```
%read Image
testIm = readImage(imSub.LatestMessage);
figure;
imshow(testIm);
%% object detect
I = testIm;
[bboxes, scores, label] = detect(objDetector, I)
label = cellstr(label);
I = insertObjectAnnotation(I,'rectangle',bboxes, label);
figure();
imshow(I)
%% create pointcloud and visualise

pcMsg = pcSub.LatestMessage;
pcMsg.PreserveStructureOnRead = true;
ptCloud = pointCloud(readXYZ(pcMsg));
xyz = readXYZ(pcMsg);
figure;
pcshow(ptCloud, 'VerticalAxisDir','down');
xlabel('X');ylabel('Y'); zlabel('Z');
curLim = axis();
curLim(1) = -0.5;
curLim(1) = -0.5;
axis(curLim);

%% find coordinates of object

% object centroid G(x1, y1) in color coordinates
x1 = bboxes(1)+ floor((bboxes(3))/2);
y1 = bboxes(2) + floor((bboxes(4)/2));

% finding real coordinates from
realCord = xyz(y1, x1, :);
realCord(3) = realCord(3) + (32/1000);

fprintf("Location of the object from Kinect sensor is (X,Y,Z) = (%f , %f , %f)↙
metres\n", realCord(1), realCord(2), realCord(3));


%% Send Coordinates to ROS by publishing message to a created topic
[pub msg] = rospublisher('posxyz', 'geometry_msgs/Point');
msg.X = realCord(1);
msg.Y = realCord(2);
msg.Z = realCord(3);
send(pub,msg);
%% end of code
```