Annexure - 1A

PART A - Plan

Micro-Project Proposal

Name of micro project: Space Object Shooting Game

1.0 Brief Introduction

The space shooting game is made for fun. This game is made in C anguage with graphics. In this game user should shoot the objects from space before they reach at the bottom. When user complete the target within the given shoots level get increased. User's rocket speed and the object's speed increases when the level of game increases.

2.0 Aim of the Micro-Project

This Micro - Project aims at

1. To aquire knowledge about Computer Graphics.
2. To use graphics functions to draw shapes, objects ,etc by inbuilt functions in CGR.
3. To develop C program to perform read and write operation to the given file
4. To use various graphics functions in Computer Graphics .

3.0 Action Plan

Week	Details of Activity	Planned Start Date	Planned Finish Date	Name of Responsible Team Members
Week 1	Decide subject for micro project.			Tanmay Shindkar
Week 2	Preparation and submission of Abstract			Aftab Shaikh Omkar Todakar
Week 3	Collection of data			Amit Patil

Week 4	Discussion and outline of Content			Rihan Nardekar
Week 5	Formulation of content			Amit Patil
Week 6	Editing of Content			Tanmay Shindkar
Week 7	Compilation of Report and Presentation			Aftab Shaikh Omkar Todakar
Week 8	Final submission of Micro Project			Rihan Nardekar

4.0 Resources Required

Sr. No.	Name of Resource/Material	Specifications	Qty	Remarks
1	Computer system	Basic configuration	1	
2	Software	Turbo C++	1	
3	Internet	Google,etc		
4	Books			

<--->

Annexure - IIA

PART B

Format for Micro-Project Report

SPACE OBJECT SHOOTING GAME

1.0 Brief Description

The space shooting game is made for fun. This game is made in C anguage with graphics. In this game user should shoot the objects from space before they reach at the bottom. When user complete the target within the given shoots level get increased. User's rocket speed and the object's speed increases when the level of game increases.

2.0 Aim of the Micro-Project

This Micro - Project aims at

1. To get knowledge of C programming.
2. To use graphics functions in C program.
3. To develop C program to perform read and write operation to the given file.
4. To use various graphics in C.

4.0 Actual Procedure Followed.

1. Decide subject for micro project.
2. Preparation and submission of Abstract
3. Collection of data
4. Discussion and outline of Content
5. Formulation of content
6. Editing of Content
7. Compilation of Report and Presentation
8. Final submission of Micro Project

5.0 Actual Resources Used

Sr. No.	Name of Resource/Material	Specifications	Qty	Remarks
1	Computer system	Basic configuration	1	
2	Software	Turbo C++	1	
3	Internet			
4	Books			

6.0 Outputs of the Micro- Projects

PROGRAM:

```
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
#include<time.h>

int ch,s=4,i;
//int sx1=50,sx2=60,sy1=0,sy2=10;
char arr[20],shot[20],starts,help,arr1[20],arr2[20];
int x1=200,y1=350,x2=200,y2=350,i,bc1=100,bc2=150;
int y=400,x3=180,y3=390,x4=220,y4=390,k=0,bh=100,bh2=50;
int min=100,max=330,min1=101,max1=331;
int incre=2,level=50,lev=1,move=7;

void start()
{                       setbkcolor(BLACK);
        setcolor(BROWN);
        bh=100;
        bh2=50;
        incre=2;
        level=50;
        lev=1;
        move=7;
        k=0;
        s=4;
        settextstyle(0,0,5);            //10
        outtextxy(100,140,"ROCKET SHOT");

        settextstyle(3,0,2);
        outtextxy(200,190,"Press s to start");
        outtextxy(200,240,"Press h to help");
        outtextxy(200,290,"Press e to exit");
}
void ghelp()
{           cleardevice();
    setcolor(MAGENTA);
    settextstyle(3,0,2);
    outtextxy(0,120,"1.Press <- (left arrow key) for moving to the left side.");
    outtextxy(0,145,"2.Press -> (right arrow key) for moving to the right side.");
    outtextxy(0,170,"3.Press F key to fire on the space objects.");
    outtextxy(0,195,"4.SHOTS    :) Number of fire shot remaining.");
    outtextxy(0,220,"5.LEVEL    :) Difficuilty level.");
```

```
	outtextxy(0,245,"6.TARGET :) Your aim. You need to get minimum target score");
	outtextxy(90,270,"to completet the level");
	outtextxy(0,295,"7.SCORE    :) Your score. Hit the middle of the object to get");
	outtextxy(90,320," high schore.");
	setcolor(RED);
	outtextxy(0,345,"TIP:) Your movement speed and the object's falling speed");
	outtextxy(40,370,"increases when difficuilty level goes increased");
	getch();
}
void loading()
{
	cleardevice();
	outtextxy(200,120,"LOADING");
	for(i=150;i<350;i++)
	{
		putpixel(i,150,WHITE);
		delay(20);
	}
}

void rocket()
{
	setcolor(6);
	setfillstyle(SOLID_FILL,6);
	line(x1,y1,x3,y3);	//left
	line(x2,y2,x4,y4);	//right
	line(x3,y3,x4,y4);	//base
	floodfill(x1+1,y3-1,6);

	setcolor(62);
	setfillstyle(SOLID_FILL, 62);
	rectangle(x3,y3,x4,y4+40);
	floodfill(x3+1,y3+1,62);

	setcolor(RED);
	setfillstyle(SOLID_FILL,RED);
	line(x3+5,y4+40,x4-5,y4+40);
	line(x3+5,y4+40,x3+5,y4+50);
	line(x4-5,y4+40,x4-5,y4+50);
	line(x3+5,y4+50,x3+10,y4+60);
	line(x4-5,y4+50,x4-10,y4+60);
	line(x3+10,y4+60,x3+10,y4+65);
	line(x4-10,y4+60,x4-10,y4+65);
	line(x3+10,y4+65,x3+20,y4+75);
```

```
	line(x4-10,y4+65,x4-20,y4+75);
	floodfill(x3+6,y4+41,RED);

	setcolor(8);
	setfillstyle(SOLID_FILL,8);
	rectangle(x3-30,y3+10,x3,y3+30);
	floodfill(x3-29,y3+11, 8);

	setcolor(7);
	setfillstyle(SOLID_FILL, 7);
	rectangle(x3-25,y3+30,x3-5,y3+40);
	floodfill(x3-24,y3+31, 7);

	setcolor(RED);
	setfillstyle(SOLID_FILL, RED);
	line(x3-20,y3+40,x3-10,y3+40);
	line(x3-20,y3+40,x3-20,y3+50);
	line(x3-10,y3+40,x3-10,y3+50);
	line(x3-10,y3+50,x3-15,y3+55);
	line(x3-20,y3+50,x3-15,y3+55);
	floodfill(x3-19,y3+41,RED);

	setcolor(8);
	setfillstyle(SOLID_FILL,8);
	rectangle(x4+30,y4+10,x4,y4+30);
	floodfill(x4+29,y4+11,8);

	setcolor(7);
	setfillstyle(SOLID_FILL,7);
	rectangle(x4+25,y4+30,x4+5,y4+40);
	floodfill(x4+6,y4+31,7);

	setcolor(RED);
	setfillstyle(SOLID_FILL,RED);
	line(x4+20,y4+40,x4+10,y4+40);
	line(x4+20,y4+40,x4+20,y4+50);
	line(x4+10,y4+40,x4+10,y4+50);
	line(x4+10,y4+50,x4+15,y4+55);
	line(x4+20,y4+50,x4+15,y4+55);
	floodfill(x4+11,y4+41,RED);
}

void target(int bc1,int bh)
{		setcolor(3);
```

```
	setfillstyle(WIDE_DOT_FILL,3);
	circle(bc1,bh,20);		//200 200
	floodfill(bc1+1,bh+1,3);
	setcolor(WHITE);
	line(bc1+20,bh,bc1+35,bh);
	line(bc1-20,bh,bc1-35,bh);
	line(bc1,bh+20,bc1,bh+35);
	line(bc1,bh-20,bc1,bh-35);
}
void target2(int bc2,int bh2)
{		setcolor(10);
	setfillstyle(HATCH_FILL,10);
	circle(bc2,bh2,20);
	floodfill(bc2+1,bh2+1,10);

	setcolor(YELLOW);
	setfillstyle(SOLID_FILL,YELLOW);
	circle(bc2+25,bh2,5);
	floodfill(bc2+26,bh2+1,YELLOW);

	setcolor(YELLOW);
	setfillstyle(SOLID_FILL,YELLOW);
	circle(bc2-25,bh2,5);
	floodfill(bc2-24,bh2+1,YELLOW);

	setcolor(YELLOW);
	setfillstyle(SOLID_FILL,YELLOW);
	circle(bc2,bh2+25,5);
	floodfill(bc2+1,bh2+26,YELLOW);

	setcolor(YELLOW);
	setfillstyle(SOLID_FILL,YELLOW);
	circle(bc2,bh2-25,5);
	floodfill(bc2+1,bh2-24,YELLOW);
}
void crst(int xx1,int xx2,int yy1,int yy2)
{		setcolor(WHITE);
	line(xx1,yy1+5,xx2,yy1+5);//xx1=50,xx2=60,yy1=0,yy2=10
	line(xx1+5,yy1,xx1+5,yy2);
	line(xx1,yy1,xx2,yy2);
	line(xx2,yy1,xx1,yy2);
}
void stars()
{		int sx1=50,sx2=60,sy1=0,sy2=10;
```

```
	// xmin=50,  xmax=350
	//ymin=0,     ymax=400
	crst(sx1+10,sx2+10,sy1+10,sy2+10);
	crst(sx1+20,sx2+20,sy1+30,sy2+30);
	crst(sx1+30,sx2+30,sy1+40,sy2+40);
	crst(sx1+60,sx2+60,sy1+30,sy2+30);
	crst(sx1+250,sx2+250,sy1+30,sy2+30);
	crst(sx1+200,sx2+200,sy1+60,sy2+60);
	crst(sx1+230,sx2+230,sy1+200,sy2+200);
	crst(sx1+100,sx2+100,sy1+80,sy2+80);
	crst(sx1+20,sx2+20,sy1+330,sy2+330);
	crst(sx1+50,sx2+50,sy1+300,sy2+300);
	crst(sx1+20,sx2+20,sy1+200,sy2+200);
	crst(sx1+200,sx2+200,sy1+230,sy2+230);
	crst(sx1+150,sx2+150,sy1+180,sy2+180);
	crst(sx1+20,sx2+20,sy1+30,sy2+30);
	crst(sx1+100,sx2+100,sy1+120,sy2+120);
	crst(sx1+50,sx2+50,sy1+300,sy2+300);
	crst(sx1+70,sx2+70,sy1+340,sy2+340);
	crst(sx1+280,sx2+280,sy1+320,sy2+320);
	crst(sx1+250,sx2+250,sy1+380,sy2+380);
	crst(sx1+180,sx2+180,sy1+270,sy2+270);
}

void main()
{
	int gd=DETECT,gm;

	initgraph(&gd,&gm,"c:\\Turboc3\\BGI");
	detectgraph(&gd,&gm);
	bc1=(rand()%(max-min+1))+min;
	bc2=(rand()%(max1-min1+1))+min1;
	do
	{
	cleardevice();
	start();
	starts=getch();
	if(starts=='e')
		exit(0);
	else if(starts=='s')
	{
	loading();
	settextstyle(1,0,3);
	while(1)
```

```
{             cleardevice();
      stars();
      setcolor(WHITE);
     /*    line(50,20,50,400);
      line(350,20,350,400);      */
      line(50,0,50,400);
      line(350,0,350,400);


      setcolor(52);
      setfillstyle(SOLID_FILL,BLACK);
      rectangle(50,0,350,470);
      rectangle(350,0,650,470);
      floodfill(51,351,52);//52

      sprintf(arr2,"LEVEL = %d",lev);
      outtextxy(450,60,arr2);
      sprintf(arr,"SCORE = %d",k);
      outtextxy(450,100,arr);
      sprintf(shot,"SHOTS = %d",s);
      outtextxy(450,120,shot);
      sprintf(arr1,"TARGET = %d",level);
      outtextxy(450,80,arr1);
      rocket();
      y=y1;
      target(bc1,bh);
      target2(bc2,bh2);
if(kbhit())
{
      ch=getch();
      if(ch=='e')
            break;
      else if(ch=='f')
            { s--;
               if(s>=0)
               {
                 for(i=0;i<100;i=i+10)
                 { cleardevice();

                     target(bc1,bh);
                     target2(bc2,bh2);
                     rocket();

                     line(x1,y,x2,y-20);//bullet x=200,y=390
```

```
// cleardevice();

y=y-20;

delay(100);
}
if(x1>bc1-30&&x1<bc1+30)
{

      cleardevice();
      if(x1>=bc1-30&&x1<=bc1-20||x1<=bc1+30&&x1>=bc1+20)
      {     k=k+5;
            outtextxy(300,200,"5 points");
      }
      else if(x1>=bc1-20&&x1<=bc1-10||x1<=bc1+20&&x1>=bc1+10)
      {     k=k+10;
            outtextxy(300,200,"10 points");
      }
      else if(x1>bc1-10&&x1<bc1||x1>bc1&&x1<bc1+10||x1==bc1)
      {     k=k+20;
            outtextxy(300,200,"15 points");
      }
      delay(30);
      goto label;

}
else if(x1>bc2-20&&x1<bc2+20)
{                 cleardevice();
      if(x1>=bc2-30&&x1<=bc2-20||x1<=bc2+30&&x1>=bc2+20)
      {k=k+5;
      outtextxy(300,200,"5 points");
      }
      else if(x1>=bc2-20&&x1<=bc2-10||x1<=bc2+20&&x1>=bc2+10)
      {     k=k+10;
            outtextxy(300,200,"10 points");
      }
      else if(x1>bc2-10&&x1<bc2||x1>bc2&&x1<bc2+10||x1==bc2)
      {     k=k+20;
            outtextxy(300,200,"15 points");
      }
      delay(100);
      goto key;
}
```

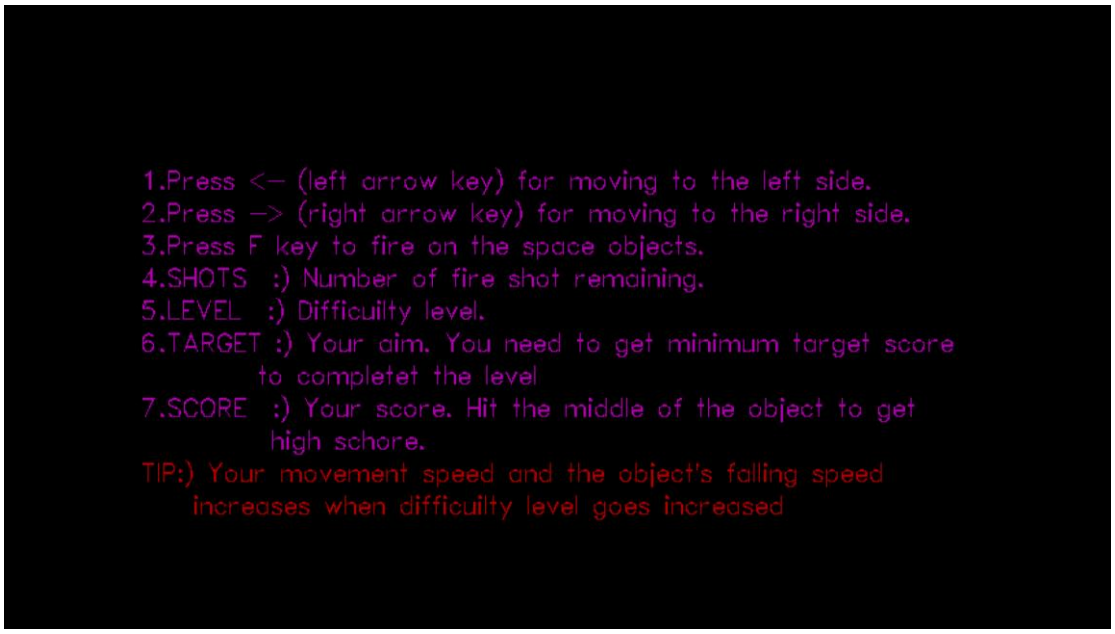
```
                }
                else if(s<0)
                  {outtextxy(200,200,"no more shots remaining");
                        if(k>=level)
                        {               cleardevice();
                              s=5;
                              incre=incre+3;
                              level=level+10;
                              k=0;
                              lev++;
                              outtextxy(300,300,"LEVEL INCREASED");
                                    //    outtextxy(280,320,"FOR   CONTIUNE   PRESS   ANY
KEY");
                              //getch();
                              if(k>level+20)
                              {
                                    move=move+2;
                              }
                              delay(200);
                        }
                        else if(k<level)
                        {               cleardevice();

                              outtextxy(300,300,arr2);
                              getch();
                              delay(200);
                              break;
                        }


                    }
              }
        else if(ch==77)             //right
        {
              if(x4>=340)
              {
                    x1=x1+0;
                    x2=x2+0;
                    x3=x3+0;
                    x4=x4+0;
              }
              else
              {
                    x1=x1+move;
```

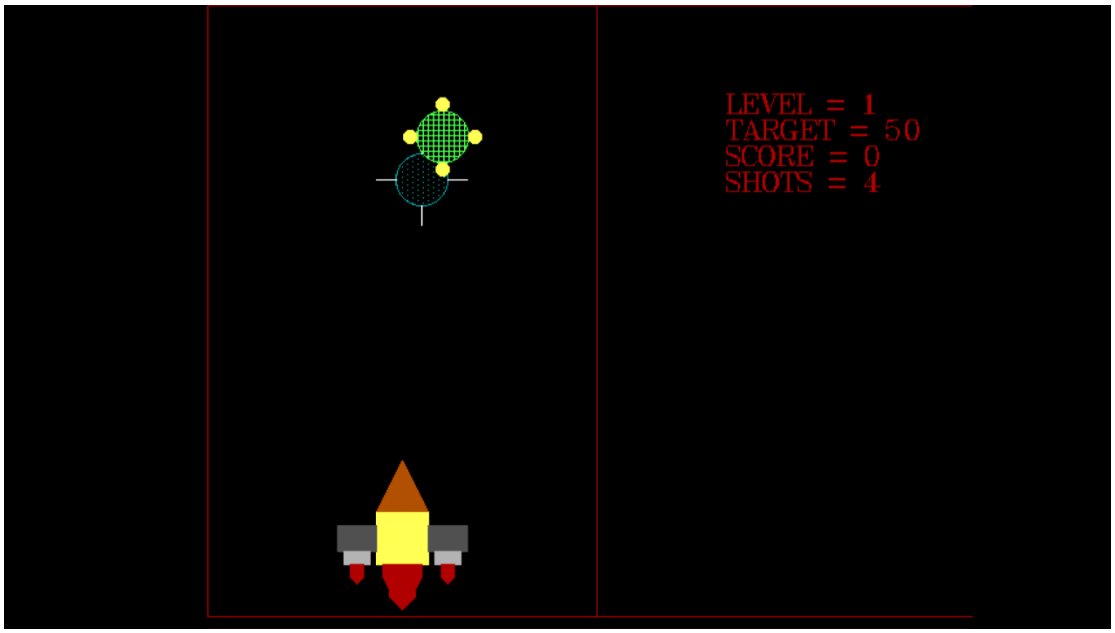
```
                x2=x2+move;
                x3=x3+move;
                x4=x4+move;
            }
        }
        else if(ch==75)          //left
        {
            if(x3<=50)
            {
                x1=x1-0;
                x2=x2-0;
                x3=x3-0;
                x4=x4-0;
            }
            else
            {
                x1=x1-move;
                x2=x2-move;
                x3=x3-move;
                x4=x4-move;
            }
        }
        else if(ch=='e')
            break;


        delay(10);
}
        if(bh<=400||bh2<=400)
        {
            bh=bh+incre;
            bh2=bh2+incre+1;
        }
        else if(bh>400||bh2>400)
        {
            if(k>=50)
            {
                cleardevice();
                outtextxy(200,200,"YOU WIN");

                delay(50);
                break;
            }
            else if(k<50)
```

```
                {
                        cleardevice();
                        outtextxy(200,200,"YOU LOST");

                        delay(50);
                        break;
                }
        }
        else
        {           label:
                srand(time(NULL));
                bc1=(rand()%(max-min+1))+min;
                key:
                bc2=(rand()%(max1-min1+1))+min1;
                bh=100;
                bh2=50;
        }

    delay(100);
    }
    }
    else if(starts=='h'||starts=='H')
        ghelp();
    }while(starts!='e'||starts!='E');
    getch();
    closegraph();

}
```

OUTPUT:


ROCKET SHOT
Press s to start
Press h to help
Press e to exit


1.Press <- (left arrow key) for moving to the left side.
2.Press -> (right arrow key) for moving to the right side.
3.Press F key to fire on the space objects.
4.SHOTS :) Number of fire shot remaining.
5.LEVEL :) Difficuilty level.
6.TARGET :) Your aim. You need to get minimum target score
to completet the level
7.SCORE :) Your score. Hit the middle of the object to get
high schore.
TIP:) Your movement speed and the object's falling speed
increases when difficuilty level goes increased



7.0 Skill Developed /learning out of this Micro-Project

1. Working with team.
2. Logic development.
3. Solving logical problems.
4. Error handling

****