# 5. SOURCE CODE

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HAND-CRICKET

VERSION 1.0

BY Nagabharan.N & Naveen Kumar.M

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HEADER FILES

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/**

#include <stdlib.h>

#include <iostream>

#include <stdio.h>

#include <math.h>

#include <GL/glut.h>

#include "SOIL.h"

using namespace std;

**/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

GLOBAL DECLARATIONS

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/**

int sw = 1370, sh = 768;

GLuint texID1,texID2,texID3,texID4, texID5,texID6,texID7,texID8,texID9, texIDg, texIDc, texIDhc, texIDp;

GLint xRaster=25,yRaster=150;

GLubyte label[30]={ '1' ,'2' ,'3' ,'4', '5', '6' ,'7' ,'8', '9' ,'10' ,'11', '12','13', '14' ,'15' ,'16' ,'17', '18' ,'19' ,'20' ,'21','22' ,'23', '24' ,'25' ,'26' ,'27' ,'28' ,'29' ,'30' };

int p[3],target,o,score,w1,w2,w3,out,e,lb=31, stat[60]={0},bc=0,i,m=0,n=0;

**/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/**

int ran(){

int a;

do{

a=rand();

a=a\*rand()%1000+rand()%100;

a=a/rand()%1000+rand()%100;

a=a\*rand()%1000+rand()%100;

a%=6;

a++;

}while(a==0||a<0);

return a;

}

GLuint LoadTexturehc(char\* file) {

GLuint texIdhc = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texIdhc);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texIdhc;

}

GLuint LoadTexturep(char\* file) {

GLuint texIdp = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texIdp);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texIdp;

}

GLuint LoadTexturec(char\* file) {

GLuint texIdc = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texIdc);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texIdc;

}

GLuint LoadTextureg(char\* file) {

GLuint texIdg = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texIdg);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texIdg;

}

GLuint LoadTexture1(char\* file) {

GLuint texId1 = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texId1);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texId1;

}

GLuint LoadTexture2(char\* file) {

GLuint texId2 = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texId2);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texId2;

}

GLuint LoadTexture3(char\* file) {

GLuint texId3 = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texId3);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texId3;

}

GLuint LoadTexture4(char\* file) {

GLuint texId4 = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texId4);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texId4;

}

GLuint LoadTexture5(char\* file) {

GLuint texId5 = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texId5);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texId5;

}

GLuint LoadTexture6(char\* file) {

GLuint texId6 = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texId6);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texId6;

}

GLuint LoadTexture7(char\* file) {

GLuint texId7 = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texId7);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texId7;

}

GLuint LoadTexture8(char\* file) {

GLuint texId8 = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texId8);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texId8;

}

GLuint LoadTexture9(char\* file) {

GLuint texId9 = SOIL\_load\_OGL\_texture(file, SOIL\_LOAD\_AUTO, SOIL\_CREATE\_NEW\_ID, SOIL\_FLAG\_INVERT\_Y | SOIL\_FLAG\_MIPMAPS);

glBindTexture(GL\_TEXTURE\_2D, texId9);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MIN\_FILTER,GL\_LINEAR);

glTexParameteri(GL\_TEXTURE\_2D,GL\_TEXTURE\_MAG\_FILTER,GL\_LINEAR);

return texId9;

}

void LoadMainGLTextures() {

char \*a="img/grnd.png";

texIDg = LoadTextureg((char\*)(a));

}

void LoadcrGLTextures() {

char \*a="img/cr.png";

texIDc = LoadTexturec((char\*)(a));

}

void LoadspGLTextures() {

char \*a="img/hc.png",\*b="img/pes.png";

texIDhc = LoadTexturehc((char\*)(a));

texIDp = LoadTexturep((char\*)(b));

}

void LoadGameGLTextures() {

char \*a="img/0l.png",\*b="img/0r.png",\*c="img/cpu.png",\*d="img/human.png";

texID1 = LoadTexture1((char\*)(a));

texID2 = LoadTexture2((char\*)(b));

texID3 = LoadTexture3((char\*)(c));

texID4 = LoadTexture4((char\*)(d));

texID5 = LoadTexture5((char\*)("img/win.png"));

texID6 = LoadTexture6((char\*)("img/lose.png"));

texID7 = LoadTexture7((char\*)("img/out.png"));

texID8 = LoadTexture8((char\*)("img/draw.png"));

texID9 = LoadTexture9((char\*)("img/gameover.png"));

}

void drawNumber(int n,float x,float y,float z,float a){

char \*c,string[50];

glPushMatrix();

glTranslatef(x-19.5,y-10,z);

glScalef(.5\*a,.5\*a,z);

int b=sprintf (string, " %d ",n);

for (c=string; \*c != '\0'; c++)

glutStrokeCharacter(GLUT\_STROKE\_ROMAN , \*c);

glPopMatrix();

}

void drawText(char\*string,int x,int y,int z,float a){

char \*c;

glPushMatrix();

glTranslatef(x,y,z);

glScalef(.5\*a,.5\*a,z);

for (c=string; \*c != '\0'; c++)

glutStrokeCharacter(GLUT\_STROKE\_ROMAN , \*c);

glPopMatrix();

}

void spdisp11(){

glColor4f(1,1,1,1);

glEnable(GL\_TEXTURE\_2D);

glBindTexture(GL\_TEXTURE\_2D, texIDp);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(400,600);

glTexCoord2i(1,0); glVertex2i(400,200);

glTexCoord2i(0,0); glVertex2i(100,200);

glTexCoord2i(0,1); glVertex2i(100,600);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glColor4f(1,1,1,1);

glEnable(GL\_TEXTURE\_2D);

glBindTexture(GL\_TEXTURE\_2D, texIDhc);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(1200,400);

glTexCoord2i(1,0); glVertex2i(1200,300);

glTexCoord2i(0,0); glVertex2i(600,300);

glTexCoord2i(0,1); glVertex2i(600,400);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glColor3f(0,0,0);

glLineWidth(4);

drawText("PRESENTS",700,500,0,1);

}

void spdisp1(){

glColor3f(1,1,1);

spdisp11();

}

void hdisp1(){

glColor4f(1,1,1,1);

glEnable(GL\_TEXTURE\_2D);

glBindTexture(GL\_TEXTURE\_2D, texIDg);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(sw,sh);

glTexCoord2i(1,0); glVertex2i(sw,0);

glTexCoord2i(0,0); glVertex2i(0,0);

glTexCoord2i(0,1); glVertex2i(0,sh);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glColor3f(1,1,0);

glLineWidth(2);

drawText("By default the user bats first for 30 balls.",50,500,0,.5);

drawText("You can select 1 of 6 numbers present on the right side.",50,400,0,.5);

drawText("After the game your statistics is displayed",50,300,0,.5);

drawText("You can exit the game anytime by using ESC key",50,200,0,.5);

}

void crdisp11(){

glEnable(GL\_TEXTURE\_2D);

glBindTexture(GL\_TEXTURE\_2D, texIDc);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(sw,sh);

glTexCoord2i(1,0); glVertex2i(sw,0);

glTexCoord2i(0,0); glVertex2i(0,0);

glTexCoord2i(0,1); glVertex2i(0,sh);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glColor3f(1,1,0);

glLineWidth(3);

drawText("CREDITS",550,650,0,1);

drawText("handcricket",500,550,0,1);

drawText("Written by",550,450,0,.75);

drawText("Nagabharan N ( 1PE10CS054 )",450,400,0,.5);

drawText("Naveen Kumar M ( 1PE10CS056 )",450,350,0,.5);

drawText("Special Thanks",500,250,0,.75);

drawText("Prof. Sarasvathi V",550,200,0,.5);

drawText("Friends",550,150,0,.5);

}

void crdisp1(){

glColor3f(1,1,1);

crdisp11();

}

void gamedisp11(){

glEnable(GL\_TEXTURE\_2D);

glBindTexture(GL\_TEXTURE\_2D, texID1);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(450,500);

glTexCoord2i(1,0); glVertex2i(450,200);

glTexCoord2i(0,0); glVertex2i(50,200);

glTexCoord2i(0,1); glVertex2i(50,500);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glEnable(GL\_TEXTURE\_2D);

glBindTexture(GL\_TEXTURE\_2D, texID2);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(900,500);

glTexCoord2i(1,0); glVertex2i(900,200);

glTexCoord2i(0,0); glVertex2i(500,200);

glTexCoord2i(0,1); glVertex2i(500,500);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glEnable(GL\_TEXTURE\_2D);

glBindTexture(GL\_TEXTURE\_2D, texID3);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(200,625);

glTexCoord2i(1,0); glVertex2i(200,525);

glTexCoord2i(0,0); glVertex2i(300,525);

glTexCoord2i(0,1); glVertex2i(300,625);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glEnable(GL\_TEXTURE\_2D);

glBindTexture(GL\_TEXTURE\_2D, texID4);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(750,625);

glTexCoord2i(1,0); glVertex2i(750,525);

glTexCoord2i(0,0); glVertex2i(650,525);

glTexCoord2i(0,1); glVertex2i(650,625);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glColor3f(1,0,0);

drawText("CPU",150,650,0,1.25);

drawText("CPU",151,650,0,1.25);

drawText("CPU",152,650,0,1.25);

drawText("HUMAN",570,650,0,1.25);

drawText("HUMAN",571,650,0,1.25);

drawText("HUMAN",572,650,0,1.25);

drawText("BALLS LEFT",330,550,0,.75);

drawText("BALLS LEFT",331,550,0,.75);

drawText("BALLS LEFT",332,550,0,.75);

drawNumber(30-bc,400,625,0,1);

if(out){

glEnable(GL\_TEXTURE\_2D);

glColor4f(1,1,1,1);

glBindTexture(GL\_TEXTURE\_2D, texID7);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(150,180);

glTexCoord2i(1,0); glVertex2i(150,20);

glTexCoord2i(0,0); glVertex2i(50,20);

glTexCoord2i(0,1); glVertex2i(50,180);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glColor3f(1,0,0);

drawText("OUT",155,75,0,1);

drawText("OUT",156,75,0,1);

drawText("OUT",157,75,0,1);

}

if(w1){

glEnable(GL\_TEXTURE\_2D);

glColor4f(1,1,1,1);

glBindTexture(GL\_TEXTURE\_2D, texID5);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(900,180);

glTexCoord2i(1,0); glVertex2i(900,20);

glTexCoord2i(0,0); glVertex2i(700,20);

glTexCoord2i(0,1); glVertex2i(700,180);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glColor3f(1,0,0);

drawText("USER WIN",355,75,0,1);

drawText("USER WIN",356,75,0,1);

drawText("USER WIN",357,75,0,1);

e=1;

}

if(w2){

glEnable(GL\_TEXTURE\_2D);

glColor4f(1,1,1,1);

glBindTexture(GL\_TEXTURE\_2D, texID6);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(900,180);

glTexCoord2i(1,0); glVertex2i(900,20);

glTexCoord2i(0,0); glVertex2i(700,20);

glTexCoord2i(0,1); glVertex2i(700,180);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glColor3f(1,0,0);

drawText("CPU WIN",325,75,0,1);

drawText("CPU WIN",326,75,0,1);

drawText("CPU WIN",327,75,0,1);

e=1;

}

if(w3){

glEnable(GL\_TEXTURE\_2D);

glColor4f(1,1,1,1);

glBindTexture(GL\_TEXTURE\_2D, texID8);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(900,180);

glTexCoord2i(1,0); glVertex2i(900,20);

glTexCoord2i(0,0); glVertex2i(700,20);

glTexCoord2i(0,1); glVertex2i(700,180);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glColor3f(1,0,0);

drawText("DRAW",325,75,0,1);

drawText("DRAW",326,75,0,1);

drawText("DRAW",327,75,0,1);

e=1;

}

}

void gamedisp21(){

glBegin(GL\_POLYGON);

glVertex2d(1000,650);

glVertex2d(1125,650);

glVertex2d(1125,700);

glVertex2d(1000,700);

glEnd();

glBegin(GL\_POLYGON);

glVertex2d(1175,650);

glVertex2d(1300,650);

glVertex2d(1300,700);

glVertex2d(1175,700);

glEnd();

glBegin(GL\_POLYGON);

glVertex2d(1000,550);

glVertex2d(1125,550);

glVertex2d(1125,600);

glVertex2d(1000,600);

glEnd();

glBegin(GL\_POLYGON);

glVertex2d(1175,550);

glVertex2d(1300,550);

glVertex2d(1300,600);

glVertex2d(1175,600);

glEnd();

glBegin(GL\_POLYGON);

glVertex2d(1000,450);

glVertex2d(1125,450);

glVertex2d(1125,500);

glVertex2d(1000,500);

glEnd();

glBegin(GL\_POLYGON);

glVertex2d(1175,450);

glVertex2d(1300,450);

glVertex2d(1300,500);

glVertex2d(1175,500);

glEnd();

}

void gamedisp22(){

drawNumber(1,1050,675,0,.5);

drawNumber(2,1220,675,0,.5);

drawNumber(3,1050,575,0,.5);

drawNumber(4,1220,575,0,.5);

drawNumber(5,1050,475,0,.5);

drawNumber(6,1220,475,0,.5);

drawText("SELECT NUMBER",1015,720,0,.5);

drawText("SELECT NUMBER",1016,720,0,.5);

drawText("SELECT NUMBER",1017,720,0,.5);

}

void gamedisp31(int a,int b,int q){

drawText("SCORE",1000,300,0,1.5);

drawText("SCORE",1001,300,0,1.5);

drawText("SCORE",1002,300,0,1.5);

drawNumber(a,950,150,0,2);

if(b){

drawText("TARGET",950,50,0,.75);

drawText("TARGET",951,50,0,.75);

drawText("TARGET",952,50,0,.75);

drawNumber(q,1100,50,0,1.5);

}

}

void gamedisp1(){

glColor3f(0,0.5+(float)rand()/(float)RAND\_MAX,(float)rand()/(float)RAND\_MAX/.5);

glBegin(GL\_POLYGON);

glVertex2d(0,0);

glVertex2d(930,0);

glVertex2d(930,sh);

glVertex2d(0,sh);

glEnd();

glColor3f(1,1,1);

gamedisp11();

}

void gamedisp2(){

glColor3f(1,0,0);

glBegin(GL\_POLYGON);

glVertex2d(930,400);

glVertex2d(sw,400);

glVertex2d(sw,sh);

glVertex2d(930,sh);

glEnd();

glColor3f(0,0,0);

gamedisp21();

glColor3f(1,1,1);

gamedisp22();

}

void gamedisp3(){

glColor3f(0,.5,0);

glBegin(GL\_POLYGON);

glVertex2d(930,0);

glVertex2d(sw,0);

glVertex2d(sw,400);

glVertex2d(930,400);

glEnd();

glColor3f(1,1,1);

gamedisp31(score,o,target+1);

}

void newdisp(){

glClear(GL\_COLOR\_BUFFER\_BIT);

glEnable(GL\_TEXTURE\_2D);

glColor4f(1,1,1,1);

glBindTexture(GL\_TEXTURE\_2D, texID9);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(sw,sh);

glTexCoord2i(1,0); glVertex2i(sw,0);

glTexCoord2i(0,0); glVertex2i(0,0);

glTexCoord2i(0,1); glVertex2i(0,sh);

glEnd();

glDisable(GL\_TEXTURE\_2D);

}

void splash(){

glClear(GL\_COLOR\_BUFFER\_BIT);

spdisp1();

glutSwapBuffers();

}

void howtoplay(){

glClear(GL\_COLOR\_BUFFER\_BIT);

if(!n){

splash();

sleep(3);

n=1;

}

hdisp1();

glutPostRedisplay();

}

void barchart(void) {

GLint month,k;

glClear(GL\_COLOR\_BUFFER\_BIT);

glColor3f(1,0,0);

drawText("STATISTICS",300,550,0,2);

drawText("Runs scored each ball",400,500,0,.5);

for(k=0;k<30;k++){

if(stat[k]==1)

glColor3f(1.0,0.0,0.0);

if(stat[k]==2)

glColor3f(0.0,1.0,0.0);

if(stat[k]==3)

glColor3f(0.0,0.0,1.0);

if(stat[k]==4)

glColor3f(1.0,1.0,0.0);

if(stat[k]==5)

glColor3f(1.0,0.0,1.0);

if(stat[k]==6)

glColor3f(0.0,1.0,1.0);

if(stat[k]==0)

glColor3f(1.0,1.0,1.0);

if(stat[k]==-2)

glColor3f(0.0,0.0,0.0);

glRecti(270+k\*30,180,280+k\*30,200+40\*stat[k]);

}

glColor3f(0.0,0.0,0.0);

xRaster=270;

for(month=0;month<30;month++){

glRasterPos2i(xRaster,yRaster);

for(k=month;k<month+1;k++)

glutBitmapCharacter(GLUT\_BITMAP\_HELVETICA\_12,label[k]);

xRaster+=30;

}

glutSwapBuffers();

}

void credits(){

glClear(GL\_COLOR\_BUFFER\_BIT);

crdisp1();

glutSwapBuffers();

}

void game(){

glClear(GL\_COLOR\_BUFFER\_BIT);

if(!m){

howtoplay();

glutSwapBuffers();

sleep(13);

m=1;

}

glLineWidth(2);

gamedisp1();

gamedisp2();

gamedisp3();

glutSwapBuffers();

if(e){

sleep(2);

barchart();

sleep(5);

credits();

sleep(4);

newdisp();

glutSwapBuffers();

}

}

void anim(int n1,int n2){

char a[30],b[30];

switch(n1){

case 1:

sprintf(a,"img/%dl.png",n1);

break;

case 2:

sprintf(a,"img/%dl.png",n1);

break;

case 3:

sprintf(a,"img/%dl.png",n1);

break;

case 4:

sprintf(a,"img/%dl.png",n1);

break;

case 5:

sprintf(a,"img/%dl.png",n1);

break;

case 6:

sprintf(a,"img/%dl.png",n1);

break;

default:

cout<<"Invalid File\n";

}

switch(n2){

case 1:

sprintf(b,"img/%dr.png",n2);

break;

case 2:

sprintf(b,"img/%dr.png",n2);

break;

case 3:

sprintf(b,"img/%dr.png",n2);

break;

case 4:

sprintf(b,"img/%dr.png",n2);

break;

case 5:

sprintf(b,"img/%dr.png",n2);

break;

case 6:

sprintf(b,"img/%dr.png",n2);

break;

default:

cout<<"Invalid File\n";

}

texID1 = LoadTexture1((char\*)(a));

texID2 = LoadTexture2((char\*)(b));

glEnable(GL\_TEXTURE\_2D);

glBindTexture(GL\_TEXTURE\_2D, texID1);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(450,500);

glTexCoord2i(1,0); glVertex2i(450,100);

glTexCoord2i(0,0); glVertex2i(50,100);

glTexCoord2i(0,1); glVertex2i(50,500);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glEnable(GL\_TEXTURE\_2D);

glBindTexture(GL\_TEXTURE\_2D, texID2);

glTexEnvf(GL\_TEXTURE\_ENV,GL\_TEXTURE\_ENV\_MODE,GL\_MODULATE);

glBegin(GL\_POLYGON);

glTexCoord2i(1,1); glVertex2i(900,500);

glTexCoord2i(1,0); glVertex2i(900,100);

glTexCoord2i(0,0); glVertex2i(500,100);

glTexCoord2i(0,1); glVertex2i(500,500);

glEnd();

glDisable(GL\_TEXTURE\_2D);

glutPostRedisplay();

}

void action(int n){

int c=ran();

switch(n){

case 1:

anim(c,1);

cout<<c<<" & 1\n";

break;

case 2:

anim(c,2);

cout<<c<<" & 2\n";

break;

case 3:

anim(c,3);

cout<<c<<" & 3\n";

break;

case 4:

anim(c,4);

cout<<c<<" & 4\n";

break;

case 5:

anim(c,5);

cout<<c<<" & 5\n";

break;

case 6:

anim(c,6);

cout<<c<<" & 6\n";

break;

default:

cout<<"Invalid\n";

}

if(c!=n){

out=0;

if(!o){

p[o]+=n;

stat[i]=n;

i++;

bc++;

if(bc==lb){

out=1;

bc=0;

target=p[0];

stat[i]=-2;

if(o==0)

score=0;

o++;

}

}

else{

p[o]+=c;

bc++;

if(bc==lb){

out=1;

bc=0;

o++;

}

}

score=p[o];

if(o && p[1]>p[0]){

cout<<"Game Over p2 won";

w2++;

for(int j=0;j<=i;j++) cout<<stat[j];

}

}

else{

out=1;

bc=0;

target=p[0];

stat[i]=-2;

if(o==0)

score=0;

o++;

}

if(o){

if(o>1&&p[0]>p[1]){

cout<<"Game Over p1 won";

w1++;

for(int j=0;j<=i;j++) cout<<stat[j];

}

if(o>1&&p[0]==p[1]){

cout<<"Game Over draw";

w3++;

for(int j=0;j<=i;j++) cout<<stat[j];

}

}

}

void mouse(int btn,int state,int x,int y){

if(btn==GLUT\_LEFT\_BUTTON && state==GLUT\_DOWN){

if(!w1&&!w2&&!w3){

y=(sh-y);

if((x<=1125)&&(x>=1000)){

if((y<=700)&&(y>=650))

action(1);

else if((y<=600)&&(y>=550))

action(3);

else if((y<=500)&&(y>=450))

action(5);

}

if((x<=1300)&&(x>=1175)){

if((y<=700)&&(y>=650))

action(2);

else if((y<=600)&&(y>=550))

action(4);

else if((y<=500)&&(y>=450))

action(6);

}

}

}

if(btn==GLUT\_RIGHT\_BUTTON && state==GLUT\_DOWN && e){

cout<<"Cant quit";

exit(0);

}

}

void keyboard(unsigned char key, int x, int y){

switch(key){

case 27:

cout<<"Exiting game\n";

exit(0);

break;

case 32 :

if(e){

exit(0);

}

else{

cout<<"Cant quit";

break;

}

default:

cout<<"Invalid";

}

}

void winReshape(GLint newWidth,GLint newHeight) {

glClear(GL\_COLOR\_BUFFER\_BIT);

glMatrixMode(GL\_PROJECTION);

glLoadIdentity();

gluOrtho2D(0.0,(GLdouble)newWidth,0.0,(GLdouble)newHeight);

}

void reshape(int w, int h){

glViewport (0, 0, (GLsizei) w, (GLsizei) h);

glMatrixMode (GL\_PROJECTION);

glLoadIdentity ();

gluOrtho2D (0.0, (GLdouble) w, 0.0, (GLdouble) h);

}

void myinit(){

LoadMainGLTextures();

LoadspGLTextures();

LoadGameGLTextures();

LoadcrGLTextures();

glEnable(GL\_TEXTURE\_2D);

glClearColor(1.0,1.0,1.0,1.0);

glPointSize(1.0);

glShadeModel(GL\_SMOOTH);

glMatrixMode(GL\_PROJECTION);

glLoadIdentity();

gluOrtho2D(0.0,sw,0.0,sh);

}

int main( int argc,char \*\*argv){

glutInit(&argc,argv);

glutInitDisplayMode(GLUT\_RGB | GLUT\_DOUBLE);

glutInitWindowSize(sw,sh);

glutInitWindowPosition(0,0);

glutCreateWindow("HandCricket");

myinit();

glutDisplayFunc(game);

glutMouseFunc(mouse);

glutKeyboardFunc(keyboard);

glutReshapeFunc(reshape);

glutFullScreen();

glutMainLoop();

return 0;

}