20210416

* If the force sensor is connected to ADC channel 10/11/12/13/14/15, it may need extra resistance divider to make sure the feedback voltage from force sensor to ADC channel range from 0 to 2.5v
* Desired torque from RTG strategy should be limited at: 0~limited torque (certain range)

20210421

* For low-level controller parameter adjustment, find it in Control.h #define part as the actuation unit parameter is the same for different subjects. For high-level controller parameter adjustment, find it in FSM.cpp HLControl\_Init() as the parameter is different for different subjects.
* Notice to check the Initial value like ForceSensorL\_InitValue, HipAngR\_InitValue is ADC raw data or Processed data
* Remember to record expected initial value of every sensor before practical application of the control program

20210422

* Make sure the relationship ThighAngle + TrunkAngle = Hip Joint is satisfied from both software and hardware aspect

20210426

* Notice Yaw angle will be reset to zero next cycle after trigger event others --> Standing is detected if yawAngleR20() is place before HLControl() to leave one cycle time for subject to full standing.
* Therefore, Yaw angle will be reset to zero immediately as long as trigger event others --> Standing is detected if yawAngleR20() is place after HLControl(). And only reset once for each event detection.
* HLsensorFeedbackPro() should be followed by HLcontrol() and sendData2PC() without more processing of sensor feedback to guarantee the real-time of sensor info.

20210427

* If velocity is calculated in MCU, attention that the real ADC feedback update frequency is not identically to the setted value in the program
* For present yaw angle reset strategy: Reset once after other motion --> standing, cannot guarantee the small step moving of yaw angle changing. Or the strategy can be replaced by: Keep resetting yaw angle as long as during standing phase

20210521

* Remember to saving data

20210908

* Check if the Kp and human motion compensation coefficient is set as a proper value for practical operation
* For practical operation with large Kp, the delta reference command should be restricted to a proper value like delta\_Tr <= 2/3 Nm

20210921

* Basic UID Threshold selection attention
* Standing -> Walking(1) v.s. Standing -> Lowering(2)
* angle(1) < angle(2)
* Standing -> Lowering
* ab\_angle > angle
* Standing -> Lowering (1) v.s. Lowering -> Grasping (2)
* angle(1) < angle(2)
* velocity(1) > velocity(2) > consist\_velocity(2)
* Standing -> Lowering (1) v.s. Lowering/Grasping -> Lifting (2)
* ab\_angle(1) > ab\_angle(2)
* angle(1) > ab\_angle(2) (Contain above)
* Lifting -> Standing (1) v.s. Lowering/Grasping -> Lifting (2)
* ab\_angle(1) < ab\_angle(2)