Working Logic of Manual Bot

Algorithm

1. Start: Game starts
   1. Controller starts control
2. Bot moves from MRSZ to the shuttlecock loading zone
   1. Controller controls with PID stabilisation by IMU
3. Bot grips a coloured shuttlecock
   1. Controller gives gripping command
   2. The gripping mechanism aligns and grips the shuttlecock
4. Bot moves till the white lines start
5. Bot goes into assist mode, to follow the white line (on the command of controller)
   1. Assist mode: Line scanning IR arrays (or RBG LSAs) start assisting the controller
   2. The bot has only one degree of freedom
   3. Joystick will be read for only one axis
   4. Till transfer point for TZ1 reaches
6. Transfer begins by the command of controller
   1. Transfer mechanism transfers shuttlecock to the Automatic Bot
      1. Controller decides what to do if the transfer is successful or unsuccessful. Suggested: Bot goes and gets another shuttlecock in position (Step 2 to 5)
   2. After transfer, Bot must go fetch another shuttlecock
7. Step 2 to 6 repeated till we qualify for TZ2
   1. Till we get a successful shot in TZ1
8. Bot goes to loading zone and gets a coloured shuttlecock to Transfer point of TZ2
   1. Same procedure as that in TZ1 follows
9. Transfer begins by the command of controller
   1. Same as in step 6
10. Step 8 to 9 repeated till we qualify for TZ3
11. Bot goes to loading zone and gets a golden shuttlecock to Transfer point of TZ3
    1. Same procedure as that in TZ1 and TZ2 follow here as well
12. Transfer begins by the command of controller
    1. Same as in step 6
13. Step 11 to 12 repeated till we score rongbay in TZ3 (or we run out of the maximum number of shuttlecocks allowed in TZ3 [=5])
    1. If Rongbay, game ends, step
14. Bot goes to loading zone and get a coloured shuttlecock to transfer point of TZ1
    1. Same procedure as before
15. Transfer begins by the command of controller
    1. Same as in step 6
16. Step 14 to 15 repeats till game timer runs out or shuttlecock get over
17. Game Ends
18. Stop