ASSIGNMENT 2
Mouse Click Events

Source Code:

```
#include <iostream>
#include <GL/gl.h>
#include <GL/freeglut.h>
#include <bits/stdc++.h>
using namespace std;
void displayPoint(int x, int y){
   glColor3f(0,1,0);
   glPointSize(1);
   glBegin(GL_POINTS);
   glVertex2i(x,y);
   glEnd();
}
void displayPointBold(int x, int y){
   glColor3f(1,0,0);
   glPointSize(3);
   glBegin(GL_POINTS);
   glVertex2i(x,y);
   glEnd();
}

void simpleLine(float x1,float x2,float y1,float y2){
   float step;
   float dx=x2-x1;
   float dy=y2-y1;
   step= max(abs(dx),abs(dy));
   float xin=dx/float(step);
   float yin=dy/float(step);
   float x=x1;
   float y=y1;
   for(int i=0;i<=step;i++){
       displayPoint(x,y);
       x=x+xin;
       y=y+yin;
   }
   glFlush();
```

```
}

void myMouse(int button, int state, int x , int y ){
   static int x1,y1,x2,y2,pt=0;
   if (button==GLUT_LEFT_BUTTON && state==GLUT_DOWN){
       if(pt==0){
           x1=x;
           y1=600-y;
           pt++;
           cout<<"X: "<<x1<<", Y: "<<y1<<endl;
       }
       else{
           y2=600-y;
           x2=x;
           simpleLine(x1,x2,y1,y2);
           cout<<"X: "<<x2<<", Y: "<<y2<<endl;
           x1=x;
           y1=600-y;
       }
   }
   else if (button==GLUT_LEFT_BUTTON && state==GLUT_UP){
       x1=x;
           y1=600-y;
           cout<<"X: "<<x1<<", Y: "<<y1<<endl;
   }
   else if(button==GLUT_RIGHT_BUTTON && state==GLUT_DOWN){
       glClear(GL_COLOR_BUFFER_BIT | GL_DEPTH_BUFFER_BIT);
       pt=0;

   }
   glFlush();
}

void primitive(void){
   glClearColor(0.0,0.0,0.0,0.0);
   glClear(GL_COLOR_BUFFER_BIT);
   gluOrtho2D(0,600,0,600);
   glColor3f(1,0,0);

   glutMouseFunc(myMouse);
}

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

```
    glutInit(&argc,argv);
    glutInitDisplayMode(GLUT_SINGLE);
    glutInitWindowPosition(0,0);
    glutInitWindowSize(600,600);
    glutCreateWindow("Trigger Events");
    glutDisplayFunc(primitive);
    glutMainLoop();
    return 0;
}
```

OUTPUT: