



NATIONAL UNIVERSITY OF MODERN LANGUAGES

Human Computer Interaction lab Report - 1

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PROGRAM: BSSE (5th Semester)

COURSE: HUMAN COMPUTER INTERACTION

SUBMITTED TO: Sir Khateeb khan

DATE: 15, Sep 2025

DAY: Monday

Lab Tasks

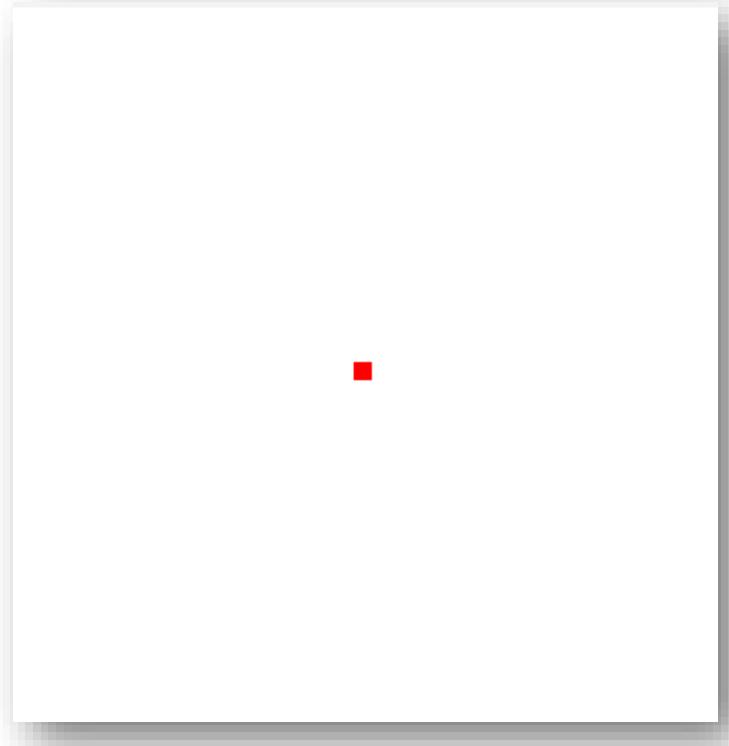
1. Write a basic OpenGL program using GLUT to create a window, set a white background, draw a red dot at the center, and then modify it to display a blue dot instead.

```
#include <GL/glut.h>

void display() {
    glClear(GL_COLOR_BUFFER_BIT);
    glColor3f(1.0f, 0.0f, 0.0f);
    glBegin(GL_POINTS);
    glVertex2f(0.0f, 0.0f);
    glEnd();
    glFlush();
}

void init() {
    glClearColor(1.0f, 1.0f, 1.0f, 1.0f);
    glPointSize(10.0f);
    glMatrixMode(GL_PROJECTION);
    glLoadIdentity();
    gluOrtho2D(-1.0, 1.0, -1.0, 1.0);
}

int main(int argc, char** argv) {
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
    glutInitWindowSize(400, 400);
    glutInitWindowPosition(100, 100);
    glutCreateWindow("Red Dot at Center");
    init();
    glutDisplayFunc(display);
    glutMainLoop();
    return 0;
}
```



2. Write the program to draw four dots of different colors (red, green, blue, and yellow) at the corners of the window. Place them at coordinates (0.5, 0.5), (-0.5, 0.5), (-0.5, -0.5), and (0.5, -0.5). Each dot should have a different color. Keep the white background. without comments

```
#include <GL/glut.h>

void display() {
    glClear(GL_COLOR_BUFFER_BIT);

    glPointSize(10.0f);

    glBegin(GL_POINTS);
    glColor3f(1.0f, 0.0f, 0.0f);
    glVertex2f(0.5f, 0.5f);

    glColor3f(0.0f, 1.0f, 0.0f);
    glVertex2f(-0.5f, 0.5f);
```

```
    glColor3f(0.0f, 0.0f, 1.0f);
    glVertex2f(-0.5f, -0.5f);

    glColor3f(1.0f, 1.0f, 0.0f);
    glVertex2f(0.5f, -0.5f);
    glEnd();

    glFlush();
}

void init() {
    glClearColor(1.0f, 1.0f, 1.0f, 1.0f);
    glMatrixMode(GL_PROJECTION);
    glLoadIdentity();
    gluOrtho2D(-1.0, 1.0, -1.0, 1.0);
}

int main(int argc, char** argv) {
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
    glutInitWindowSize(400, 400);
    glutInitWindowPosition(100, 100);
    glutCreateWindow("Four Colored Dots");
    init();
    glutDisplayFunc(display);
    glutMainLoop();
    return 0;
}
```

