ECE 270: Computer Methods in ECE
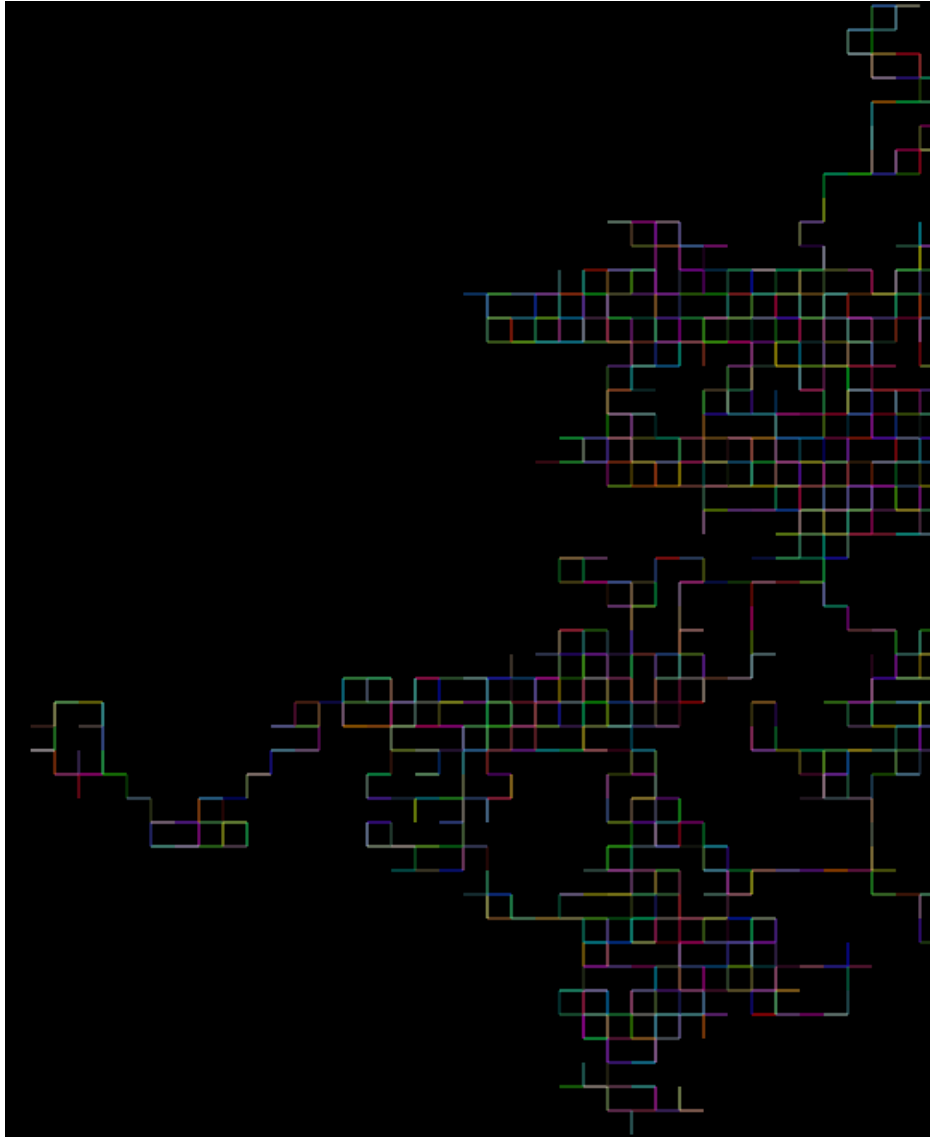

Quiz #3
Random Walk

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1 Testing and Output

```
x=830          y=200          x1=830          y1=200
x=815          y=200          x1=815          y1=200
x=815          y=215          x1=815          y1=215
x=830          y=215          x1=830          y1=215
x=815          y=215          x1=815          y1=215
x=800          y=215          x1=800          y1=215
x=800          y=200          x1=800          y1=200
x=800          y=215          x1=800          y1=215
x=815          y=215          x1=815          y1=215
x=815          y=200          x1=815          y1=200
x=800          y=200          x1=800          y1=200
x=815          y=200          x1=815          y1=200
x=815          y=200          x1=815          y1=200
x=815          y=215          x1=815          y1=215
x=830          y=215          x1=830          y1=215
x=830          y=230          x1=830          y1=230
x=830          y=230          x1=830          y1=230
x=830          y=230          x1=830          y1=230
x=815          y=230          x1=815          y1=230
x=815          y=230          x1=815          y1=230
x=830          y=230          x1=830          y1=230
x=830          y=245          x1=830          y1=245
x=815          y=245          x1=815          y1=245
x=830          y=245          x1=830          y1=245
x=845          y=245          x1=845          y1=245
x=845          y=245          x1=845          y1=245
x=830          y=245          x1=830          y1=245
x=830          y=230          x1=830          y1=230
x=845          y=230          x1=845          y1=230
```

2 Code

```
//----------changes made to ofApp.h-------------//
class ofApp : public ofBaseApp{
    public:
        int x,y,x1,y1;
        int RandSign()
        {
            int sign;
            sign = rand()%2;
            if(sign ==0) sign=-1;
            return sign;
        }
        int ChangeColor()
        {
            int ColorValue;
            ColorValue = 1 + rand()%256; //to return a random value of RGB
                between 1 and 255
                                        //i skipped the RGB value 0 0 0
                                            because it gives black and
                                            background is black :)
            return ColorValue;
         }
        void setup();
        void update();
        void draw();
        void keyPressed(int key);
        void keyReleased(int key);
        void mouseMoved(int x, int y);
        void mouseDragged(int x, int y, int button);
        void mousePressed(int x, int y, int button);
        void mouseReleased(int x, int y, int button);
        void windowResized(int w, int h);
        void dragEvent(ofDragInfo dragInfo);
        void gotMessage(ofMessage msg);
};

//----------changes made to ofApp.cpp-------------//
void ofApp::setup(){
    x=500; y=500;
    x1=500; y1=500;
    ofBackground(0,0,0);
    ofSetBackgroundAuto(false);
    ofSetFrameRate(50);
}
//-------------------------------------------------------------
void ofApp::update(){
```

```
        printf("x=%d\t\ty=%d\t\tx1=%d\t\ty1=%d\n",x,y,x1,y1);
        if (rand()%2==0) x1+=RandSign()*15;
        else if(rand()%2==1) y1+=RandSign()*15;
}
//---------------------------------------------------------------
void ofApp::draw(){
        ofSetColor(ChangeColor(),ChangeColor(),ChangeColor());
        ofLine(x,y,x1,y1);
        x=x1; y=y1;
}
//-------------------------------------------------//
```