オリジナルのソースコード

float ball\_x = 200.0;

float ball\_y = 200.0;

float ball\_vx = 3.0;

float ball\_vy = -5.0;

int [][] block = {{0,0,0,0,0},{0,0,0,0,0},{0,0,0,0,0},{0,0,0,0,0},{1,1,1,1,1}};

//int [][] block = { { 3, 3, 3, 3, 3}, {3, 3, 3, 3, 3}, {2, 2, 2, 2, 2},

// {2, 2, 2, 2, 2}, {1, 1, 1, 1, 1} };

int bar\_x = 150;

int bar\_y = 350;

void setup(){

size( 300, 400 );

frameRate( 30 );

}

void draw() {

background( 180, 255, 220 );

fill( 100, 200, 0 );

noStroke();

rect( 0, 0, 10, 400 );

rect( 0, 0, 300, 10 );

rect( 290, 0, 10, 400 );

drawBlock();

fill( 200, 100, 0 );

bar\_x = mouseX;

if( bar\_x < 40 ) bar\_x = 40;

if( bar\_x > 260 ) bar\_x = 260;

rect( bar\_x - 30, bar\_y, 60, 20 );

fill( 0, 100, 200 );

ellipse( ball\_x, ball\_y, 20, 20 );

ball\_x += ball\_vx;

ball\_y += ball\_vy;

if( ball\_x < 20 ){

ball\_x = 20;

ball\_vx = -ball\_vx;

}

if( ball\_x > 280 ){

ball\_x = 280;

ball\_vx = -ball\_vx;

}

if( ball\_y < 20 ){

ball\_y = 20;

ball\_vy = -ball\_vy;

}

if( ball\_y > bar\_y-10 ){

if( ball\_x > bar\_x-30 && ball\_x < bar\_x+30 ){

ball\_y = bar\_y-10;

ball\_vy = -ball\_vy;

ball\_vx += ( ball\_x - bar\_x) / 10;

}

}

if( ball\_y > bar\_y+10 ){

noLoop();

fill( 255, 0, 0 );

PFont font = loadFont( "Osaka-48.vlw" );

textFont( font, 32 );

text( "GameOver", 70, 240 );

}

for( int i=0; i<5; i++ ){

for( int j=0; j<5; j++ ){

if( block[i][j] > 0 ){

if( ball\_x > j\*50+20 && ball\_x < j\*50+60 &&

ball\_y > i\*30+20 && ball\_y < i\*30+60 ){

ball\_vy = -ball\_vy;

block[i][j] --;

}

}

}

}

int k=1;

for( int i=0; i<5; i++ ){

for( int j=0; j<5; j++ ){

if( block[i][j] > 0 )

k = 0;

}

}

if( k == 1 ){

noLoop();

fill( 255, 0, 0 );

PFont font = loadFont( "Osaka-48.vlw" );

textFont( font, 32 );

text( "Clear", 100, 240 );

}

}

void drawBlock() {

int i, j;

for( i=0; i<5; i++ ){

for( j=0; j<5; j++ ){

switch( block[i][j] ){

case 3:

stroke( 0 );

fill( 100 );

break;

case 2:

stroke( 0 );

fill( 150 );

break;

case 1:

stroke( 0 );

fill( 200 );

}

if( block[i][j] > 0 ){

rect( j\*50+30, i\*30+30, 40, 20 );

}

}

}

}

自作のソースコード

float ball\_x = 200.0;

float ball\_y =500.0;

float ball\_vx = 6.0;

float ball\_vy = -6.0;

int [][] block = { {1, 1, 1, 1, 1, 1, 1 },

{1, 1, 1, 1, 1, 1, 1}, {1, 1, 1, 1, 1, 1, 1 }, { 2, 2, 2, 2, 2, 2, 2 },{1,1,1,1,1,1,1}, {2, 2, 2, 2, 2, 2, 2} };

int bar\_x = 150;

int bar\_y = 500;

PImage img;

void setup(){

size( 450, 600);

frameRate( 30 );

}

void draw() {

img = loadImage("dcm.jpg");

image(img, 0, 0);

noStroke();

rect( 0, 0, 10, 600 );

rect( 0, 0, 450, 10 );

rect( 440, 0, 10, 600);

drawBlock();

fill( 200, 100, 0 );

bar\_x = mouseX;

if( bar\_x < 40 ) bar\_x = 40;

if( bar\_x > 410) bar\_x = 410;

rect( bar\_x - 30, bar\_y, 60, 20 );

fill( 255 );

ellipse( ball\_x, ball\_y, 15, 15 );

fill(0);

ball\_x += ball\_vx;

ball\_y += ball\_vy;

if( ball\_x < 10 ){

ball\_x = 10;

ball\_vx = -ball\_vx;

}if( ball\_x > 430 ){

ball\_x = 430;

ball\_vx = -ball\_vx;

}

if( ball\_y < 10 ){

ball\_y = 10;

ball\_vy = -ball\_vy;

}

if( ball\_y > bar\_y-10 ){

if( ball\_x > bar\_x-30 && ball\_x < bar\_x+30 ){

ball\_y = bar\_y-10;

ball\_vy = -ball\_vy;

ball\_vx += ( ball\_x - bar\_x) / 10;

}

}

if( ball\_y > bar\_y+40 ){

noLoop();

fill( 255, 0, 0 );

textSize(60);

text( "GameOver!", 70, 240 );

}

for( int i=0; i<6; i++ ){

for( int j=0; j<7; j++ ){

if( block[i][j] > 0 ){

if( ball\_x > j\*60+30 && ball\_x < j\*60+80 &&

ball\_y > i\*50+150 && ball\_y < i\*50+160 ){

ball\_vy = -ball\_vy;

block[i][j] --;

}

}

}

}

int k=1;

for( int i=0; i<6; i++ ){

for( int j=0; j<7; j++ ){

if( block[i][j] > 0 )

k = 0;

}

}

if( k == 1 ){

noLoop();

fill( 255, 0, 0 );

textSize(50);

text( "Clear", 140, 200);

}

}

void drawBlock() {

int i, j;

for( i=0; i<6; i++ ){

for( j=0; j<7; j++ ){

switch( block[i][j] ){

case 3:

stroke( 0 );

fill( 100 );

break;

case 2:

stroke( 0 );

fill( 150 );

break;

case 1:

stroke( 0 );

fill( 200 );

}

if( block[i][j] > 0 ){

rect( j\*60+30, i\*50+150, 40,10);

}

}

オリジナルとは変化を持たせるため画面を大きくし、背景にブロック塀のブロックの画像を使った。ボールのスピード、ブロックの個数、間隔と耐久度、当たり判定を自分なりに調節した。オリジナルでは落ちて失敗しても何も言われなかったが、gameoverの文字を出すことによって決着をつけることができた。

参考　http://samus.cocolog-nifty.com/blog/2009/09/proseccing-0302.html