Errors during importing KST to SunriseWorkbench

Dear Dr. Safeea,

Thank you for your reply.

 A good news! We have solved our previous problems. Now we share the solutions with everyone here.

Step 1: We install the 'Direct Servo Motion Extension' library to our project because we miss this library. (For other people, please make sure that the 'Direct Servo Motion Extension' library and the 'Smart Servo Motion Extension' are both installed in the project.)

Step 2: We comment the following syntaxes,

'import com.kuka.connectivity.motionModel.directServo.DirectServo' and 'import com.kuka.connectivity.motionModel.directServo.IDirectServoRuntime' in the BackgroundTask.java and MatlabToolboxServer.java;

'import com.kuka.connectivity.motionModel.smartServo.ISmartServoRuntime', 'import com.kuka.connectivity.motionModel.smartServo.ServoMotion' and 'import com.kuka.connectivity.motionModel.smartServo.SmartServo' in the SmartServoWithImpedence.java.

Step 3: Some errors still exist because now we have not imported the direct servo and smart servo library in the project. At this moment, we just put the mouse for the error code line to use the suggested import by the sunrise. Then, the errors will disappear.

Step 4: We modified the package name to 'application', not the 'lbrExampleApplications', because our codes are all in the 'application' package. Other people may not need to conduct this step. If you want to do this like us, please remember to also modify the names, such as 'application' instead of 'lbrExampleApplications', in first line in all codes of the KST.

Done.

Our workbench version is 1.7. And all the libraries version that we use are shown in Fig.1 below.
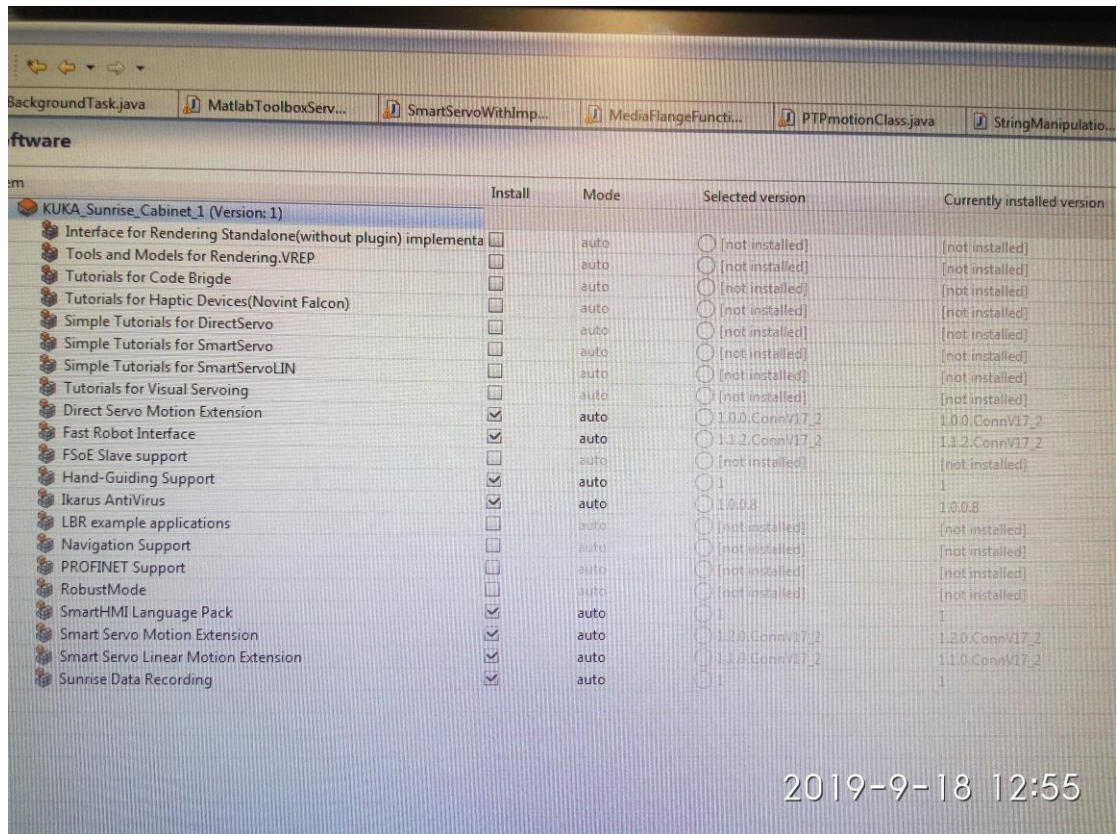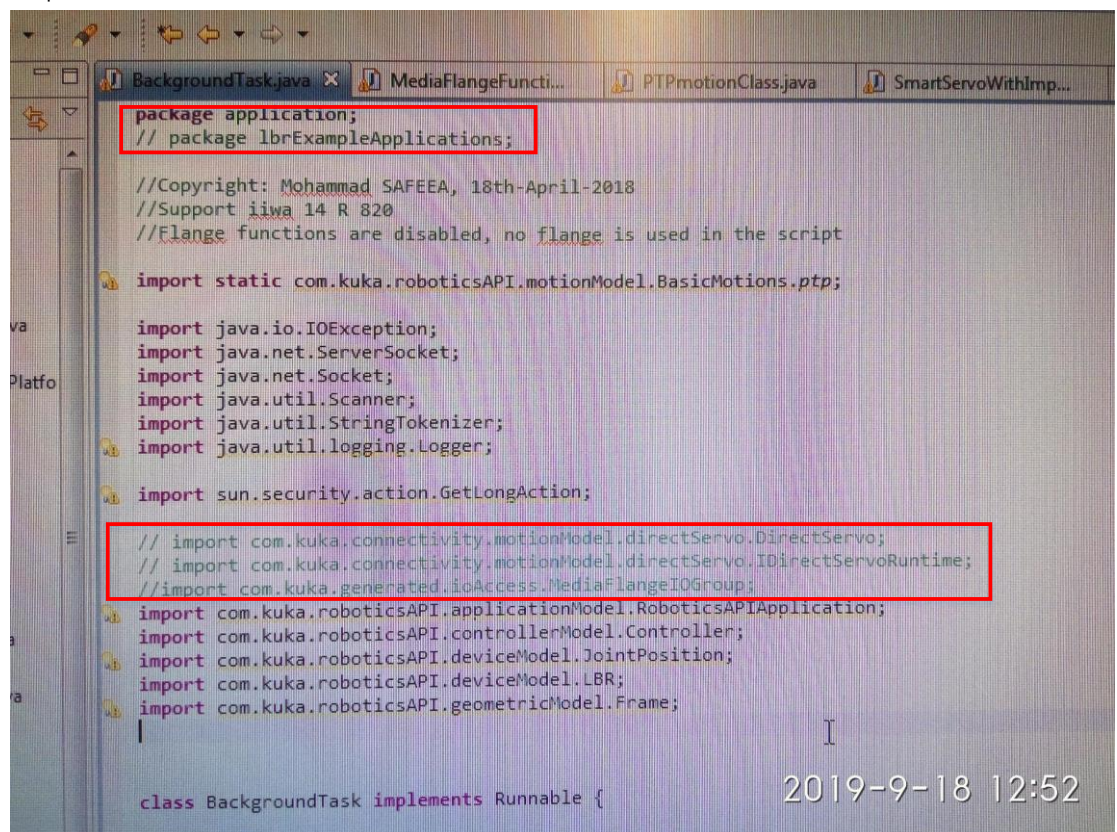
Fig.1 and Step 1

The following are pictures for the steps 2-3 above.

Step 2.1:

Step 2.2


```
 * KST 1.6
 *
 * First upload 07-May-2017
 *
 * This is a multi-threaded server program that is meant to be used with KUKA iiwa 7 R 800
 * robot with pneumatic flange, the server listens on the port 30005.
 *
 * */

import static com.kuka.roboticsAPI.motionModel.BasicMotions.ptp;

import java.io.IOException;
import java.io.UnsupportedEncodingException;
import java.net.ServerSocket;
import java.net.Socket;
import java.util.Scanner;
import java.util.StringTokenizer;
import java.util.logging.Logger;

// import com.kuka.connectivity.motionModel.directServo.DirectServo;
// import com.kuka.connectivity.motionModel.directServo.IDirectServoRuntime;

//import com.kuka.generated.ioAccess.MediaFlangeIOGroup;
import com.kuka.roboticsAPI.applicationModel.RoboticsAPIApplication;
import com.kuka.roboticsAPI.controllerModel.Controller;
import com.kuka.roboticsAPI.deviceModel.JointPosition;
import com.kuka.roboticsAPI.deviceModel.LBR;
import com.kuka.roboticsAPI.geometricModel.Frame;
import com.kuka.roboticsAPI.motionModel.DirectServo;
import com.kuka.roboticsAPI.motionModel.IDirectServoRuntime;


public class MatlabToolboxServer extends RoboticsAPIApplication
{
    private LBR _lbr;
    private Controller kuka_Sunrise_Cabinet_1;

        // Utility classes
```

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Step 2.3


```
package application;
// package lbrExampleApplications;

//Copyright: Mohammad SAFEEA, 18th-April-2018
//Support iiwa 14 R 820
//Flange functions are disabled, no flange is used in the script

import java.util.StringTokenizer;


import com.kuka.common.ThreadUtil;
// import com.kuka.connectivity.motionModel.smartServo.ISmartServoRuntime;
// import com.kuka.connectivity.motionModel.smartServo.ServoMotion;
// import com.kuka.connectivity.motionModel.smartServo.SmartServo;
import com.kuka.roboticsAPI.applicationModel.RoboticsAPIApplication;
import com.kuka.roboticsAPI.controllerModel.Controller;
import com.kuka.roboticsAPI.deviceModel.JointPosition;
import com.kuka.roboticsAPI.deviceModel.LBR;
import com.kuka.roboticsAPI.geometricModel.CartDOF;
import com.kuka.roboticsAPI.geometricModel.LoadData;
import com.kuka.roboticsAPI.geometricModel.ObjectFrame;
import com.kuka.roboticsAPI.geometricModel.Tool;
import com.kuka.roboticsAPI.geometricModel.math.XyzAbcTransformation;
import com.kuka.roboticsAPI.motionModel.ISmartServoRuntime;
import com.kuka.roboticsAPI.motionModel.ServoMotion;
import com.kuka.roboticsAPI.motionModel.SmartServo;
import com.kuka.roboticsAPI.motionModel.controlModeModel.CartesianImpedanceControlMod
import com.kuka.roboticsAPI.motionModel.controlModeModel.IMotionControlMode;
import com.kuka.roboticsAPI.motionModel.controlModeModel.PositionControlMod
import com.kuka.roboticsAPI.sensorModel.TorqueSensorData;
import com.sun.corba.se.impl.interceptors.PINoOpHandlerImpl;
```
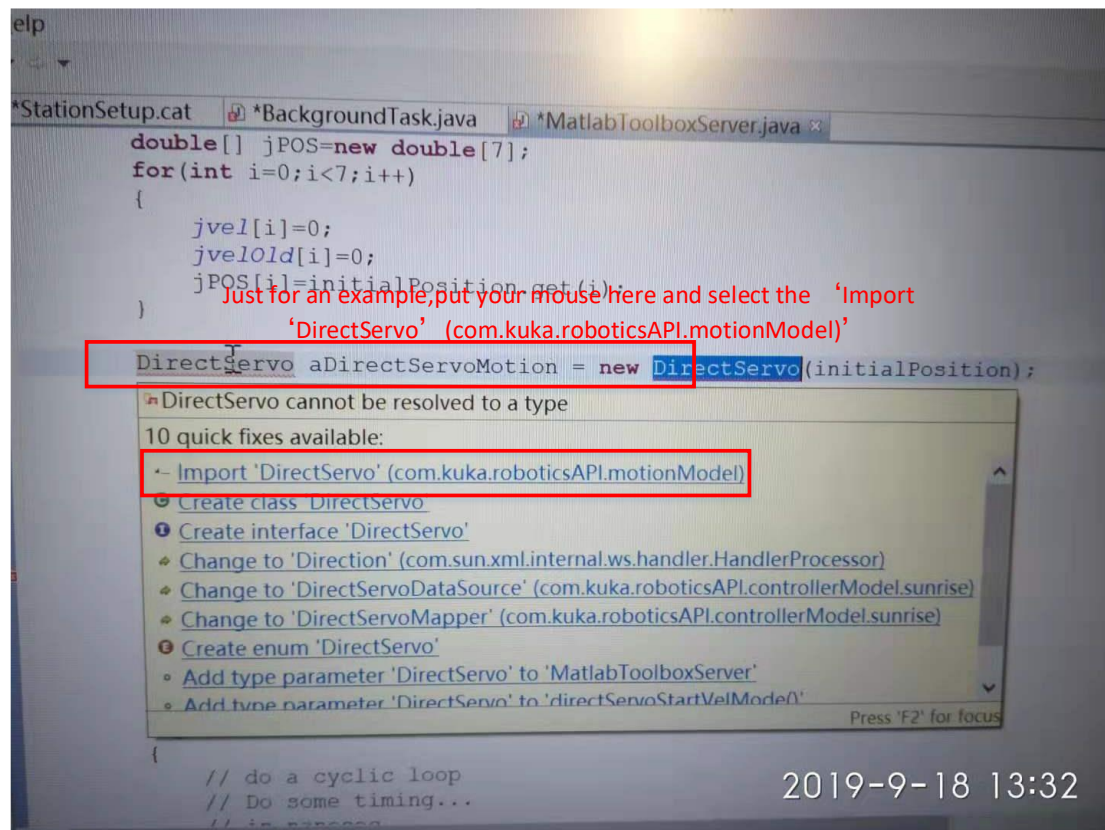
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Step 3


```
double[] jPOS=new double[7];
for(int i=0;i<7;i++)
{
    jvel[i]=0;
    jvelOld[i]=0;
    jPOS[i]=initialPosition.get(i);
}
```

Just for an example, put your mouse here and select the 'Import 'DirectServo' (com.kuka.roboticsAPI.motionModel)'

```
DirectServo aDirectServoMotion = new DirectServo(initialPosition);
```

DirectServo cannot be resolved to a type

10 quick fixes available:

- Import 'DirectServo' (com.kuka.roboticsAPI.motionModel)
- Create class 'DirectServo'
- Create interface 'DirectServo'
- Change to 'Direction' (com.sun.xml.internal.ws.handler.HandlerProcessor)
- Change to 'DirectServoDataSource' (com.kuka.roboticsAPI.controllerModel.sunrise)
- Change to 'DirectServoMapper' (com.kuka.roboticsAPI.controllerModel.sunrise)
- Create enum 'DirectServo'
- Add type parameter 'DirectServo' to 'MatlabToolboxServer'
- Add type parameter 'DirectServo' to 'directServoStartVelMode()'

Press 'F2' for focus

```
{
    // do a cyclic loop
    // Do some timing...
```

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Thank you for your reply and help all the time!

Tian Xu.