How to use point cloud library(pcl) for point cloud segmentation??

Step-1:

Install PCL library in your home directory by following below commands:

```
cd
wget https://github.com/PointCloudLibrary/pcl/archive/pcl-1.8.1.tar.gz
tar xvzf pcl-1.8.1.tar.gz
cd pcl-pcl-1.8.1
mkdir build
cd build
cmake .. -DCMAKE_BUILD_TYPE=Release -DPCL_ENABLE_SSE:BOOL=FALSE
make -j 4
sudo make install
```

Step-2:

Now install jsk_pcl_ros package in your catkin_ws by following below commands:

```
cd ~/catkin_ws
git clone https://github.com/jsk-ros-pkg/jsk_recognition
cd jsk_pcl_ros
git checkout melodic-devel
cd ~/catkin_ws
catkin build
```

In this meta package a method of MaskImageFilter from jsk_pcl_ros package extracts indices of point clouds which are masked by mask image.

It subscribes to following topics:

Input point cloud: ~input   (sensor_msgs/PointCloud2)

Input mask: ~input/mask   (sensor_msgs/Image)   # In our project that will be binary output mask by mask-rcnn which is published in the topic

Camera info of the mask image: ~input/camera_info (sensor_msgs/CameraInfo)

It publishes topic:

Indices of the points masked by input mask: ~output (pcl_msgs/PointIndices)

Step-3:

Check the installation via. Running the following example:

```
roslaunch jsk_pcl_ros sample_mask_image_filter.launch
```

Note:
You can change the input topics as per the topics published in your case.

Reference: **link**