```
 - inside bluetooth connected loop -
if (orient_PID) {
       motor_speed = orientation_pid();

       //Turn 1:
       while (abs(last_error) > 1) {
         if (motor_speed > 0) {
           motors.turn_left(motor_speed, 0);
           yaw_prev = yaw_cur;
         }
         else if (motor_speed < 0) {
           motors.turn_right(motor_speed, 0);
           yaw_prev = yaw_cur;
         }
         sensor_live();
         motor_speed = orientation_pid();
       }

       // //Line 1:
       motors.straightbackward(100,650);
       motors.stop();
       delay(2000);

       //Turn 2:
       yaw_cur = 0;
       yaw_prev = 0;
       motor_speed = orientation_pid();
       turn_angle = -20;
       while (abs(last_error) > 1) {
         if (motor_speed > 0) {
           motors.turn_left(motor_speed, 0);
           yaw_prev = yaw_cur;
         }
         else if (motor_speed < 0) {
           motors.turn_right(motor_speed, 0);
           yaw_prev = yaw_cur;
         }
         sensor_live();
         motor_speed = orientation_pid();
       }

       //Line 2:
```

```
motors.straightbackward(100,750);
motors.stop();
delay(2000);

//Turn 3:
yaw_cur = 0;
yaw_prev = 0;
motor_speed = orientation_pid();
turn_angle = -25;
while (abs(last_error) > 1) {
  if (motor_speed > 0) {
    motors.turn_left(motor_speed, 0);
    yaw_prev = yaw_cur;
  }
  else if (motor_speed < 0) {
    motors.turn_right(motor_speed, 0);
    yaw_prev = yaw_cur;
  }
  sensor_live();
  motor_speed = orientation_pid();
}

//Line 3:
motors.straightbackward(100,600);
motors.stop();
delay(2000);

//Turn 4:
yaw_cur = 0;
yaw_prev = 0;
motor_speed = orientation_pid();
turn_angle = 25;
while (abs(last_error) > 1) {
  if (motor_speed > 0) {
    motors.turn_left(motor_speed, 0);
    yaw_prev = yaw_cur;
  }
  else if (motor_speed < 0) {
    motors.turn_right(motor_speed, 0);
    yaw_prev = yaw_cur;
  }
  sensor_live();
```

```
  motor_speed = orientation_pid();
}
motors.stop();

//Line 4:
motors.straightbackward(100,700);
motors.stop();
delay(2000);

//Turn 5:
yaw_cur = 0;
yaw_prev = 0;
motor_speed = orientation_pid();
turn_angle = 30;
while (abs(last_error) > 1) {
  if (motor_speed > 0) {
    motors.turn_left(motor_speed, 0);
    yaw_prev = yaw_cur;
  }
  else if (motor_speed < 0) {
    motors.turn_right(motor_speed, 0);
    yaw_prev = yaw_cur;
  }
  sensor_live();
  motor_speed = orientation_pid();
}
motors.stop();

//Line 5:
motors.straightbackward(100,1000);
motors.stop();
delay(2000);

//Turn 6:
yaw_cur = 0;
yaw_prev = 0;
motor_speed = orientation_pid();
turn_angle = 30;
while (abs(last_error) > 1) {
  if (motor_speed > 0) {
    motors.turn_left(motor_speed, 0);
    yaw_prev = yaw_cur;
```

```
    }
    else if (motor_speed < 0) {
      motors.turn_right(motor_speed, 0);
      yaw_prev = yaw_cur;
    }
    sensor_live();
    motor_speed = orientation_pid();
  }
  motors.stop();

  //Line 6:
  motors.straightbackward(100,1000);
  motors.stop();
  delay(2000);

  //Turn 7:
  yaw_cur = 0;
  yaw_prev = 0;
  motor_speed = orientation_pid();
  turn_angle = 30;
  while (abs(last_error) > 1) {
    if (motor_speed > 0) {
      motors.turn_left(motor_speed, 0);
      yaw_prev = yaw_cur;
    }
    else if (motor_speed < 0) {
      motors.turn_right(motor_speed, 0);
      yaw_prev = yaw_cur;
    }
    sensor_live();
    motor_speed = orientation_pid();
  }
  motors.stop();

  //Line 7:
  motors.straightbackward(100,650);
  motors.stop();
  delay(3000);
  orient_PID = false;

}
```