Robotics Group Project

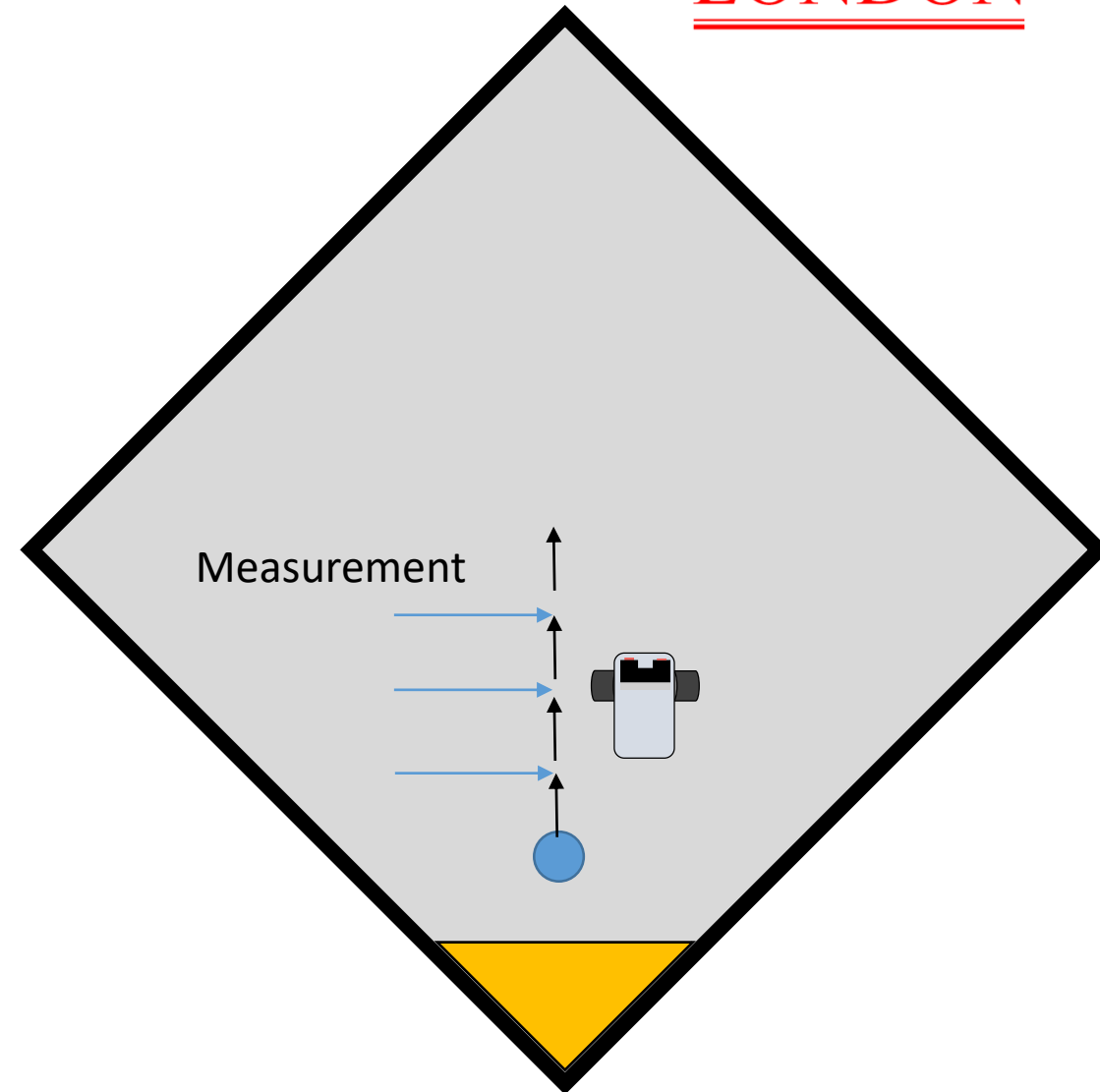## *- Error analysis of open loop localisation-*

Aim

Measure errors which may occur when the robot navigates in the map in open loop

Required sensor

- Gyro sensor
- Motor encoder

Task- Repeated forward motion

- Start the robot at the starting point

- Move forward 20 mm intervals

- Each time: measure the error of location

- Repeat 10 times and record the errors

Measurement

Task- Repeated backward motion

- Start the robot at the starting point

- Move backward 20 mm intervals

- Each time: measure the error of location

- Repeat 10 times and record the errors
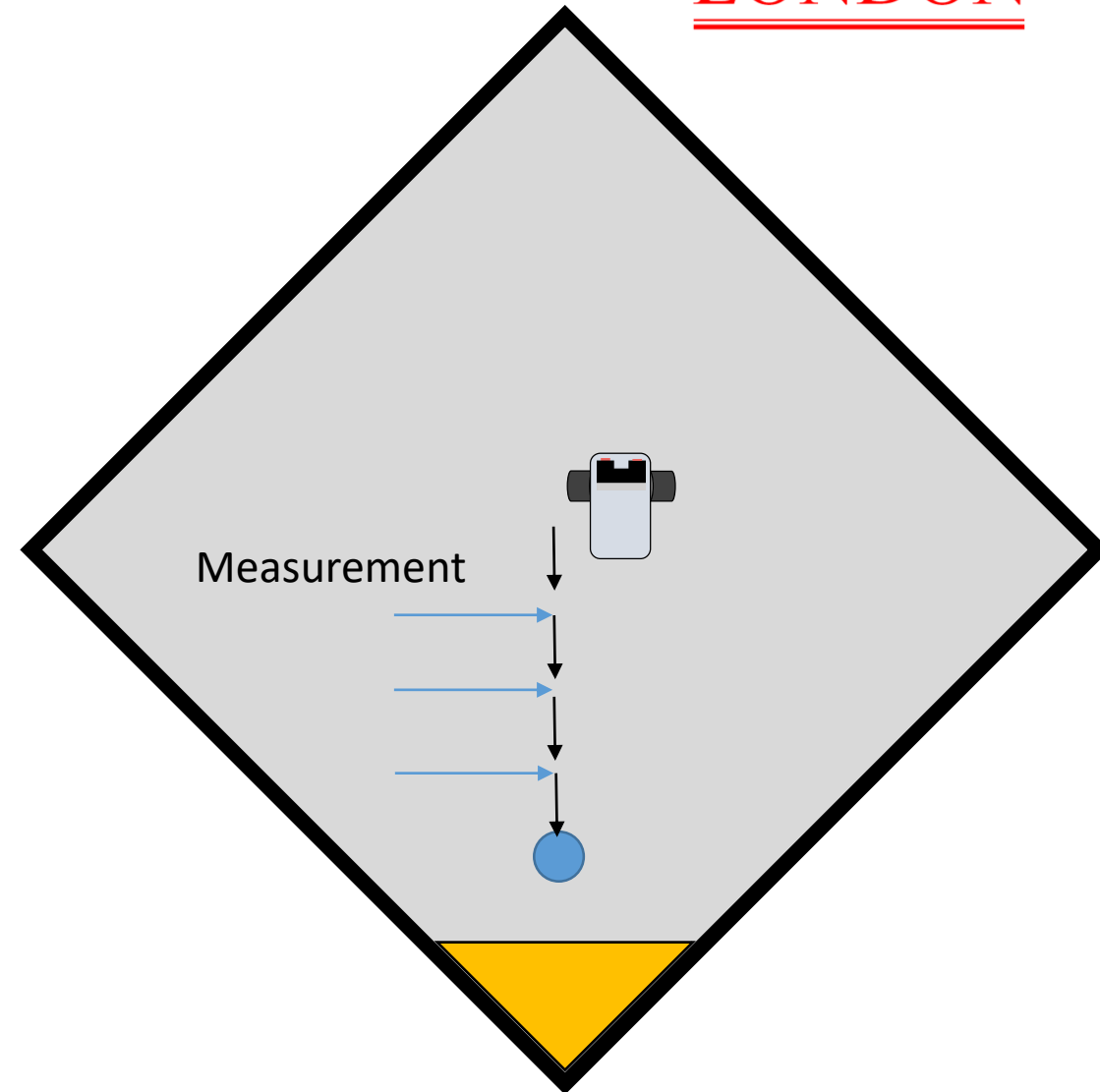
Measurement

- You can do the measurements on your bench

Task Repeated rotation

- Start the robot at the starting point

- Travel 50 cm

- Rotate 90 degree anticlockwise

- Repeat for four times

- Measure the error of location for each iteration
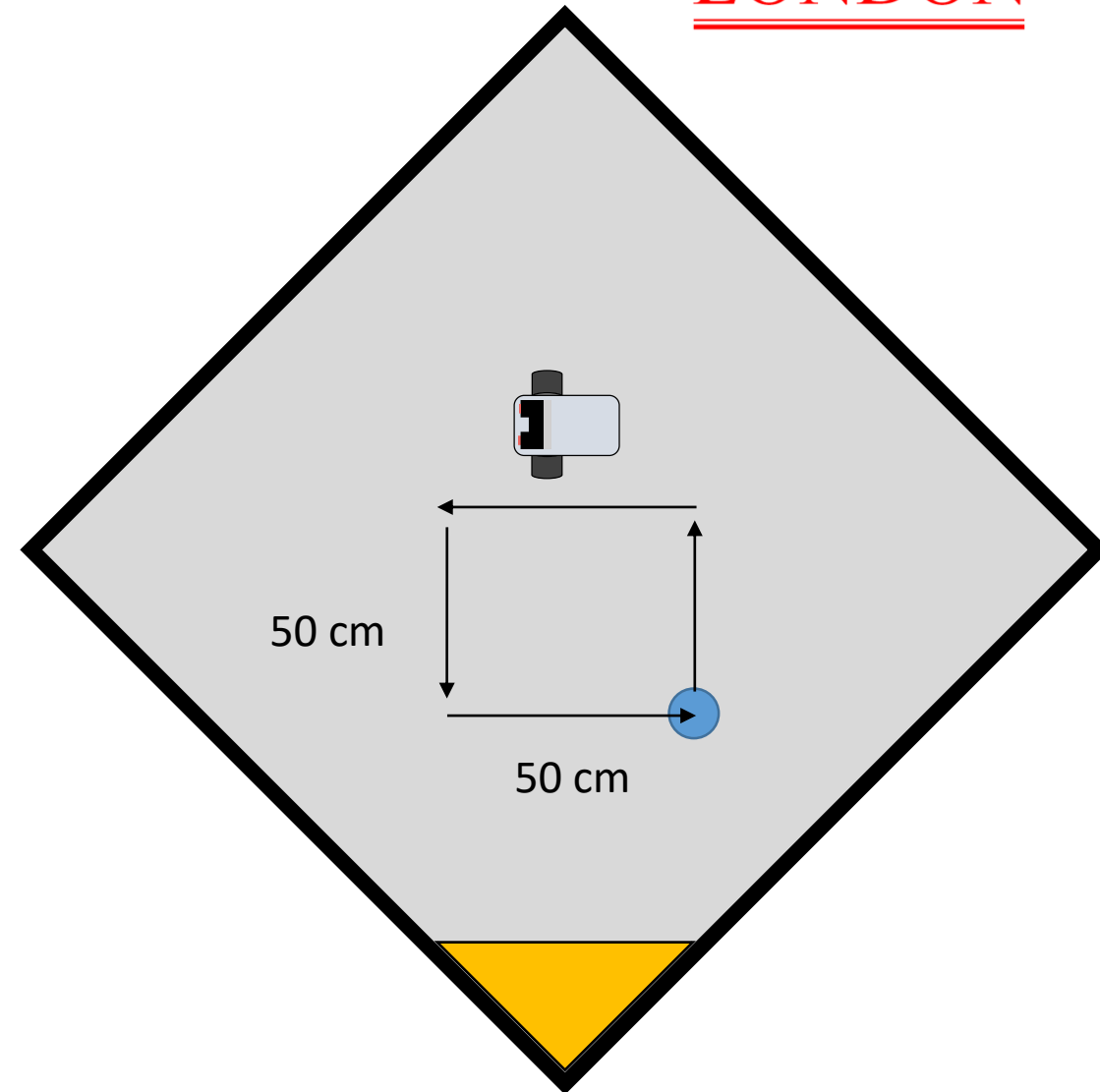
Task Repeated rotation

- Start the robot at the starting point

- Travel as the arrows indicated

- Measure the final error of location

- Repeat three times and measure the errors
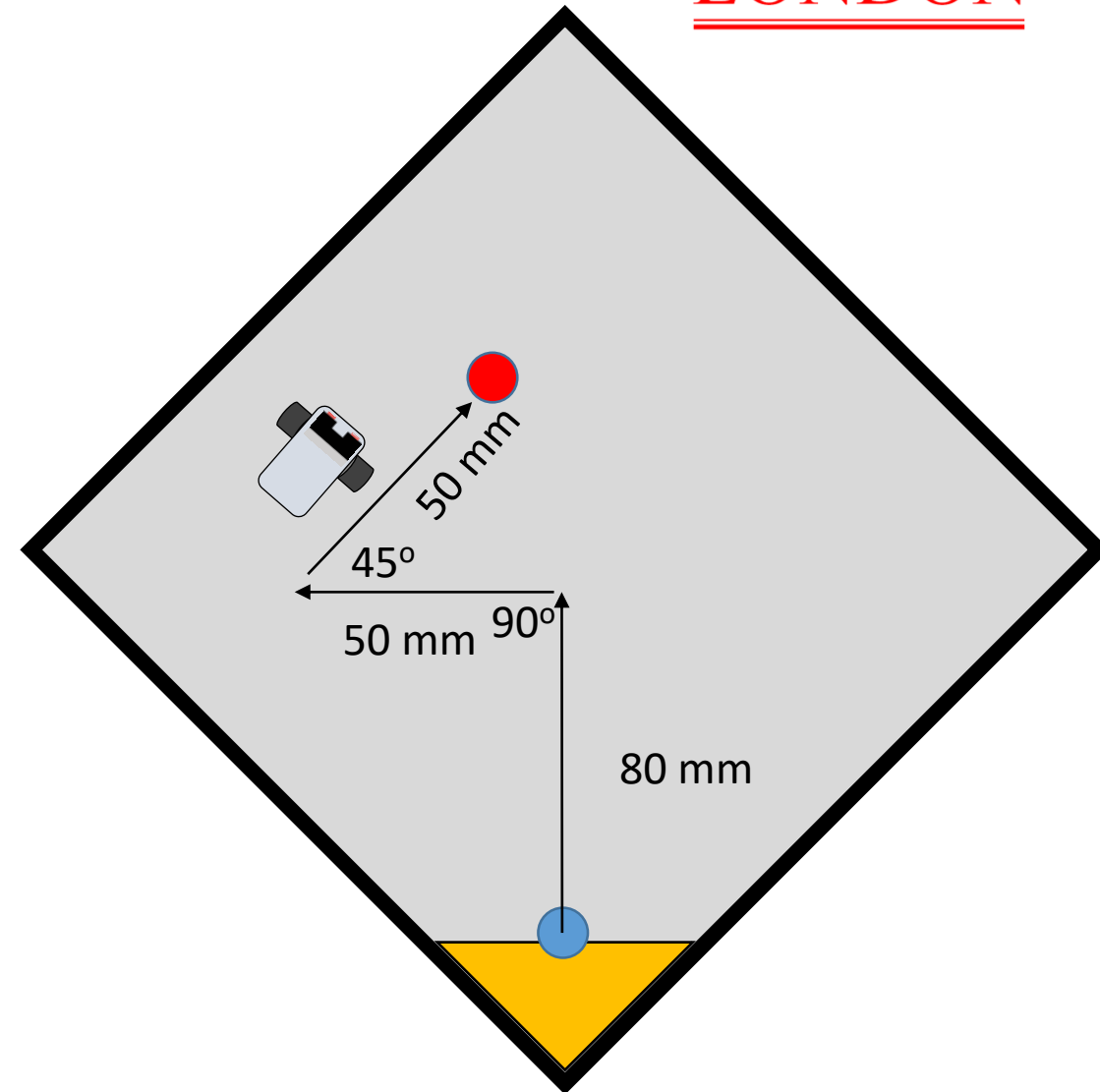
- Summarize the error analysis into your individual report