

/*

MIRABILIA PROCESSING PROTOTYPE

Mirabilia is a project designed by
Alberto Elizondo, Fosca Salvi and Fiona Fey.

*/

```
// Variables
// int all variables
```

```
int xrabbit = 0;
int yrabbit = 0;
int numFrames = 20;
int frame = 0;
int numFramesRun = 5;
int frameRun=0;
int numFramesJump = 34;
int frameJump = 0;
int numFramesHelp = 8;
int frameHelp = 0;
int numFramesCarrot = 12;
int frameCarrot = 0;
int timer;
int timer2;
int x=0;
```

```
float mirabiliaX=0;
float mirabiliaY=0;
float arrowY=0;
float mirabiliaAngle=0;
float r1=0;
float r2=0;
float elliPos=0;
float transparentCover=0;
float halfRabbitY=40;
```

```
float transparentFirst=0;
float transparentReality=0;
float transparentArrow=0;
float transparentTools=0;
float rabbitUpY=random(-100, -35);
float transparentSpiral=0;
float transparent1=0;
float transparent2=0;
float transparent3=0;
float transparent4=0;
float transparentInstruments=0;
float transparentAre=0;
float transparentAnywhere=0;
float transparentAugmentedreality=0;
float transparentMessage=0;
float transparentCarrot=0;
float carrotY=300;
float yrabbitJump=0;
float toolBarY = 215;
```

```
float transparentToolbar1=0;  
float transparentToolbar2=0;  
float transparentToolbar3=0;  
float transparentToolbar4=0;  
float transparentToolbar5=0;  
float transparentbg2=0;  
float posi1;  
float posi2;
```

```
float transparentProfile1;  
float transparentProfile2;  
float transparentProfile3;
```

```
boolean waitForHim =false;  
boolean stopJumping =true;
```

```
// Images
// Load all images
```

```
PImage [] images =new PImage [numFrames];
PImage [] imagesRun =new PImage [numFramesRun];
PImage [] imagesJump =new PImage [numFramesJump];
PImage [] imagesHelp =new PImage [numFramesHelp];
PImage [] imagesCarrot =new PImage [numFramesCarrot];
```

```
PImage finger;
PImage mirabilia;
PImage holecover;
PImage cover2;
PImage tools;
PImage arrow;
PImage bg;
PImage bg2;
PImage reality;
PImage halfRabbit;
PImage miRabbitUp;
PImage runrabbit1;
PImage runrabbit2;
PImage runrabbit3;
PImage runrabbit4;
PImage runrabbit5;
```

```
PImage spiral;
PImage circleMusic;
PImage circleFishMarket;
PImage circleFood;
PImage circleSea;
PImage instruments;
PImage are;
PImage anywhere;
PImage mp;
PImage message;
PImage button;//fake augmented reality
PImage profile1;
PImage profile2;
PImage profile3;
PImage carrot;
PImage menu;
PImage toolBar;
PImage toolBar1;
PImage toolBar2;
PImage toolBar3;
PImage toolBar4;
PImage toolBar5;
```

```
// Setup
//Set all classes for animations
```

```
void setup() {
  size(320, 480);
```

```
  bg =loadImage("background.PNG");
  bg2 =loadImage("background2.png");
  holecover =loadImage("holecover.png");
  mirabilia =loadImage("mirabilia.png");
```

```
  images[0] =loadImage ("rabbit1.png");
  images[1] =loadImage ("rabbit2.png");
  images[2] =loadImage ("rabbit3.png");
  images[3] =loadImage ("rabbit4.png");
  images[4] =loadImage ("rabbit5.png");
  images[5] =loadImage ("rabbit6.png");
  images[6] =loadImage ("rabbit7.png");
  images[7] =loadImage ("rabbit8.png");
  images[8] =loadImage ("rabbit9.png");
  images[9] =loadImage ("rabbit10.png");
  images[10] =loadImage ("rabbit11.png");
  images[11] =loadImage ("rabbit12.png");
  images[12] =loadImage ("rabbit13.png");
  images[13] =loadImage ("rabbit14.png");
  images[14] =loadImage ("rabbit15.png");
  images[15] =loadImage ("rabbit16.png");
  images[16] =loadImage ("rabbit17.png");
  images[17] =loadImage ("rabbit18.png");
  images[18] =loadImage ("rabbit19.png");
  images[19] =loadImage ("rabbit20.png");
```

```
//welcome screen animation
```

```
  imagesRun[0] =loadImage ("runrabbit1.png");
  imagesRun[1] =loadImage ("runrabbit2.png");
  imagesRun[2] =loadImage ("runrabbit3.png");
  imagesRun[3] =loadImage ("runrabbit4.png");
  imagesRun[4] =loadImage ("runrabbit5.png");
```

```
  imagesJump[0] =loadImage ("coniglio1.png");
  imagesJump[1] =loadImage ("coniglio2.png");
  imagesJump[2] =loadImage ("coniglio3.png");
  imagesJump[3] =loadImage ("coniglio4.png");
  imagesJump[4] =loadImage ("coniglio5.png");
  imagesJump[5] =loadImage ("coniglio6.png");
  imagesJump[6] =loadImage ("coniglio7.png");
```

```
imagesJump[7] =loadImage ("coniglio8.png");
imagesJump[8] =loadImage ("coniglio9.png");
imagesJump[9] =loadImage ("coniglio10.png");
imagesJump[10] =loadImage ("coniglio11.png");
imagesJump[11] =loadImage ("coniglio12.png");
imagesJump[12] =loadImage ("coniglio13.png");
imagesJump[13] =loadImage ("coniglio14.png");
imagesJump[14] =loadImage ("coniglio15.png");
imagesJump[15] =loadImage ("coniglio16.png");
imagesJump[16] =loadImage ("coniglio17.png");
imagesJump[17] =loadImage ("coniglio18.png");
imagesJump[18] =loadImage ("coniglio19.png");
imagesJump[19] =loadImage ("coniglio20.png");
imagesJump[20] =loadImage ("coniglio21.png");
imagesJump[21] =loadImage ("coniglio22.png");
imagesJump[22] =loadImage ("coniglio23.png");
imagesJump[23] =loadImage ("coniglio24.png");
imagesJump[24] =loadImage ("coniglio25.png");
imagesJump[25] =loadImage ("coniglio26.png");
imagesJump[26] =loadImage ("coniglio27.png");
imagesJump[27] =loadImage ("coniglio28.png");
imagesJump[28] =loadImage ("coniglio29.png");
imagesJump[29] =loadImage ("coniglio30.png");
imagesJump[30] =loadImage ("coniglio31.png");
imagesJump[31] =loadImage ("coniglio32.png");
imagesJump[32] =loadImage ("coniglio33.png");
imagesJump[33] =loadImage ("coniglio34.png");
```

```
imagesHelp[0] =loadImage ("rabbitHelp1.png");
imagesHelp[1] =loadImage ("rabbitHelp2.png");
imagesHelp[2] =loadImage ("rabbitHelp3.png");
imagesHelp[3] =loadImage ("rabbitHelp4.png");
imagesHelp[4] =loadImage ("rabbitHelp5.png");
imagesHelp[5] =loadImage ("rabbitHelp6.png");
imagesHelp[6] =loadImage ("rabbitHelp7.png");
imagesHelp[7] =loadImage ("rabbitHelp8.png");
```

```
imagesCarrot[0] =loadImage ("carrotEaten0.png");
imagesCarrot[1] =loadImage ("carrotEaten1.png");
imagesCarrot[2] =loadImage ("carrotEaten2.png");
imagesCarrot[3] =loadImage ("carrotEaten3.png");
imagesCarrot[4] =loadImage ("carrotEaten4.png");
imagesCarrot[5] =loadImage ("carrotEaten5.png");
imagesCarrot[6] =loadImage ("carrotEaten6.png");
imagesCarrot[7] =loadImage ("carrotEaten7.png");
imagesCarrot[8] =loadImage ("carrotEaten8.png");
imagesCarrot[9] =loadImage ("carrotEaten9.png");
```

```
imagesCarrot[10] =loadImage ("carrotEaten10.png");
imagesCarrot[11] =loadImage ("carrotEaten11.png");

tools =loadImage("tools.png");
arrow =loadImage("arrow.png");
halfRabbit =loadImage ("halfRabbit.png");
reality =loadImage("reality.jpg");
carrot =loadImage("carrot.png");

spiral =loadImage("greySpiral.png");
circleMusic =loadImage("circleMusic.png");
circleFishMarket =loadImage("circleFishMarket.png");
circleFood =loadImage("circleFood.png");
circleSea =loadImage("circleSea.png");

instruments =loadImage("instruments.png");
are =loadImage("are.png");
anywhere =loadImage("anywhere.png");
miRabbitUp =loadImage("mirabbitUp.png");
cover2 =loadImage("cover2.png");

menu =loadImage("menu.png");
toolBar =loadImage("toolbar.png");
toolBar1 =loadImage("toolbar1.png");
toolBar2 =loadImage("toolbar2.png");
toolBar3 =loadImage("toolbar3.png");
toolBar4 =loadImage("toolbar4.png");
toolBar5 =loadImage("toolbar5.png");
mp =loadImage("bg1.jpg");
button =loadImage("button.png");
message =loadImage("message.png");

profile1 =loadImage("profile1.jpg");
profile2 =loadImage("profile2.JPG");
profile3 =loadImage("profile3.jpg");

finger =loadImage("finger.png");
smooth();
frameRate(20);
}
```

```
// Draw
```

```
void draw() {  
  
    background(bg);  
  
    if(transparentReality>=255) {  
        transparentCover=0;  
    }  
  
    else transparentCover=255;  
    if(transparentAugmentedreality>=255) {  
        transparentTools=0;  
    }  
  
    if(frameCount>0) {  
        transparentFirst+=10;  
    }  
  
    if(frameCount>75) {  
        mirabiliaAngle+=3;  
        mirabiliaX+=20;  
    }  
  
    if(frameCount>=95) {  
        mirabiliaY+=20;  
    }  
  
    if(frameCount>=170) {  
        elliPos+=5;  
    }  
  
    if(frameCount>=170) {  
        r1+=20;  
    }  
  
    if(frameCount>=170) {  
        r2+=5;  
    }  
  
  
    if(elliPos>89) {  
        elliPos=89;  
    }  
    if(r1>192) {  
        r1=192;  
    }  
    if(r2>20) {
```



```

    r2=20;
}

tint(255,transparentFirst);
pushMatrix();
rotate (radians(mirabiliaAngle));
image (mirabilia,0+mirabiliaX,0+mirabiliaY);
popMatrix();

image (images[frame],xrabbit,yrabbit);
if(mirabiliaY>=100) {
    if (frame < numFrames-1 ) {
        frame++;
    }
    else {
        frame = 19;
    }
    if (frame == 19) {
        yrabbit = yrabbit+7;
    }
}

//the first animation

noTint();
if(frameCount>=200 && r2 >= 20) {
    //myIPhone.vibrate();
    halfRabbitY-=20;
    if(halfRabbitY<=-30) {
        halfRabbitY=-30;
    }
}

if(frameCount>=235) {
    //myIPhone.vibrate();
    halfRabbitY+=80;
}

if(halfRabbitY>=100) {
    halfRabbitY=100;
}

if(frameCount>=260) {
    transparentTools+=10;
}

tint (255,transparentSpiral);
image(spiral,0,-30);

```

```
if(frameCount>=295) {
  transparentSpiral+=10;
}
```

```
//the spirial
```

```
tint(255,transparentbg2);
image(bg2,0,0);
tint(255,transparent1);
image(circleMusic,0.5,-29);
tint(255,transparent2);
image(circleFishMarket,1,-29);
tint(255,transparent3);
image(circleFood,0.5,-30);
tint(255,transparent4);
image(circleSea,0.5,-29);
```

```
if (frameCount>=300) {
  if(mousePressed&&mouseX>=12&&mouseX<=110&&mouseY>=130&&mouseY<=193) {
    transparent1+=100;
  }
  if(mousePressed&&mouseX>=125&&mouseX<=205&&mouseY>=115&&mouseY<=187) {
    transparent2+=100;
  }
  if(mousePressed&&mouseX>=125&&mouseX<=270&&mouseY>=190&&mouseY<=240) {
    transparent3+=100;
  }
  if(mousePressed&&mouseX>=215&&mouseX<=280&&mouseY>=120&&mouseY<=185) {
    transparent4+=100;
  }
}
```

```
//the keywords get dark,the other become light
```

```
tint (255,transparentArrow);
image (arrow,0,arrowY);
if(transparent1>=100||transparent2>=100||transparent3>=100||transparent4>
  transparentArrow+=10;
  if (mouseX>=200&&mouseX<=300&&mouseY>=406&&mouseY<=480&&mousePressed)//
  {
    transparentSpiral-=50;
    arrowY+=20;
  }
  if(arrowY>=100) {
    arrowY=100;
  }
}
```

```
    }  
    if (arrowY >= 20) {  
        transparentSpiral = 30;  
    }  
}
```

//at least choose a keyword press the rabbit hole, and the spiral disappears

```
if (frameCount >= 300 && transparentSpiral <= 30) {  
    timer++;  
    if (second() % 2 == 0) {  
        transparent1 = 200;  
        transparent2 = 80;  
        transparent3 = 160;  
        transparent4 = 95;  
    }  
    if (second() % 3 == 0) {  
        transparent1 = 100;  
        transparent2 = 230;  
        transparent3 = 60;  
        transparent4 = 150;  
    }  
    if (second() % 5 == 0) {  
        transparent1 = 80;  
        transparent2 = 50;  
        transparent3 = 220;  
        transparent4 = 70;  
    }  
    if (second() % 7 == 0) {  
        transparent1 = 115;  
        transparent2 = 100;  
        transparent3 = 70;  
        transparent4 = 200;  
    }  
}
```

//when the spiral disappears the chosen keywords shine

```
frameRate(10);  
if (stopJumping == false) {  
    image (imagesJump[frameJump], -3, 0);  
    frameJump = (frameJump + 1) % numFramesJump;  
};  
  
if (timer >= 150) {  
    transparent1 = 255;  
}  
if (transparent1 == 255 && timer >= 150 && transparentSpiral <= 30) {  
    //myIPhone.vibrate();  
}
```

```
    stopJumping =false;
transparent2=100;
transparent3=70;
transparent4=160;
}
```

//the rabbit keeps jumping,the other keywords stop blinking.

```
if(transparent1>=255) {
    if(mouseX>=11&&mouseX<=107&&mouseY>=135&&mouseY<=180&&mousePressed&&timer) {
        transparentInstruments+=50;
        if(transparentInstruments>=255) {
            transparentAre+=50;
        }
        if(transparentAre>=255) {
            transparentAnywhere+=50;
        }
    }
}
if(transparentAnywhere>=255&&timer>=150) {
    arrowY=0;
    transparentArrow=255;
    if(mousePressed&&mouseX>=200&&mouseX<=300&&mouseY>=406&&mouseY<=480) {
        arrowY+=50;
        if(arrowY==60) {
            arrowY=100;
            transparentArrow = 0;
        }
    }
}

if(transparentInstruments>=50) {
    stopJumping =true;
}
}
if(transparentAnywhere>=255) {
    transparentSpiral=30;
}
}
```

//the keyword MUSIC shows,
//click on the MUSIC comes out a phrase,
//the rabbit stops and the spiral goes lighter,arrow appears

```
tint(255,transparentInstruments);
image(instruments,-20,165);
tint(255,transparentAre);
image(are,-30,170);
```

```
tint(255,transparentAnywhere);
image(anywhere,-93,174);
if(timer>=150&&transparentInstruments>=255)
{
  transparent2=0;
  transparent3=0;
  transparent4=0;
}
```

```
//the other keywords fade
```

```
if(timer>=160&&transparent1>=255&&transparentAnywhere>=255&&mouseX>=20&&n
  transparentbg2=255;
}
```

```
if(transparentbg2>=255) {
  transparentInstruments=0;
  transparentAre=0;
  transparentAnywhere=0;
  transparent1=0;
```

```
  if(second()%2==0) {
    transparent2=80;
    transparent3=160;
    transparent4=95;
  }
```

```
  if(second()%3==0) {
    transparent2=230;
    transparent3=60;
    transparent4=150;
  }
```

```
  if(second()%5==0) {
    transparent2=50;
    transparent3=220;
    transparent4=70;
  }
```

```
  if(second()%7==0) {
    transparent2=100;
    transparent3=70;
    transparent4=200;
  }
```

```
}
```

```
//click spiral button to go back
```

```
//when the frase shows up,the arrow appears,
//click on the hole,start the augmented reality
```

```

if(transparent1>=255&&timer>=150&&transparentAnywhere>=255&&mousePressed&
  transparentAugmentedreality=255;
}

float posiX =map(mouseX,0, width, -mp.width+width, 0);
float posiY =map(mouseY,0, height, -mp.height+height,0);
posi1 += (posiX - posi1)*0.05;
posi2 += (posiY - posi2)*0.05;

if(transparentAugmentedreality>=255&&mouseX>=290&&mouseX<=320&&mouseY>=0&
  transparentAugmentedreality=0;
  transparentMessage=0;

}

//exit the augmented reality

if(transparentAugmentedreality>=255&&toolBarY>=215&&mousePressed&&mouseX>
  delay(5);
  toolBarY--=300;

  //open the toolbar

  if(toolBarY<=-25) {
    toolBarY=-25;
  }
}
if(transparentAugmentedreality>=255&&transparentMessage<=0&&toolBarY>=215
  delay(3);
  transparentMessage=255;
}

//see the message

if(transparentAugmentedreality>=255&&toolBarY<=-25&&mousePressed&&mouseX>
  toolBarY+=300;

  //close the toolbar

  if(toolBarY>=215) {
    toolBarY=215;
  }
}
if(transparentMessage>=255&&mousePressed&&mouseX>=0&&mouseX<=320&&mouseY>
  transparentMessage=0;
}

//close the message

```

```

if(transparentTools>=255) {
  tint (255,transparentCarrot);
  image(carrot,230,carrotY);
  constrain(carrotY,300,480);
  if(transparentReality>=255) {
    if(frameCount % 50 == 0) {
      waitForHim =true;
      //myIPhone.vibrate();
    }

    if(waitForHim) {
      if(frameHelp < 7) {
        frameHelp = (frameHelp+1) % numFramesHelp;
      }
    }
  }
}

//carrot button

if(transparentReality<=0&&mouseX>=80&&mouseX<=117&&mouseY>=420&&mouseY<
{
  transparentCarrot=255;
  carrotY+=30;
  if(carrotY==480) {
    carrotY = 300;
    transparentCarrot = 0;
    transparentReality=255;
  }
}

else if(transparentReality>=0&&mouseX>=290&&mouseX<=320&&mouseY>=0&&mouseY<
{
  timer2++;
  transparentReality=0;
  if(transparentReality<=0) {
    waitForHim =false;
    frameHelp = 0;
  }
}

if(transparentReality<=0) {
  waitForHim =false;
  frameHelp = 0;
  delay(4);
}
if(timer2>=3) {
  if(frameCarrot<=10) {

```

```

        frameCarrot = (frameCarrot+1) % numFramesCarrot;
        //myIPhone.vibrate();}
    }
}

```

```
//the help screen
```

```

if(transparentTools>=255&&mousePressed) {
    if (mouseX>=144&&mouseX<=170&&mouseY>=420&&mouseY<=457&&transparentProf
        transparentProfile1=255;
    }
    if(transparentProfile1==255&&mouseX>=275&&mouseX<=315&&mouseY>=5&&mouse
        transparentProfile1=0;
        transparentProfile2=0;
        transparentProfile3=0;
    }
    if(transparentProfile1==255&&mouseX>=150&&mouseX<=210&&mouseY>=240&&mouse
        transparentProfile2=255;
    }
    if(transparentProfile1==255&&mouseX>=110&&mouseX<=135&&mouseY>=160&&mouse
        transparentProfile3=255;
    }
}

```

```
//profile screen
```

```

noTint();
image(halfRabbit,0,halfRabbitY);
image(imagesCarrot[frameCarrot],0,0);

tint(transparentCover);
image (holecover,0,0);
noTint();
frameRate(15);
fill(0,transparentFirst);
noStroke();
ellipse(width/2+elliPos,450,290-r1,28-r2);
tint (255,transparentTools);
image (tools,0,0);

tint (255,transparentAugmentedreality);
image(mp,posit1,posit2);
image(menu,0,0);
image(button,posit1,posit2);

```



```

tint(255,transparentMessage);
image(message,posit1,posit2);
tint (255,transparentAugmentedreality);
image(toolBar,-3,toolBarY);
image (cover2,posit1,posit2);

if (transparentAugmentedreality==255&&toolBarY<=-25&&mousePressed) {
  if(mouseX>=230 &&mouseX<=270 &&mouseY>=220 &&mouseY<=255) {
    transparentToolBar1=255;
    tint (255,transparentToolBar1);
    image(toolBar1,-3,toolBarY);
  }
  if(mouseX>=230 &&mouseX<=270 &&mouseY>=270 &&mouseY<=300 ) {
    transparentToolBar2=255;
    tint (255,transparentToolBar2);
    image(toolBar2,-3,toolBarY);
  }
  if(mouseX>=230 &&mouseX<=270 &&mouseY>=320 &&mouseY<=335 ) {
    transparentToolBar3=255;
    tint (255,transparentToolBar3);
    image(toolBar3,-3,toolBarY);
  }
  if(mouseX>=230 &&mouseX<=270 &&mouseY>=355 &&mouseY<=395 ) {
    transparentToolBar4=255;
    tint (255,transparentToolBar4);
    image(toolBar4,-3,toolBarY);
  }
  if(mouseX>=230 &&mouseX<=270 &&mouseY>=410 &&mouseY<=440 ) {
    transparentToolBar5=255;
    tint (255,transparentToolBar5);
    image(toolBar5,-3,toolBarY);
  }
}

noStroke();
ellipse(width/2+elliPos,450,290-r1,28-r2);

tint(255,transparentReality);
image(reality,0,0);
image(imagesHelp[frameHelp],-4, 0);

noTint();
if(second()%13==0&&transparentReality<=0&&frameCount>=150&&transparentPrc
{//myIPhone.vibrate();
  frameRate(1);
  image(miRabbitUp,random(-20,335),rabbitUpY);
}

```

```
if(second()%17==0&&transparentReality<=0&&frameCount>=150&&transparentProc
{ //myIPhone.vibrate();
  frameRun = (frameRun+1) % numFramesRun;
  image(imagesRun[frameRun],0, 0);
}
tint(255,transparentProfile1);
image(profile1,0,0);
tint(255,transparentProfile2);
image(profile2,0,0);
tint(255,transparentProfile3);
image(profile3,0,0);

noCursor();
noTint();
image(finger,mouseX-25,mouseY);
}
```