**#include <stdio.h>**

**#include <time.h>**

**#include <stdlib.h>**

**#include <conio.h>**

**#include<time.h>**

**#include<ctype.h>**

**#include <time.h>**

**#include <windows.h>**

**#include <process.h>**

**#define UP 72**

**#define DOWN 80**

**#define LEFT 75**

**#define RIGHT 77**

**int length;**

**int bend\_no;**

**int len;**

**char key;**

**void record();**

**void load();**

**int life;**

**void Delay(long double);**

**void Move();**

**void Food();**

**int Score();**

**void Print();**

**void gotoxy(int x, int y);**

**void GotoXY(int x,int y);**

**void Bend();**

**void Boarder();**

**void Down();**

**void Left();**

**void Up();**

**void Right();**

**void ExitGame();**

**int Scoreonly();**

**struct coordinate**

**{**

**int x;**

**int y;**

**int direction;**

**};**

**typedef struct coordinate coordinate;**

**coordinate head, bend[500],food,body[30];**

**int main()**

**{**

**char key;**

**Print();**

**system("cls");**

**load();**

**length=5;**

**head.x=25;**

**head.y=20;**

**head.direction=RIGHT;**

**Boarder();**

**Food();**

**life=3;**

**bend[0]=head;**

**Move();**

**return 0;**

**}**

**void Move()**

**{**

**int a,i;**

**do**

**{**

**Food();**

**fflush(stdin);**

**len=0;**

**for(i=0; i<30; i++)**

**{**

**body[i].x=0;**

**body[i].y=0;**

**if(i==length)**

**break;**

**}**

**Delay(length);**

**Boarder();**

**if(head.direction==RIGHT)**

**Right();**

**else if(head.direction==LEFT)**

**Left();**

**else if(head.direction==DOWN)**

**Down();**

**else if(head.direction==UP)**

**Up();**

**ExitGame();**

**}**

**while(!kbhit());**

**a=getch();**

**if(a==27)**

**{**

**system("cls");**

**exit(0);**

**}**

**key=getch();**

**if((key==RIGHT&&head.direction!=LEFT&&head.direction!=RIGHT)||(key==LEFT&&head.direction!=RIGHT&&head.direction!=LEFT)||(key==UP&&head.direction!=DOWN&&head.direction!=UP)||(key==DOWN&&head.direction!=UP&&head.direction!=DOWN))**

**{**

**bend\_no++;**

**bend[bend\_no]=head;**

**head.direction=key;**

**if(key==UP)**

**head.y--;**

**if(key==DOWN)**

**head.y++;**

**if(key==RIGHT)**

**head.x++;**

**if(key==LEFT)**

**head.x--;**

**Move();**

**}**

**else if(key==27)**

**{**

**system("cls");**

**exit(0);**

**}**

**else**

**{**

**printf("\a");**

**Move();**

**}**

**}**

**void gotoxy(int x, int y)**

**{**

**COORD coord;**

**coord.X = x;**

**coord.Y = y;**

**SetConsoleCursorPosition(GetStdHandle(STD\_OUTPUT\_HANDLE), coord);**

**}**

**void GotoXY(int x, int y)**

**{**

**HANDLE a;**

**COORD b;**

**fflush(stdout);**

**b.X = x;**

**b.Y = y;**

**a = GetStdHandle(STD\_OUTPUT\_HANDLE);**

**SetConsoleCursorPosition(a,b);**

**}**

**void load()**

**{**

**int row,col,r,c,q;**

**gotoxy(36,14);**

**printf("loading...");**

**gotoxy(30,15);**

**for(r=1; r<=20; r++)**

**{**

**for(q=0; q<=100000000; q++);**

**printf("%c",177);**

**}**

**getch();**

**}**

**void Down()**

**{**

**int i;**

**for(i=0; i<=(head.y-bend[bend\_no].y)&&len<length; i++)**

**{**

**GotoXY(head.x,head.y-i);**

**{**

**if(len==0)**

**printf("v");**

**else**

**printf("\*");**

**}**

**body[len].x=head.x;**

**body[len].y=head.y-i;**

**len++;**

**}**

**Bend();**

**if(!kbhit())**

**head.y++;**

**}**

**void Delay(long double k)**

**{**

**Score();**

**long double i;**

**for(i=0; i<=(10000000); i++);**

**}**

**void ExitGame()**

**{**

**int i,check=0;**

**for(i=4; i<length; i++)**

**{**

**if(body[0].x==body[i].x&&body[0].y==body[i].y)**

**{**

**check++;**

**}**

**if(i==length||check!=0)**

**break;**

**}**

**if(head.x<=10||head.x>=70||head.y<=10||head.y>=30||check!=0)**

**{**

**life--;**

**if(life>=0)**

**{**

**head.x=25;**

**head.y=20;**

**bend\_no=0;**

**head.direction=RIGHT;**

**Move();**

**}**

**else**

**{**

**system("cls");**

**printf("All lives completed\nBetter Luck Next Time!!!\nPress any key to quit the game\n");**

**record();**

**exit(0);**

**}**

**}**

**}**

**void Food()**

**{**

**if(head.x==food.x&&head.y==food.y)**

**{**

**length++;**

**time\_t a;**

**a=time(0);**

**srand(a);**

**food.x=rand()%70;**

**if(food.x<=10)**

**food.x+=11;**

**food.y=rand()%30;**

**if(food.y<=10)**

**food.y+=11;**

**}**

**else if(food.x==0)**

**{**

**food.x=rand()%70;**

**if(food.x<=10)**

**food.x+=11;**

**food.y=rand()%30;**

**if(food.y<=10)**

**food.y+=11;**

**}**

**}**

**void Left()**

**{**

**int i;**

**for(i=0; i<=(bend[bend\_no].x-head.x)&&len<length; i++)**

**{**

**GotoXY((head.x+i),head.y);**

**{**

**if(len==0)**

**printf("<");**

**else**

**printf("\*");**

**}**

**body[len].x=head.x+i;**

**body[len].y=head.y;**

**len++;**

**}**

**Bend();**

**if(!kbhit())**

**head.x--;**

**}**

**void Right()**

**{**

**int i;**

**for(i=0; i<=(head.x-bend[bend\_no].x)&&len<length; i++)**

**{**

**body[len].x=head.x-i;**

**body[len].y=head.y;**

**GotoXY(body[len].x,body[len].y);**

**{**

**if(len==0)**

**printf(">");**

**else**

**printf("\*");**

**}**

**len++;**

**}**

**Bend();**

**if(!kbhit())**

**head.x++;**

**}**

**void Bend()**

**{**

**int i,j,diff;**

**for(i=bend\_no; i>=0&&len<length; i--)**

**{**

**if(bend[i].x==bend[i-1].x)**

**{**

**diff=bend[i].y-bend[i-1].y;**

**if(diff<0)**

**for(j=1; j<=(-diff); j++)**

**{**

**body[len].x=bend[i].x;**

**body[len].y=bend[i].y+j;**

**GotoXY(body[len].x,body[len].y);**

**printf("\*");**

**len++;**

**if(len==length)**

**break;**

**}**

**else if(diff>0)**

**for(j=1; j<=diff; j++)**

**{**

**body[len].x=bend[i].x;**

**body[len].y=bend[i].y-j;**

**GotoXY(body[len].x,body[len].y);**

**printf("\*");**

**len++;**

**if(len==length)**

**break;**

**}**

**}**

**else if(bend[i].y==bend[i-1].y)**

**{**

**diff=bend[i].x-bend[i-1].x;**

**if(diff<0)**

**for(j=1; j<=(-diff)&&len<length; j++)**

**{**

**body[len].x=bend[i].x+j;**

**body[len].y=bend[i].y;**

**GotoXY(body[len].x,body[len].y);**

**printf("\*");**

**len++;**

**if(len==length)**

**break;**

**}**

**else if(diff>0)**

**for(j=1; j<=diff&&len<length; j++)**

**{**

**body[len].x=bend[i].x-j;**

**body[len].y=bend[i].y;**

**GotoXY(body[len].x,body[len].y);**

**printf("\*");**

**len++;**

**if(len==length)**

**break;**

**}**

**}**

**}**

**}**

**void Boarder()**

**{**

**system("cls");**

**int i;**

**GotoXY(food.x,food.y);**

**printf("F");**

**for(i=10; i<71; i++)**

**{**

**GotoXY(i,10);**

**printf("!");**

**GotoXY(i,30);**

**printf("!");**

**}**

**for(i=10; i<31; i++)**

**{**

**GotoXY(10,i);**

**printf("!");**

**GotoXY(70,i);**

**printf("!");**

**}**

**}**

**void Print()**

**{**

**printf("\tWelcome to the mini Snake game.(press any key to continue)\n");**

**getch();**

**system("cls");**

**printf("\tGame instructions:\n");**

**printf("\n-> Use arrow keys to move the snake.\n\n-> You will be provided foods at the several coordinates of the screen which you have to eat. Everytime you eat a food the length of the snake will be increased by 1 element and thus the score.\n\n-> Here you are provided with three lives. Your life will decrease as you hit the wall or snake's body.\n\n-> YOu can pause the game in its middle by pressing any key. To continue the paused game press any other key once again\n\n-> If you want to exit press esc. \n");**

**printf("\n\nPress any key to play game...");**

**if(getch()==27)**

**exit(0);**

**}**

**void record()**

**{**

**char plname[20],nplname[20],cha,c;**

**int i,j,px;**

**FILE \*info;**

**info=fopen("record.txt","a+");**

**getch();**

**system("cls");**

**printf("Enter your name\n");**

**scanf("%[^\n]",plname);**

**for(j=0; plname[j]!='\0'; j++)**

**{**

**nplname[0]=toupper(plname[0]);**

**if(plname[j-1]==' ')**

**{**

**nplname[j]=toupper(plname[j]);**

**nplname[j-1]=plname[j-1];**

**}**

**else nplname[j]=plname[j];**

**}**

**nplname[j]='\0';**

**fprintf(info,"Player Name :%s\n",nplname);**

**time\_t mytime;**

**mytime = time(NULL);**

**fprintf(info,"Played Date:%s",ctime(&mytime));**

**fprintf(info,"Score:%d\n",px=Scoreonly());**

**for(i=0; i<=50; i++)**

**fprintf(info,"%c",'\_');**

**fprintf(info,"\n");**

**fclose(info);**

**printf("Wanna see past records press 'y'\n");**

**cha=getch();**

**system("cls");**

**if(cha=='y')**

**{**

**info=fopen("record.txt","r");**

**do**

**{**

**putchar(c=getc(info));**

**}**

**while(c!=EOF);**

**}**

**fclose(info);**

**}**

**int Score()**

**{**

**int score;**

**GotoXY(20,8);**

**score=length-5;**

**printf("SCORE : %d",(length-5));**

**score=length-5;**

**GotoXY(50,8);**

**printf("Life : %d",life);**

**return score;**

**}**

**int Scoreonly()**

**{**

**int score=Score();**

**system("cls");**

**return score;**

**}**

**void Up()**

**{**

**int i;**

**for(i=0; i<=(bend[bend\_no].y-head.y)&&len<length; i++)**

**{**

**GotoXY(head.x,head.y+i);**

**{**

**if(len==0)**

**printf("^");**

**else**

**printf("\*");**

**}**

**body[len].x=head.x;**

**body[len].y=head.y+i;**

**len++;**

**}**

**Bend();**

**if(!kbhit())**

**head.y--;**

**}**