**Project1: x bounce**

let myBall;

function setup() {

createCanvas(400, 400);

myBall = new Ball;

}

function draw() {

background(220);

myBall.display();

myBall.bounce();

myBall.move();

}

class Ball{

constructor(){

this.ballX = 200;

this.ballY = 100;

this.speedX = 1;

}

display(){

fill(255,255,0);

circle(this.ballX,this.ballY,40);

}

bounce(){

if(this.ballX > width || this.ballX < 0){

this.speedX = this.speedX \* (-1);

}

}

move(){

this.ballX = this.ballX + this.speedX;

}

}

**Project2: XY bounce**

let myBall;

function setup() {

createCanvas(400, 400);

myBall = new Ball;

}

function draw() {

background(220);

myBall.display();

myBall.bounce();

myBall.move();

}

class Ball{

constructor(){

this.ballX = 200;

this.ballY = 100;

this.speedX = 1;

this.speedY = 2;

}

display(){

fill(255,255,0);

circle(this.ballX,this.ballY,40);

}

bounce(){

if(this.ballX > width || this.ballX < 0){

this.speedX = this.speedX \* (-1);

}

if(this.ballY > height || this.ballY < 0){

this.speedY = this.speedY \* (-1);

}

}

move(){

this.ballX = this.ballX + this.speedX;

this.ballY = this.ballY + this.speedY;

}

}

**Project-3: XY bounce with custom starting values for its instance variables**

let myBall;

function setup() {

createCanvas(400, 400);

myBall = new Ball(200,100,1,2);

}

function draw() {

background(220);

myBall.display();

myBall.bounce();

myBall.move();

}

class Ball{

constructor(x,y,vx,vy){

this.ballX = x;

this.ballY = y;

this.speedX = vx;

this.speedY = vy;

}

display(){

fill(255,255,0);

circle(this.ballX,this.ballY,40);

}

bounce(){

if(this.ballX > width || this.ballX < 0){

this.speedX = this.speedX \* (-1);

}

if(this.ballY > height || this.ballY < 0){

this.speedY = this.speedY \* (-1);

}

}

move(){

this.ballX = this.ballX + this.speedX;

this.ballY = this.ballY + this.speedY;

}

}

**Project-4: 2 balls bounce**

let myBall1;

let myBall2;

function setup() {

createCanvas(400, 400);

myBall1 = new Ball(200,100,1,2);

myBall2 = new Ball(100,200,2,1);

}

function draw() {

background(220);

myBall1.display();

myBall1.bounce();

myBall1.move();

myBall2.display();

myBall2.bounce();

myBall2.move();

}

class Ball{

constructor(x,y,vx,vy){

this.ballX = x;

this.ballY = y;

this.speedX = vx;

this.speedY = vy;

}

display(){

fill(255,255,0);

circle(this.ballX,this.ballY,40);

}

bounce(){

if(this.ballX > width || this.ballX < 0){

this.speedX = this.speedX \* (-1);

}

if(this.ballY > height || this.ballY < 0){

this.speedY = this.speedY \* (-1);

}

}

move(){

this.ballX = this.ballX + this.speedX;

this.ballY = this.ballY + this.speedY;

}

}

**Project-5: Many balls bounce**

let myBall = [];

function setup() {

createCanvas(400, 400);

for (let i=0; i<10; i++){

myBall[i]= new Ball(random(width),random(height),random(3),random(3));

}

}

function draw() {

background(220);

for (let i=0; i<myBall.length; i++){

myBall[i].display();

myBall[i].bounce();

myBall[i].move();

}

}

class Ball{

constructor(x,y,vx,vy){

this.ballX = x;

this.ballY = y;

this.speedX = vx;

this.speedY = vy;

}

display(){

noStroke();

fill(50);

circle(this.ballX,this.ballY,40);

}

bounce(){

if(this.ballX > width || this.ballX < 0){

this.speedX = this.speedX \* (-1);

}

if(this.ballY > height || this.ballY < 0){

this.speedY = this.speedY \* (-1);

}

}

move(){

this.ballX = this.ballX + this.speedX;

this.ballY = this.ballY + this.speedY;

}

}

**Project-6: Mouse press add ball and key press remove ball**

let myBall = [];

function setup() {

createCanvas(400, 400);

}

function draw() {

background(220);

for (let i=0; i<myBall.length; i++){

myBall[i].display();

myBall[i].bounce();

myBall[i].move();

}

}

function mousePressed(){

myBall.push(new Ball(mouseX, mouseY, 1,1));

}

function keyPressed(){

myBall.pop();

}

class Ball{

constructor(x,y,vx,vy){

this.ballX = x;

this.ballY = y;

this.speedX = vx;

this.speedY = vy;

}

display(){

noStroke();

fill(50);

circle(this.ballX,this.ballY,40);

}

bounce(){

if(this.ballX > width || this.ballX < 0){

this.speedX = this.speedX \* (-1);

}

if(this.ballY > height || this.ballY < 0){

this.speedY = this.speedY \* (-1);

}

}

move(){

this.ballX = this.ballX + this.speedX;

this.ballY = this.ballY + this.speedY;

}

}

**Project-6: if mouse if pressed conditin**

let myBall = [];

function setup() {

createCanvas(400, 400);

}

function draw() {

background(220);

if (mouseIsPressed){

myBall.push(new Ball(mouseX, mouseY, random(2),random(2)));

}

for (let i=0; i<myBall.length; i++){

myBall[i].display();

myBall[i].bounce();

myBall[i].move();

}

}

class Ball{

constructor(x,y,vx,vy){

this.ballX = x;

this.ballY = y;

this.speedX = vx;

this.speedY = vy;

}

display(){

noStroke();

fill(125,100,220);

circle(this.ballX,this.ballY,4);

}

bounce(){

if(this.ballX > width || this.ballX < 0){

this.speedX = this.speedX \* (-1);

}

if(this.ballY > height || this.ballY < 0){

this.speedY = this.speedY \* (-1);

}

}

move(){

this.ballX = this.ballX + this.speedX;

this.ballY = this.ballY + this.speedY;

}

}