# include "iGraphics.h"

#define screenheight 663

#define screenwidth 1200

#define bgspeed 120

#include<stdlib.h>

#include<string.h>

#include<math.h>

int posx=0, posy, ind=0, mode=0, cnt=0, enmind=screenwidth, enmcnt=0,attack=1, amod=0, deadenemy=0, health=100, level=0, plevel=0, menu=1, bosx=1000, bosy=0, bossl=0, boss=0, baind=0, icnt=0, battack=5, bhealth=100;

char bgi[40][15]= {"bg\\bg1.bmp", "bg\\bg2.bmp", "bg\\bg3.bmp", "bg\\bg4.bmp", "bg\\bg5.bmp", "bg\\bg6.bmp", "bg\\bg7.bmp", "bg\\bg8.bmp", "bg\\bg9.bmp", "bg\\bg10.bmp", "bg\\bg11.bmp", "bg\\bg12.bmp" , "bg\\bg13.bmp", "bg\\bg14.bmp", "bg\\bg15.bmp", "bg\\bg16.bmp", "bg\\bg17.bmp", "bg\\bg18.bmp", "bg\\bg19.bmp", "bg\\bg20.bmp" , "bg\\bg21.bmp", "bg\\bg22.bmp" , "bg\\bg23.bmp", "bg\\bg24.bmp", "bg\\bg25.bmp", "bg\\bg26.bmp", "bg\\bg27.bmp", "bg\\bg28.bmp", "bg\\bg29.bmp", "bg\\bg30.bmp" , "bg\\bg31.bmp", "bg\\bg32.bmp" , "bg\\bg33.bmp", "bg\\bg34.bmp", "bg\\bg35.bmp", "bg\\bg36.bmp", "bg\\bg37.bmp", "bg\\bg38.bmp", "bg\\bg39.bmp", "bg\\bg40.bmp"};

char run[6][15]= {"run\\r1.bmp", "run\\r2.bmp", "run\\r3.bmp", "run\\r4.bmp", "run\\r5.bmp", "run\\r6.bmp"};

char flys[2][15]= {"fly\\f1.bmp", "fly\\f2.bmp"};

char fly[4][15]= {"fly\\f3.bmp", "fly\\f4.bmp", "fly\\f5.bmp", "fly\\f6.bmp"};

char enm[7][15]= {"e\\e1.bmp", "e\\e2.bmp","e\\e3.bmp","e\\e4.bmp","e\\e5.bmp","e\\e6.bmp","e\\e7.bmp"};

char bosp[7][15]= {"bth\\p1.bmp", "bth\\p2.bmp","bth\\p3.bmp","bth\\p4.bmp","bth\\p5.bmp","bth\\p6.bmp","bth\\p7.bmp"};

int enmset[5]= {0,0,0,0,0};

char a1[15]="A\\a1.bmp";

char ba[15]="bth\\a1.bmp";

char menui[15]="menu\\p1.bmp";

int a1set[30]= {0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0};

int baset[30]= {0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0};

char c[100];

char d[100];

char h1[100];

char h2[100];

void score()

{

if(bossl==1)

{

strcpy(d, "THANOS: ");

itoa(bhealth, c, 10);

strcat(d, c);

strcpy(h1, "IRONMAN: ");

itoa(health, h2, 10);

strcat(h1, h2);

}

else

{

strcpy(d, "THANOS IS COMING: ");

itoa(25-deadenemy, c, 10);

strcat(d, c);

strcpy(h1, "HEALTH: ");

itoa(health, h2, 10);

strcat(h1, h2);

}

//printf("%s\n", d);

}

struct bg

{

int x;

int y;

};

struct enemy

{

int x;

int y;

int eind;

int eshow;

};

struct atck

{

int ax;

int ay;

int ashow;

};

struct batck

{

int bax;

int bay;

};

bg bg[40];

enemy enemy[5];

atck atck1[30];

batck batck1[30];

/\*

function iDraw() is called again and again by the system.

\*/

void enemyset(int i)

{

enemy[i].x=1200;

enemy[i].y=i\*130+(rand()%80);

enemy[i].eind=(rand()%7);

enemy[i].eshow=1;

enmset[i]=1;

}

void atckset(int i)

{

a1set[i]=1;

atck1[i].ashow=1;

if(mode==11 || mode==0)

{

atck1[i].ax=posx+90;

atck1[i].ay=90;

}

else if(mode==21)

{

atck1[i].ax=posx+180;

atck1[i].ay=posy+45;

}

}

void batckset(int i)

{

baset[i]=1;

batck1[i].bax=bosx-100;

batck1[i].bay=bosy+50;

}

void iDraw()

{

//place your drawing codes here

iClear();

if(menu==1)

{

iShowBMP(0,0, menui);

iShowBMP(25, 25, "menu\\b1.bmp");

iShowBMP(200, 25, "menu\\b3.bmp");

iShowBMP(400, 25, "menu\\b6.bmp");

iShowBMP(600, 25, "menu\\b7.bmp");

iShowBMP(800, 25, "menu\\b9.bmp");

iShowBMP(1000, 25, "menu\\b5.bmp");

}

if(menu==2)

{

iShowBMP(0,0, "menu\\p2.bmp");

iShowBMP(25, 25, "menu\\b8.bmp");

iShowBMP(1000, 25, "menu\\b5.bmp");

}

if(menu==3)

{

iShowBMP(0,0, "menu\\p3.bmp");

iShowBMP(25, 550, "menu\\b8.bmp");

}

if(menu==4)

{

iShowBMP(0,0, "menu\\p4.bmp");

}

if(menu==5)

{

iShowBMP(0,0, "menu\\p5.bmp");

iShowBMP(25, 25, "menu\\b8.bmp");

iShowBMP(1000, 25, "menu\\b5.bmp");

}

if(level == 1)

{

for(int i=0; i<40; i++)

{

iShowBMP(bg[i].x, bg[i].y, bgi[i]);

}

if(mode==11)

{

iShowBMP2(posx, 0, run[ind], 1);

}

if(mode==0)

{

iShowBMP2(posx, 0, "run\\s11.bmp", 1);

}

if(mode==21)

{

if(ind>3) ind=ind%4;

iShowBMP2(posx, posy, fly[ind], 1);

}

if(plevel==1)

{

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

{

if(enmset[i]==0) enemyset(i);

else iShowBMP(enemy[i].x, enemy[i].y, enm[enemy[i].eind]);

}

for(int j=2; j<30; j++)

{

if(a1set[j]==1)

{

//printf("i= %d bool=%d\n", j, a1set[j]);

iShowBMP(atck1[j].ax, atck1[j].ay, a1);

}

}

for(int j=2; j<30; j++)

{

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

{

if( a1set[j]==1 && (atck1[j].ax+100>enemy[i].x) && (atck1[j].ay+10>enemy[i].y && atck1[j].ay<enemy[i].y+50))

{

a1set[j]=0;

enmset[i]=0;

deadenemy++;

if(deadenemy==25)

{

menu=4;

plevel=0;

level=0;

}

}

}

}

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

{

if(mode==21 && (posx+180>enemy[i].x) && (posy+90>enemy[i].y && posy<enemy[i].y+50))

{

enmset[i]=0;

health-=5;

if(health<=0)

{

level=0;

menu=2;

plevel=0;

mode=0;

posx=0;

posy=0;

health=100;

deadenemy=0;

}

}

else if((mode==0 || mode==11) && (posx+90>enemy[i].x) && (120>enemy[i].y && 0<enemy[i].y+50))

{

enmset[i]=0;

health-=5;

if(health<=0)

{

level=0;

menu=2;

mode=0;

posx=0;

posy=0;

health=100;

deadenemy=0;

}

}

}

iSetColor(255,255,255);

iFilledRectangle(0, 600, 420, 40);

iFilledRectangle(700, 600, 420, 40);

iSetColor(0,0,0);

iFilledRectangle(10, 610, 400, 20);

iSetColor(0,0,0);

iFilledRectangle(710, 610, 400, 20);

iSetColor(0,0,255);

iFilledRectangle(710,610, 4\*health, 20);

iSetColor(255,0,0);

iFilledRectangle(10,610, 16\*deadenemy, 20);

iSetColor(255,255,255);

iText(20, 615, d);

iText(720, 615, h1);

}

if(bossl==1)

{

for(int j=2; j<30; j++)

{

if(a1set[j]==1)

{

//printf("i= %d bool=%d\n", j, a1set[j]);

iShowBMP(atck1[j].ax, atck1[j].ay, a1);

}

if(baset[j]==1)

{

//printf("i= %d bool=%d\n", j, a1set[j]);

iShowBMP(batck1[j].bax, batck1[j].bay, ba);

}

}

if(boss==1)

{

iShowBMP(bosx,bosy,"bth\\b1.bmp");

}

else if(boss==2)

{

icnt++;

if(icnt%3==0) baind=(baind+1)%7;

iShowBMP(bosx, bosy, bosp[baind]);

if(baind==6)

{

boss=1;

baind=0;

batckset(battack);

battack=(battack+1)%30;

if(battack<5) battack=5;

}

}

for(int j=2; j<30; j++)

{

for(int i=5; i<30; i++)

{

if( a1set[j]==1 && baset[i]==1 && (atck1[j].ax+100>batck1[i].bax) && (atck1[j].ay+10>batck1[i].bay && atck1[j].ay<batck1[i].bay+107))

{

a1set[j]=0;

baset[i]=0;

}

}

}

for(int i=5; i<30; i++)

{

if(mode==21 && baset[i]==1 && (posx+180>batck1[i].bax) && (posy+90>batck1[i].bay && posy<batck1[i].bay+107))

{

baset[i]=0;

health-=10;

if(health<=0)

{

level=0;

bossl=0;

menu=2;

plevel=0;

mode=0;

posx=0;

posy=0;

health=100;

deadenemy=0;

}

}

else if((mode==0 || mode==11) && baset[i]==1 && (posx+180>batck1[i].bax) && (120>batck1[i].bay))

{

baset[i]=0;

health-=10;

if(health<=0)

{

level=0;

bossl=0;

menu=2;

plevel=0;

mode=0;

posx=0;

posy=0;

health=100;

deadenemy=0;

}

}

}

if(mode==21 && (posx+180>bosx) && (posy+90>bosy && posy<bosy+142))

{

health-=5;

bhealth-=2;

if(health<=0)

{

level=0;

bossl=0;

menu=2;

plevel=0;

mode=0;

posx=0;

posy=0;

health=100;

deadenemy=0;

}

if(bhealth<=0)

{

level=0;

bossl=0;

menu=5;

plevel=0;

mode=0;

posx=0;

posy=0;

health=100;

deadenemy=0;

}

}

else if((mode==0 || mode==11) && (posx+180>bosx) && (120>bosy))

{

health-=5;

bhealth-=2;

if(health<=0)

{

level=0;

bossl=0;

menu=2;

plevel=0;

mode=0;

posx=0;

posy=0;

health=100;

deadenemy=0;

}

if(bhealth<=0)

{

level=0;

bossl=0;

menu=5;

plevel=0;

mode=0;

posx=0;

posy=0;

health=100;

deadenemy=0;

}

}

for(int j=2; j<30; j++)

{

if( a1set[j]==1 && (atck1[j].ax+100>bosx) && (atck1[j].ay+10>bosy && atck1[j].ay<bosy+142))

{

bhealth-=2;

a1set[j]=0;

if(bhealth<=0)

{

level=0;

bossl=0;

menu=5;

plevel=0;

mode=0;

posx=0;

posy=0;

health=100;

deadenemy=0;

}

}

}

iSetColor(255,255,255);

iFilledRectangle(0, 600, 420, 40);

iFilledRectangle(700, 600, 420, 40);

iSetColor(0,0,0);

iFilledRectangle(10, 610, 400, 20);

iSetColor(0,0,0);

iFilledRectangle(710, 610, 400, 20);

iSetColor(0,0,255);

iFilledRectangle(710,610, 4\*health, 20);

iSetColor(0,0,255);

iFilledRectangle(10,610, 4\*bhealth, 20);

iSetColor(255,255,255);

iText(20, 615, d);

iText(720, 615, h1);

}

}

}

/\*

function iMouseMove() is called when the user presses and drags the mouse.

(mx, my) is the position where the mouse pointer is.

\*/

void iMouseMove(int mx, int my)

{

//place your codes here

}

/\*

function iMouse() is called when the user presses/releases the mouse.

(mx, my) is the position where the mouse pointer is.

\*/

void iMouse(int button, int state, int mx, int my)

{

if (button == GLUT\_LEFT\_BUTTON && state == GLUT\_DOWN)

{

if(menu==1 && (mx>24 && mx<177) && (my>24 && my<88))

{

menu=0;

level=1;

plevel=1;

}

else if((menu==1 || menu==2 || menu==5)&& (mx>999 && mx<1150) && (my>24 && my<88))

{

exit(0);

}

else if((menu==2 || menu==5) && (mx>24 && mx<177) && (my>24 && my<88))

{

menu=1;

level=0;

plevel=0;

}

else if(menu==1 && (mx>799 && mx<950) && (my>24 && my<88))

{

menu=3;

level=0;

plevel=0;

}

else if(menu==3 && (mx>24 && mx<177) && (my>549 && my<613))

{

menu=1;

level=0;

plevel=0;

}

else if(menu==4 && (mx>0 && mx<1200) && (my>0 && my<665))

{

boss=1;

bossl=1;

level=1;

plevel=0;

menu=0;

}

}

if (button == GLUT\_RIGHT\_BUTTON && state == GLUT\_DOWN)

{

//place your codes here

}

}

/\*

function iKeyboard() is called whenever the user hits a key in keyboard.

key- holds the ASCII value of the key pressed.

\*/

void iKeyboard(unsigned char key)

{

if (key == 'r')

{

mode=11;

posy=0;

}

if (key == 's')

{

mode=0;

posy=0;

}

if(key == 'f')

{

mode=21;

}

if(key == 'a')

{

if(attack<2) attack=2;

else attack=(attack+1)%30;

atckset(attack);

}

//place your codes for other keys here

}

/\*

function iSpecialKeyboard() is called whenver user hits special keys like-

function keys, home, end, pg up, pg down, arraows etc. you have to use

appropriate constants to detect them. A list is:

GLUT\_KEY\_F1, GLUT\_KEY\_F2, GLUT\_KEY\_F3, GLUT\_KEY\_F4, GLUT\_KEY\_F5, GLUT\_KEY\_F6,

GLUT\_KEY\_F7, GLUT\_KEY\_F8, GLUT\_KEY\_F9, GLUT\_KEY\_F10, GLUT\_KEY\_F11, GLUT\_KEY\_F12,

GLUT\_KEY\_LEFT, GLUT\_KEY\_UP, GLUT\_KEY\_RIGHT, GLUT\_KEY\_DOWN, GLUT\_KEY\_PAGE UP,

GLUT\_KEY\_PAGE DOWN, GLUT\_KEY\_HOME, GLUT\_KEY\_END, GLUT\_KEY\_INSERT

\*/

void iSpecialKeyboard(unsigned char key)

{

if(key == GLUT\_KEY\_RIGHT)

{

if(mode==0 && posx<1080) posx+=10;

if(mode==21 && posx<960) posx+=10;

}

else if(key == GLUT\_KEY\_LEFT)

{

if(mode==0 && posx>0) posx-=10;

if(mode==21 && posx>0) posx-=10;

}

else if(key == GLUT\_KEY\_UP)

{

if(mode==21 && posy<543) posy+=30;

}

else if(key == GLUT\_KEY\_DOWN)

{

if(mode==21 && posy>0) posy-=30;

}

//place your codes for other keys here

}

void setall()

{

int sum=0;

for(int i=0; i<40; i++)

{

bg[i].y=0;

bg[i].x=sum;

sum+=120;

}

}

void change()

{

for(int i=0; i<40; i++)

{

bg[i].x-=bgspeed;

if(bg[i].x==(-120))

{

bg[i].x=4680;

}

}

}

void runchng()

{

ind=(ind+1)%6;

if(mode==11 && posx<1080) posx+=20;

}

void flychng()

{

if(ind>3) ind=ind%4;

ind=(ind+1)%4;

//if(mode==21 && posx<960) posx+=10;

}

void enemychng()

{

for(int i=0; i<7; i++)

{

if(enemy[i].x > 0)

{

enemy[i].x-=(rand()%100);

enemy[i].y+=(pow(-1,(rand()%2))\*(rand()%30));

if(enemy[i].y<0) enemy[i].y=0;

if(enemy[i].y>565) enemy[i].y=565;

}

else enemyset(i);

enemy[i].eind=(enemy[i].eind+1)%7;

}

}

void atck1chng()

{

for(int j=2; j<30; j++)

{

if(a1set[j]==1)

{

atck1[j].ax = atck1[j].ax + 100;

//printf("i=%d %d\n", j, atck1[j].ax);

if( atck1[j].ax>=1200 ) a1set[j]=0;

}

}

}

void batckchng()

{

for(int j=5; j<30; j++)

{

if(baset[j]==1)

{

int dhorsi=posy- batck1[j].bay;

batck1[j].bax = batck1[j].bax - 100;

batck1[j].bay = batck1[j].bay + (dhorsi/3);

//printf("i=%d %d\n", j, atck1[j].ax);

if( atck1[j].ax>=1200 ) a1set[j]=0;

}

}

}

void bosmove()

{

if(bosx >= 500)

{

bosx+=(pow(-1,(rand()%2))\*(rand()%100));

bosy+=(pow(-1,(rand()%2))\*(rand()%100));

if(bosy<0) bosy=0;

if(bosy>565) bosy=565;

if(bosx<500) bosx=500;

if(bosx>1000) bosx=1000;

}

}

void bpow()

{

boss=2;

}

int main()

{

//place your own initialization codes here.

setall();

iSetTimer(200,change);

iSetTimer(200, runchng);

iSetTimer(200, enemychng);

iSetTimer(200, atck1chng);

iSetTimer(200, batckchng);

iSetTimer(200, score);

iSetTimer(200, bosmove);

iSetTimer(3000, bpow);

PlaySound("snd2.wav", NULL , SND\_LOOP | SND\_ASYNC);

iInitialize(screenwidth, screenheight, "Avengers");

return 0;

}