Working Logic of Autonomous Bot

Algorithm

1. Start
2. Bot moves from ARSZ to Transfer point of TZ1 and waits for the manual bot to deliver shuttlecock
   1. Line following with PID assistance up to TZ1 entry junction
   2. Rotate by 90 degrees and rest at TZ1 transfer point
   3. Wait till shuttlecock transfer is done successfully
3. Bot moves to TZ1 throwing point and throws shuttlecock
   1. Goes to throwing point and throws shuttlecock
   2. After throw, bot rotates 90 degree
      1. If throw is successful, bot moves to the TZ2 transfer point and waits for the manual bot to deliver shuttlecock. (Step 5)
      2. If throw is unsuccessful, bot moves to the TZ1 transfer point and waits for the manual bot to deliver shuttlecock.
4. Step 3 is repeated till success in TZ1
5. Bot moves to transfer point of TZ2 through entry junction of TZ2 and waits for the manual bot to deliver shuttlecock.
6. After receiving shuttlecock successfully, the bot moves to throwing point of TZ2 and throws shuttlecock
   1. Same as in step 3
7. Step 5 to 6 are repeated till success in TZ2
8. Bot moves to the transfer point of TZ3 (or TZ2, both are the same point) and waits for manual bot to deliver golden shuttlecock
9. After receiving shuttlecock successfully, the bot moves to throwing point of TZ3 and throws shuttlecock
   1. Same as in step 3 and 6
10. Step 8 to 9 are repeated till wither rongbay or we run out of golden shuttlecocks [=5]
    1. If rongbay, game ends. Step 16
11. Bot moves to the entry point of TZ1
12. Bot enters the transfer point of TZ1 in the transfer orientation.
13. Bot waits for the mechanical bot to deliver coloured shuttlecock
    1. Wait till transfer successful
14. Bot moves to throwing point of TZ1 and throws shuttlecock
15. Step 12 to 14 are repeated till game ends (either timer clocks out or we run out of shuttlecock)
16. Stop