

Bug1:

The current project error arises from a mismatch between the topics published by the Intel RealSense camera and the input topics expected by Trossen Robotics. To resolve this issue, we map the camera's topics to the robot's required topics.

Please go to this website:

https://github.com/GuangpingLiu2024/Project2_supplementary_material

Download the package remap to the directory: ~/interbotix_ws/src

Go back to the directory ~/interbotix_ws and run

```
colcon build
```

```
source install/setup.bash
```

Open three terminals:

First terminal:

```
ros2 run remap camera_remap
```

Second terminal:

```
ros2 launch interbotix_xsarm_perception xsarm_perception.launch.py robot_model:=px100  
use_pointcloud_tuner_gui:=true use_armtag_tuner_gui:=true
```

Third terminal:

```
Run your script python3 px100_vision_IK.py
```

```
python3 px100_vision_IK.py
```

Bug2:

Guide 4. We now have all the global variables and dependencies that we need to design our **mission planner**; it is time to create our main function and start to create a **robot object**, a **cloud interface object** (for 3D point cloud and depth data generation), an **arm tag interface object** (for AprilTag identification), and an **inverse kinematics object**:

```
def main():  
    # Initialize the arm module along with the point cloud, armtag modules and px100_IK_ex custom API  
    bot = InterbotixManipulatorXS(  
        robot_model=ROBOT_MODEL,  
        robot_name=ROBOT_NAME,  
        group_name='arm',  
        gripper_name='gripper'  
    )  
    pcl = InterbotixPointCloudInterface(node_inf=bot.core)  
    armtag = InterbotixArmTagInterface(  
        ref_frame=REF_FRAME,  
        arm_tag_frame=ARM_TAG_FRAME,  
        arm_base_frame=ARM_BASE_FRAME,  
        node_inf=bot.core  
    )  
    my_api = ourAPI()
```

In the guide4, update node_inf = bot.core to bot.core.robot_node for the class InterbotixPointCloudInterface and the class InterbotixArmTagInterface