**Agnel Charities**

**Fr. C. Rodrigues Institute of Technology, Vashi, Navi-Mumbai**

# Department of Computer Engineering

**Subject: -Computer Graphics**

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CG MINI-PROJECT

**FOOTBALL ANIMATION**

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# DESCRIPTION AND OVERVIEW

A) **TITLE:** FOOTBALL ANIMATION made using Turbo C

B) **DESCRIPTION:**

* In this project we will display a 2D football animation using computer graphics.
* There are two options wherein you can either make a goal or save a goal.
* If you choose the option to make a goal, you get the option to either kick left or kick right.
* If you choose to save a goal, the ball gets caught by the keeper and the message displayed will be “saved a goal”.

**FUNCTIONS :**

C) USER DEFINED FUNCTIONS:

The user defined functions used in the project are

* man();
* mankick();
* anim();
* keeper();
* goal\_post();
* start\_frame();
* loader();
* end\_goal();
* end\_save();

D) IN-BUILT FUNCTIONS

* **setfillstyle():** sets the current fill pattern and fillcolor.

* **setcolor():** to give color to the text.
* **floodfill():** used to fill enclosed area.

* **setbackground():** to change the current background color in text mode.
* **setlinestyle():** set style for all line drawn by line, drawpoly, rectangle and so on.

➢ **CODE:**

#include<stdio.h>

#include<stdlib.h>

#include<graphics.h>

#include<conio.h>

void man();

void mankick();

void anim();

void keeper();

void goal\_post();

void start\_frame();

void loader();

void end\_goal();

void end\_save();

void main(){

int gm,gd=DETECT;

int i=355,op,lr;

int poly[]={220,40,425,40,385,5,170,5,220,40};

initgraph(&gd,&gm,"c:\\TURBOC3\\BGI");

start\_frame();

printf("\n\n\n\n\n\n\n\n\n\t\t\t\tPRESS\n");

printf("\t\t\t\t1 to score a goal and \n\t\t\t\t2 to save the goal \n\t\t\t\t");

scanf("%d",&op);

if(op==1){

printf("\n\t\t\t\tChoose the side you want to score\n\t\t\t\tpress 4 for left end and 6 for right end\n\t\t\t\t");

scanf("%d",&lr);

}

loader();

cleardevice();

//spot marking2/\*

//circle(310,300,5);

//rectangle(308,298,312,302);

//spot mark end \*/

goal\_post();

setcolor(LIGHTCYAN);

circle(315,i,15);//ball

setfillstyle(SOLID\_FILL,LIGHTCYAN);

floodfill(315,i,LIGHTCYAN);

man();

mankick();

anim(op,lr);

if(op==1)

end\_goal();

else

end\_save();

getch();

}

void anim(int opt,int lrs){

int i=365,j=315,lim=35,ikeep=265,jkeep=265;

poly[]={220,40,425,40,385,5,170,5,220,40};

if(opt==2)

lim=65;//limit of ball when save

else

lim=5;//limit of ball when goal

while(i>lim){

goal\_post();

/\*spot marking2

circle(310,300,5);

rectangle(308,298,312,302);

//spot mark end\*/

man();

setcolor(YELLOW);

//keeper start

circle(ikeep,40,12);

line(ikeep,52,jkeep,92);

line(ikeep,65,jkeep-15,75);

line(ikeep,65,jkeep+15,75);

line(ikeep,92,jkeep-15,112);

line(ikeep,92,jkeep+15,112);

ikeep=ikeep+2;

jkeep=jkeep+2;

//keeper end

setcolor(LIGHTCYAN);

circle(j,i,15);//ball

setfillstyle(SOLID\_FILL,LIGHTCYAN);

floodfill(j,i,LIGHTCYAN);

if(opt==1){

i=i-30;

if(lrs==4){

j=j-8;

}

else

j=j+5;

delay(150);

cleardevice();

}

else{

i=i-10;

delay(40);

if(i==65)

delay(500);//for last frame keeper holds the ball

cleardevice();

}

}

}

void man(){

setcolor(RED);

circle(350,260,15);

line(350,275,350,340);

line(350,290,330,305);

line(350,290,370,305);

line(350,340,370,375);

line(350,340,330,375);//kick00

}

void mankick(){

delay(700);

line(350,340,325,360);//kick01

setcolor(GREEN);

line(350,340,330,375);

delay(200);

line(350,340,325,360);

setcolor(RED);

line(350,340,330,375);

}

void goal\_post(){

int poly[]={220,40,425,40,385,5,170,5,220,40};

setbkcolor(GREEN);

setcolor(WHITE);

setlinestyle(0,0,3);

rectangle(20,40,610,600);//outline

setcolor(BLUE);

drawpoly(5,poly);//goal

setcolor(WHITE);

rectangle(220,40,425,150);//inner box

rectangle(125,40,520,250);//d

arc(325,239,195,345,50);//semi circle

arc(20,43,270,360,14);//left corner arc

arc(607,40,180,270,14);

}

void start\_frame(){

setbkcolor(RED);

rectangle(260,125,440,290);

rectangle(170,60,555,115);//title rectangle

settextstyle(10,0,2);

outtextxy(180,63,"LET'S PLAY FOOTBALL");

setfillstyle(SOLID\_FILL,WHITE);

floodfill(180,63,WHITE);

rectangle(160,325,565,335);

}

void loader(){

int i=160;

for(i=160;i<=565;i+=2)

{

rectangle(160,325,i,335);

delay(15);

}

}

void end\_goal(){

int i=1;

setcolor(WHITE);

setbkcolor(RED);

for(i=1;i<=5;i++){

setbkcolor(RED);

settextstyle(10,0,i);

outtextxy(200,170,"GOAL!!!");

delay(75);

if(i!=5)

cleardevice();

}

}

void end\_save(){

int i=1;

setcolor(WHITE);

setbkcolor(RED);

for(i=1;i<=5;i++){

setbkcolor(RED);

settextstyle(10,0,i);

outtextxy(75,170,"SAVED A GOAL!!!");

delay(75);

if(i!=5)

cleardevice();

}

}

**OUTPUT:**

**Text

Description automatically generated Diagram

Description automatically generatedText

Description automatically generated**

**Text

Description automatically generated** Diagram

Description automatically generatedText, logo, company name

Description automatically generated

**Conclusion:**

Hence successfully understood and implemented drawing and animation using graphics function.