

Technical University of Moldova
CIM Faculty

Report

Laboratory work #1

Computer Graphics

Done by:

Luchianenco Filip, FAF-121 gr.

Verified by:

Chetrusca, superior lector

Chişinău 2013

LAB 1 - Getting started (2 points)

1. Describe the functionality of your app(from end user perspective) - 1 point
2. Setup an OpenGL app - 1 point

1. Describe the functionality of your app(from end user perspective)

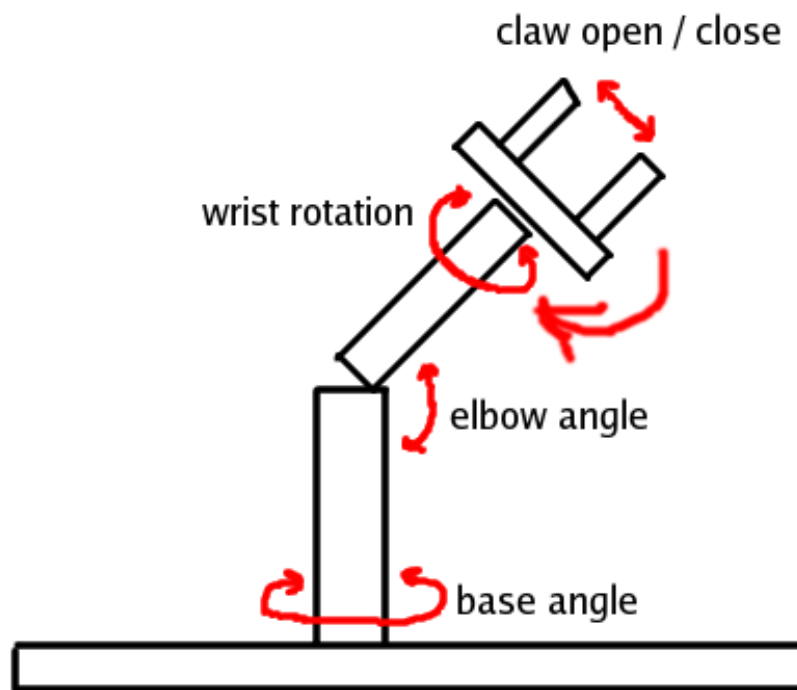
For this Laboratory work, i have chosen the 5th option:

Simulation of a robot arm picking orders in a warehouse.

I would like to create a picking orders system. It will be composed of following elements:

1. Fixed on Ground Robotic Arm
2. Konveyor (transports different objects on a line, stops and waits for the machine to pick objects)
3. Plate where objects have to be dropped
4. Objects to be moved by arm from konveyor to plate

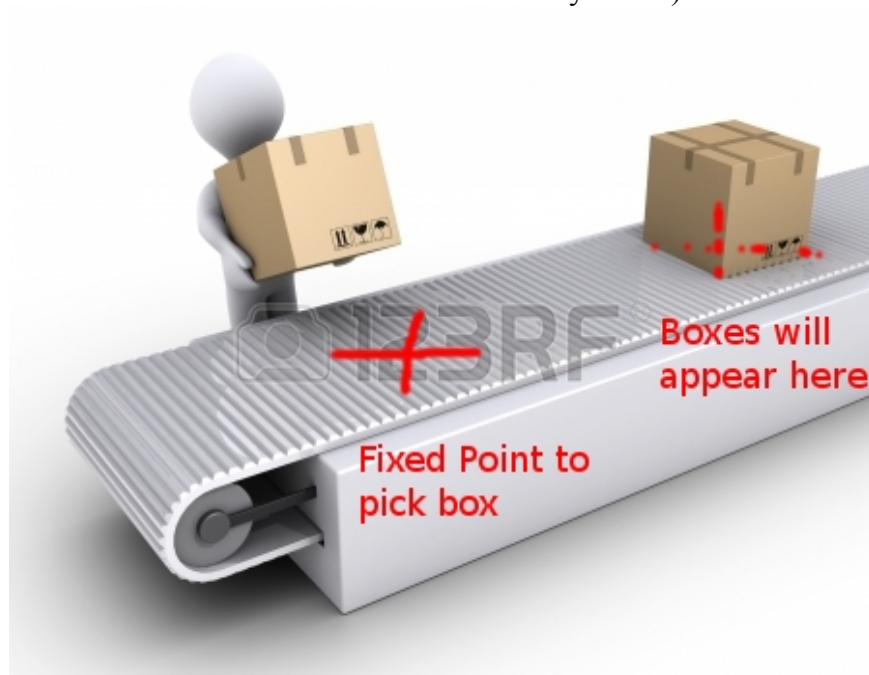
1. Fixed on Ground Robotic Arm



robot arm, side view

2. Konveyor

(it will have fixed points where boxes will appear, and the box to be taken will always stop in same position on order to be taken by the arm; so the arm will only have to bother about the size of the box, but the location will be always same)



3. Plate where objects have to be dropped

Some Place where objects will be put

4. Objects to be moved by arm from konveyor to plate

Random Boxes

2. Setup an OpenGL app

I have setup OpenGL app inside my Linux Machine(Ubuntu 13.10)

In Order to install OpenGL on Linux I had to write the following command in terminal:

```
sudo apt-get install -y glutg3-dev glutg3 glut-doc libglut3-dev libglut3 libglew-dev libglew1
```

Then, in order to compile a project I need to execute the following command in terminal:

```
g++ all_classes_here.cpp headers_if_needed.h -o nameOfExecutable -lglut -lGLU
```

And to run the compiled project:

```
./nameOfExecutable
```

The First Example that I tried was a rotating square, which proves that I have set up the OpenGL environment correctly.

Here is a video on how it works:

http://www.youtube.com/watch?v=EyhLMP7_BWg

Also the source code can be seen on my GitHub Account:

https://github.com/luchfilip/CG_openGL/tree/master/source_codes/rotating_square

I did not include/attach the source code to the sent email because the first laboratory work does not require almost any code except the window initialization.