line.velY = -1;
        fish.posX = line.posX;
        fish.posY = line.posY;
    }
```

```
    if(fisherman.collideFish(fish)){
        print("cathed");
        line.velY = 0;
        fishList.remove(i);
        score = score + 1;
    }
```

```
    if(fish.isOutOfWindow()){
        fishList.remove(i);
    }
}
```

```
for(int i =sharkList.size()-1; i>0; i--){
    Shark shark = sharkList.get(i);
    shark.display();
```

```
    if(line.collideShark(shark)){
        print("shark got hit");
        line.velY = -10;
        shark.posX = line.posX;
        shark.posY = line.posY;
    }
```

```

    if(fisherman.collideShark(shark)){
        print("GAME OVER");
        line.velY = 0;
        state = 2;
    }
    if(shark.isOutOfWindow()){
        sharkList.remove(i);
    }
}
if(startTimer.time < 0){
    state = 3;}
}

```

```

void timeUp(){ //state 3
    background(125,125,125);
    text("Time's up!", 150, 200);
    text("Your score:", 150, 300);
    text(score, 450,300);
    text("Press 'T' to try again", 150, 400);
}

```

```

void gameOver(){//state 2
    background(255,0,0);
    image(img2, 600, 100, 300,300);
    textSize(100);
    text("GAME OVER", 200,300);
    text("Press 'R' to restart", 80,500);
}

```

```

void fishRestart(){
    fishList.clear();
    for(int i =0; i<10; i++){
        fishList.add(new Fish (width, height));
    }
}

```

```

sharkList.clear();
for(int i =0; i<10; i++){
    sharkList.add(new Shark (width, height));
}
fisherman = new Fisherman(width, height);
}

```

```

void keyPressed(){
    fisherman.keyPressed();
    line.keyPressed();
}

```

//State management.

```

if(state==0 && key=='g;'){
    state=1;}
if(state== 2 && key== 'r;'){
    state = 1;
    score = 0;
}

```

```

startTimer = new Timer(60);
fishRestart();
}
if(state==3 && key=='t'){
state=1;
score = 0;
fishRestart();
startTimer = new Timer(60);}
}

```

## Fish

```

class Fish{
float posX;
float posY;
float size;
float velX;
boolean hasBeenInside;
PImage img;
PImage img2;

Fish(int _width, int _height){
size = random(10,30);
hasBeenInside = false;

float randomPct = random(100);
if(randomPct < 50){
posX = -size;
posY = random(_height/2)+_height/4;
velX = random(5);
} else {
posX = _width + size;
posY = random(_height/2)+_height/4;
velX = random(-5);
}
}

boolean isOutOfWindow(){
if(posX < 0 || posX > width){
if (hasBeenInside) {
return true;
} else {
return false;
}
} else{
hasBeenInside = true;
return false;
}
}

void display(){
ellipse(posX, posY, size, size);
posX += velX;

```

```

img = loadImage("Cartoon fish.png");
img2 = loadImage("Cartoon fish kopi.png");

if (velX > 0){
    image(img, posX-30, posY-25, size +25, size+25);
}
if (velX < 0){
    image(img2, posX-15, posY-25, size +25, size+25);
}
}
}

```

## **Fisherman**

```

class Fisherman{
float posX;
float posY;
float velX;
PImage img;

```

```

Fisherman(int _width, int _height){
    posX = _width/2;
    posY = _height/20;
}

```

```

void display(){

    rect(posX, posY, 10, 10);
    img = loadImage("cartoon fisher.png");
    image(img, posX-40, posY-40, 100,80);
}

```

//Collision Fisherman and Fish.

```

boolean collideFish(Fish testFish){
    if(dist(posX, posY, testFish.posX, testFish.posY) < testFish.size/2 +3){
        return true;
    }else{
        return false;}
}

```

//Collision Fisherman and Shark.

```

boolean collideShark(Shark testShark){
    if(dist(posX, posY, testShark.posX, testShark.posY) < testShark.size/2 +3){
        return true;
    }else{
        return false;}
}

```

```

void keyPressed(){
    if(key==CODED){
        if (keyCode==LEFT){
            velX = -3;

```

```

    }
    if(keyCode==RIGHT){
        velX = 3;
    }
}
}
}

```

## Line

```

class Line{
float posX;
float posY;
float velY;

```

```

Line(int _width, int _height){
    posX = _width/2;
    posY = _height/20;
}

```

```

void display(){
    line(fisherman.posX,fisherman.posY,fisherman.posX, posY);

    if(posY > height){
        velY = -3;}

    posY += velY;
}

```

//Collision Line and Fish.

```

boolean collideFish(Fish testFish){
    if(dist(fisherman.posX, posY, testFish.posX, testFish.posY) < testFish.size/2 +3){
        return true;
    }else{
    } return false;
}

```

//Colision Line ans Shark.

```

boolean collideShark(Shark testShark){
    if(dist(fisherman.posX, posY, testShark.posX, testShark.posY) < testShark.size/2+3){
        return true;
    }else{
    } return false;
}

```

```

void keyPressed(){
    if(key==CODED){
        if(keyCode==DOWN){
            velY = 3;
        }
        if (keyCode==UP){
            velY = -3;
        }
    }
}

```

```
}  
}  
}
```

## Shark

```
class Shark{
```

```
float posX;
```

```
float posY;
```

```
float velX;
```

```
float size;
```

```
boolean hasBeenInside;
```

```
PImage img;
```

```
PImage img2;
```

```
Shark(int _width, int _height){
```

```
    size = random(40,60);
```

```
    posX = random(_width);
```

```
    hasBeenInside = false;
```

```
    float randomPct = random(100);
```

```
    if(randomPct < 50){
```

```
        posX = -size;
```

```
        posY = random(_height/2)+_height/4;
```

```
        velX = 5;
```

```
    } else {
```

```
        posX = _width + size;
```

```
        posY = random(_height/2)+_height/4;
```

```
        velX = -5;
```

```
    }
```

```
 }
```

```
boolean isOutOfWindow(){
```

```
    if(posX < 0 || posX > width){
```

```
        if (hasBeenInside) {
```

```
            return true;
```

```
        } else {
```

```
            return false;
```

```
        }
```

```
    }else{
```

```
        hasBeenInside = true;
```

```
        return false;
```

```
    }
```

```
 }
```

```
void display(){
```

```
    rect(posX, posY, 60, 20);
```

```
    img = loadImage("cartoon shark.png");
```

```
    img2 = loadImage("cartoon shark kopi.png");
```

```
    /*image(img, posX -20, posY-30, 120, 80);*/
```

```
    posX += velX;
```

```
    if (velX < 0){
```

```
    image(img, posX-15, posY-30, 120, 80);  
  }  
  if (velX > 0){  
    image(img2, posX-45, posY-30, 120, 80);  
  }  
}  
}
```

## Timer

```
class Timer{  
  float time;  
  
  Timer(float set){  
    time = set;  
  }  
  float getTime(){  
    return (time);  
  }  
  void setTime(float set){  
    time = set;  
  }  
  void countdown(){  
    time -= 1/frameRate;  
  }  
}
```