#include<stdio.h>

#include<conio.h>

#include<graphics.h>

#include<memory.h>

#include<stdlib.h>

#include<dos.h>

char key;

struct loc

{

int x,y;

};

struct snake

{

struct loc sloc;

struct snake \*link;

char dir;

};

struct game\_data

{

int score;

int no\_food;

};

struct game\_data gd={0,0};

struct limit

{

int lx1,ly1,lx2,ly2;

};

struct limit l={96,96,404,404};

struct food

{

struct loc floc;

int number;

};

int n=0;

//-------------------------------------------------------------------

//------------------------FUNCTIONS----------------------------------

//-------------------------------------------------------------------

void draw(struct snake \*head,struct food \*f)

{

struct snake \*temp;

temp=head;

rectangle(96,96,404,404);

rectangle(98,98,402,402);

rectangle(100,100,400,400);

setfillstyle(9,13);

bar(temp->sloc.x-6,temp->sloc.y-6,temp->sloc.x+6,temp->sloc.y+6);

temp=temp->link;

setfillstyle(9,2);

while(temp->link!=NULL)

{

bar(temp->sloc.x-5,temp->sloc.y-5,temp->sloc.x+5,temp->sloc.y+5);

temp=temp->link;

}

bar(temp->sloc.x-5,temp->sloc.y-5,temp->sloc.x+5,temp->sloc.y+5);

circle(f->floc.x-2,f->floc.y-2,5);

circle(f->floc.x+2,f->floc.y+2,5);

circle(f->floc.x-2,f->floc.y+2,5);

circle(f->floc.x+2,f->floc.y-2,5);

delay(20);

while(!kbhit()){goto e;}

key=getche();

e:

cleardevice();

}

gameover(void)

{

cleardevice();

outtextxy(100,100,"----------------- GAME OVER ----------------------");

printf("\n\n\n\n\n\n\n\n");

printf("\t\t# Score - %d",gd.score);

printf("\n\t\t# No of food - %d", gd.no\_food);

s1:

sound(300);delay(300);sound(450);delay(150);sound(500);delay(150);

sound(300);delay(200);sound(450);delay(100);sound(450);delay(200);

while(!kbhit()){goto s1;}

nosound();

return(0);

}

void game(struct snake \*head,struct food \*f)

{

struct snake \*temp,pre,nxt;

temp=head;

while(key!='p')

{

if(head->sloc.x==l.lx1||head->sloc.x==l.ly2||head->sloc.y==l.ly1||head->sloc.y==l.ly2)

{gameover();}

if(head->sloc.x>=f->floc.x-5&&head->sloc.x<=f->floc.x+5&&head->sloc.y>=f->floc.y-5&&head->sloc.y<=f->floc.y+5)

{

temp=head;

sound(420);

f->floc.x=150+random(245);

f->floc.y=150+random(245);

gd.score+=100;

gd.no\_food+=1;

n=n+1;

// if(n==2)

// {

while(temp->link!=NULL){temp=temp->link;}

temp->link=(struct snake \*)malloc(sizeof(struct snake));

temp->link->link=NULL;

temp->link->sloc.x= temp->sloc.x;

temp->link->sloc.y= temp->sloc.y;

temp->link->dir=temp->dir;

n=0;

// }

}

switch(key)

{

case 'a': if(head->dir!='d'){head->dir='a'; head->sloc.x-=2; } else {key=head->dir;} break;

case 'w': if(head->dir!='s'){head->dir='w'; head->sloc.y-=2; } else {key=head->dir;} break;

case 'd': if(head->dir!='a'){head->dir='d'; head->sloc.x+=2; } else {key=head->dir;} break;

case 's': if(head->dir!='w'){head->dir='s'; head->sloc.y+=2; } else {key=head->dir;} break;

}

//cleardevice();

draw(head,f);

nosound();

temp=head;

pre=\*temp;

while(temp->link!=NULL)

{

nxt.sloc.x=temp->link->sloc.x;

nxt.sloc.y=temp->link->sloc.y;

nxt.dir=temp->link->dir;

temp->link->sloc.x=pre.sloc.x;

temp->link->sloc.y=pre.sloc.y;

temp->link->dir=pre.dir;

temp=temp->link;

pre=nxt;

}

}

}

void main(void)

{

struct snake \*s;

struct food f;

int gdriver = DETECT, gmode, errorcode;

clrscr();

s=(struct snake \*)malloc(sizeof(struct snake));

s->dir='w';

s->link=NULL;

s->sloc.x= s->sloc.y=300;

f.floc.x=150+random(250);

f.floc.y=150+random(250);

//------------------------------------------------------------

initgraph(&gdriver, &gmode, "c:\\tc\\bgi\\egavga.bgi");

//-------- # ENTER REQUIREED PATH FOR EGAVGA.BGI---------------

outtextxy(300,50,"SNAKE");

outtextxy(220,100,"Created By - Viral M Parekh");

outtextxy(100,160,"# Instructions :");

outtextxy(100,200,"1. Press 'w' to go upward");

outtextxy(100,220,"2. Press 's' to go downward");

outtextxy(100,240,"3. Press 'a' to go left hand side");

outtextxy(100,260,"4. Press 'd' to go right hand side");

outtextxy(100,280,"5. Press 'p' to Paused the game");

s:

sound(700);delay(200);sound(450);delay(180);sound(300);delay(150);

sound(350);delay(200);sound(450);delay(180);sound(500);delay(150);

while(!kbhit()){goto s;}

nosound();

pause :

draw(s,&f);

game(s,&f);

key='r';

rectangle(60,60,600,200);

outtextxy(260,100,"GAME PAUSED");

s1:

sound(400);delay(500);sound(450);delay(250);sound(300);delay(200);

sound(400);delay(300);sound(450);delay(250);sound(300);delay(200);

while(!kbhit()){goto s1;}

goto pause;

closegraph();

clrscr();

printf("\n\n\n\n\t\t\t\tThankyou.....");

getch();

}