Homework Week 9 – Creating the Autoware <-> CAN DBW (Dataspeed) Vehicle Interface

1. In your own words, explain why we need a vehicle interface between Autoware and the Dataspeed DBW CAN system on the MKZ.

2. Complete the table below with the message types in each direction and their purpose.

   I. DBW → Autoware

   - Package: dbw_ford_msgs
     - Msg name: _____
     - Purpose: _____

   II. Autoware → DBW

   - Package: autoware_control_msgs
     - Msg name: _____
     - Purpose: _____

3. The module notes that Autoware_control_msgs/Control replaces the older autoware_auto_vehicle_msgs control message.

   I. Describe what information this Control message carries (high-level contents).

   II. Why is it important that the interface uses the current message type instead of the deprecated one?

4. After launching the mkz_interface with the following command:

```
ros2 launch mkz_interface mkz_interface.launch.xml
```
s

   Run the command ros2 topic list and name a few of the topics that come up. Echo the topics and see if there is any data being sent or received. If there is no data, what would you do? (Hint: refer back to weeks 1 & 2 for launching the DBW system)