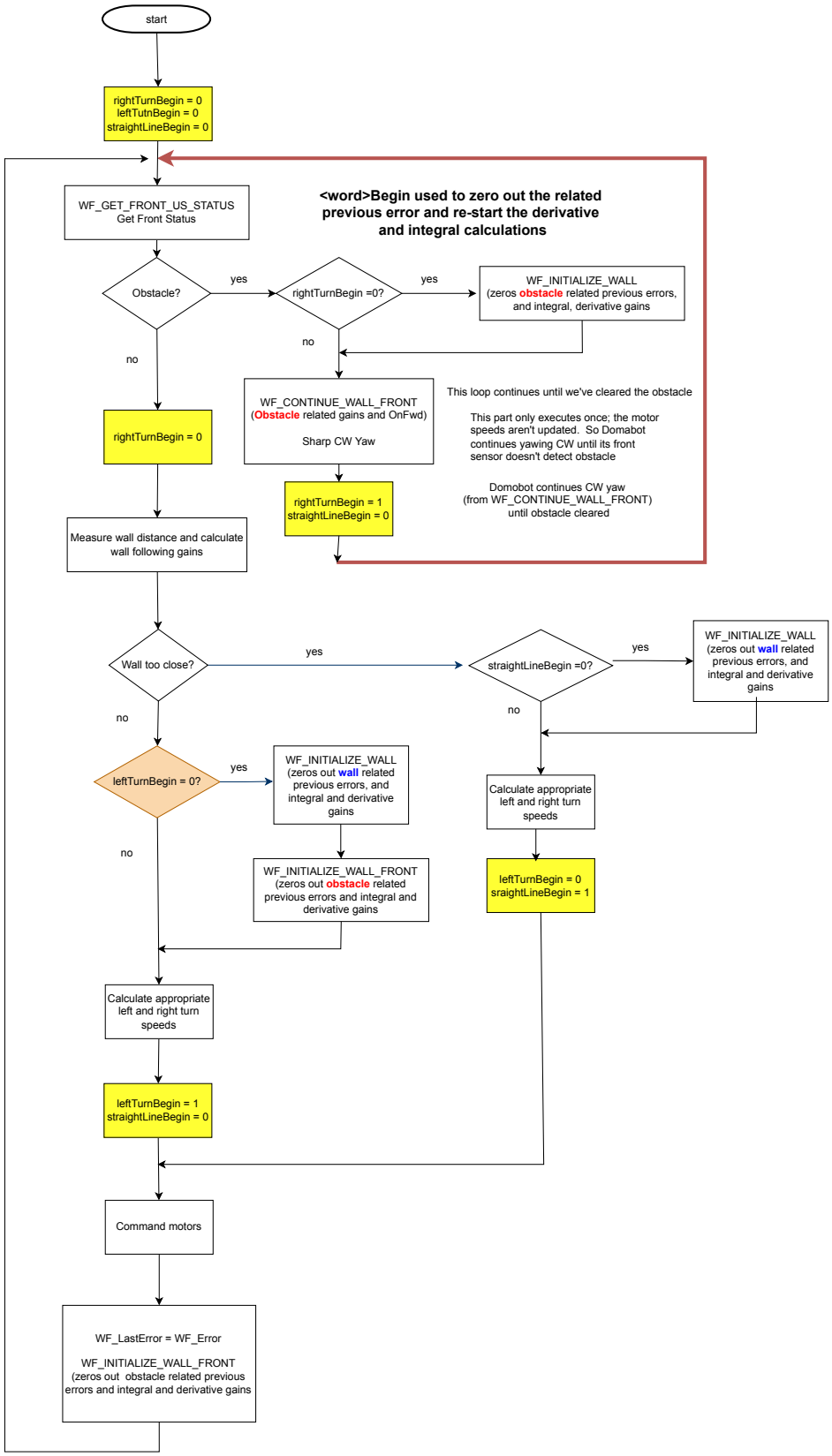
start
rightTurnBegin = 0
leftTutnBegin = 0
straightLineBegin = 0
WF_GET_FRONT_US_STATUS
Get Front Status
<word>Begin used to zero out the related previous error and re-start the derivative and integral calculations
Obstacle?
yes
rightTurnBegin =0?
yes
WF_INITIALIZE_WALL
(zeros obstacle related previous errors, and integral, derivative gains
no
no
WF_CONTINUE_WALL_FRONT
(Obstacle related gains and OnFwd)
Sharp CW Yaw
This loop continues until we've cleared the obstacle
This part only executes once; the motor speeds aren't updated. So Domabot continues yawing CW until its front sensor doesn't detect obstacle
Domobot continues CW yaw
(from WF_CONTINUE_WALL_FRONT)
until obstacle cleared
rightTurnBegin = 0
rightTurnBegin = 1
straightLineBegin = 0
Measure wall distance and calculate wall following gains
Wall too close?
yes
straightLineBegin =0?
yes
WF_INITIALIZE_WALL
(zeros out wall related previous errors, and integral and derivative gains
no
no
leftTurnBegin = 0?
yes
WF_INITIALIZE_WALL
(zeros out wall related previous errors, and integral and derivative gains
Calculate appropriate left and right turn speeds
no
WF_INITIALIZE_WALL_FRONT
(zeros out obstacle related previous errors and integral and derivative gains
leftTurnBegin = 0
sraightLineBegin = 1
Calculate appropriate left and right turn speeds
leftTurnBegin = 1
straightLineBegin = 0
Command motors
WF_LastError = WF_Error
WF_INITIALIZE_WALL_FRONT
(zeros out obstacle related previous errors and integral and derivative gains