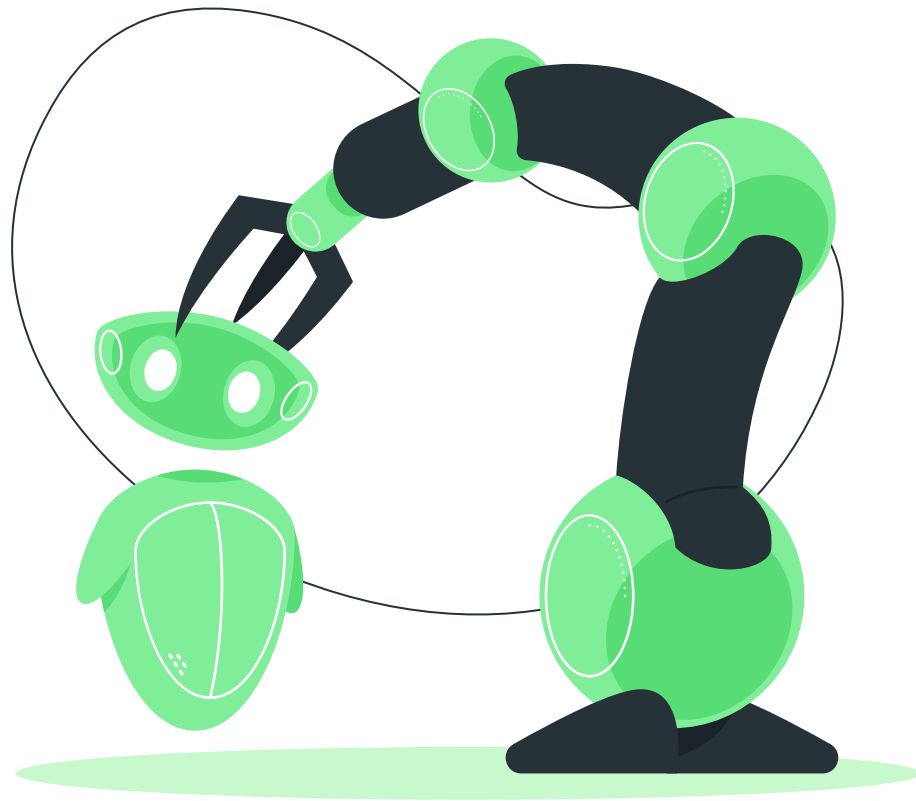


EECS/BioE/ME 106A/206A

Lab 2:

Publisher and Subscriber Nodes



Announcements

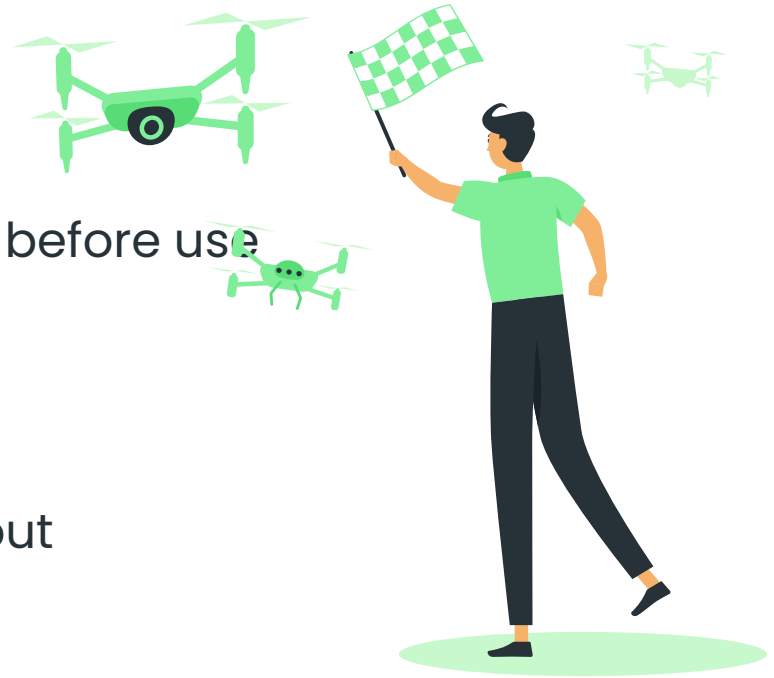
- ★ Lab 2 due before the start of your lab section next week

Housekeeping Reminders

- **If you aren't feeling well, don't come to lab**
- Be respectful to everyone
- No food/drink in the lab
- Keep your stations clean and wipe before use
- Don't work in the lab alone

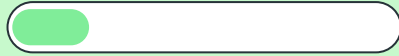
Ctrl + C EVERY process before you log out

Use **pkill -u \$(whoami)** to log out



Upcoming Lab Schedule

Today



Lab 1 Due

Work on Lab 2

1 Week



Lab 2 Due

Work on Labs 3/4

2 Weeks



Buffer Week for

Labs 3 & 4

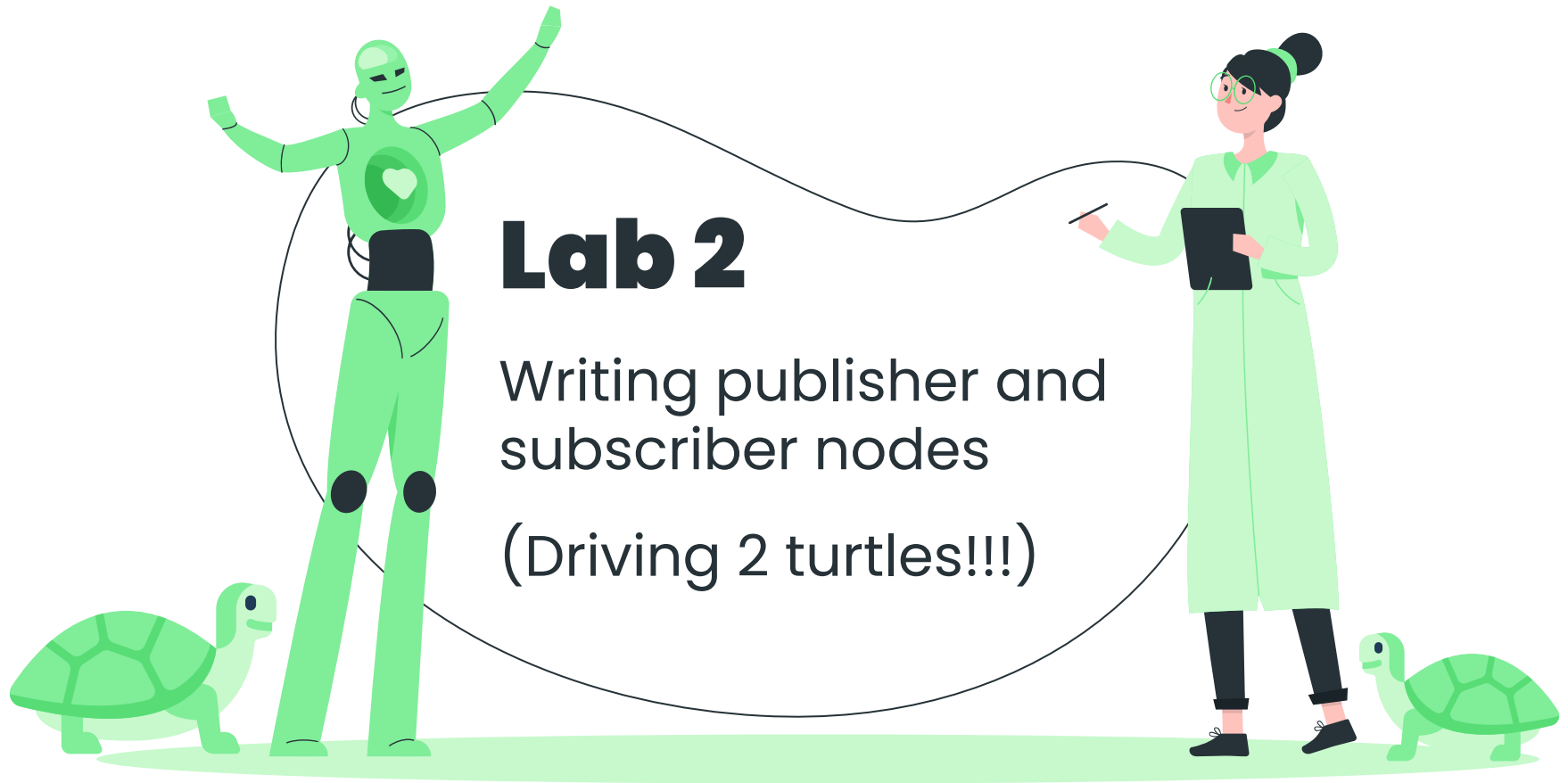
3 Weeks



Labs 3 AND 4 Due

Work on Labs 5/6



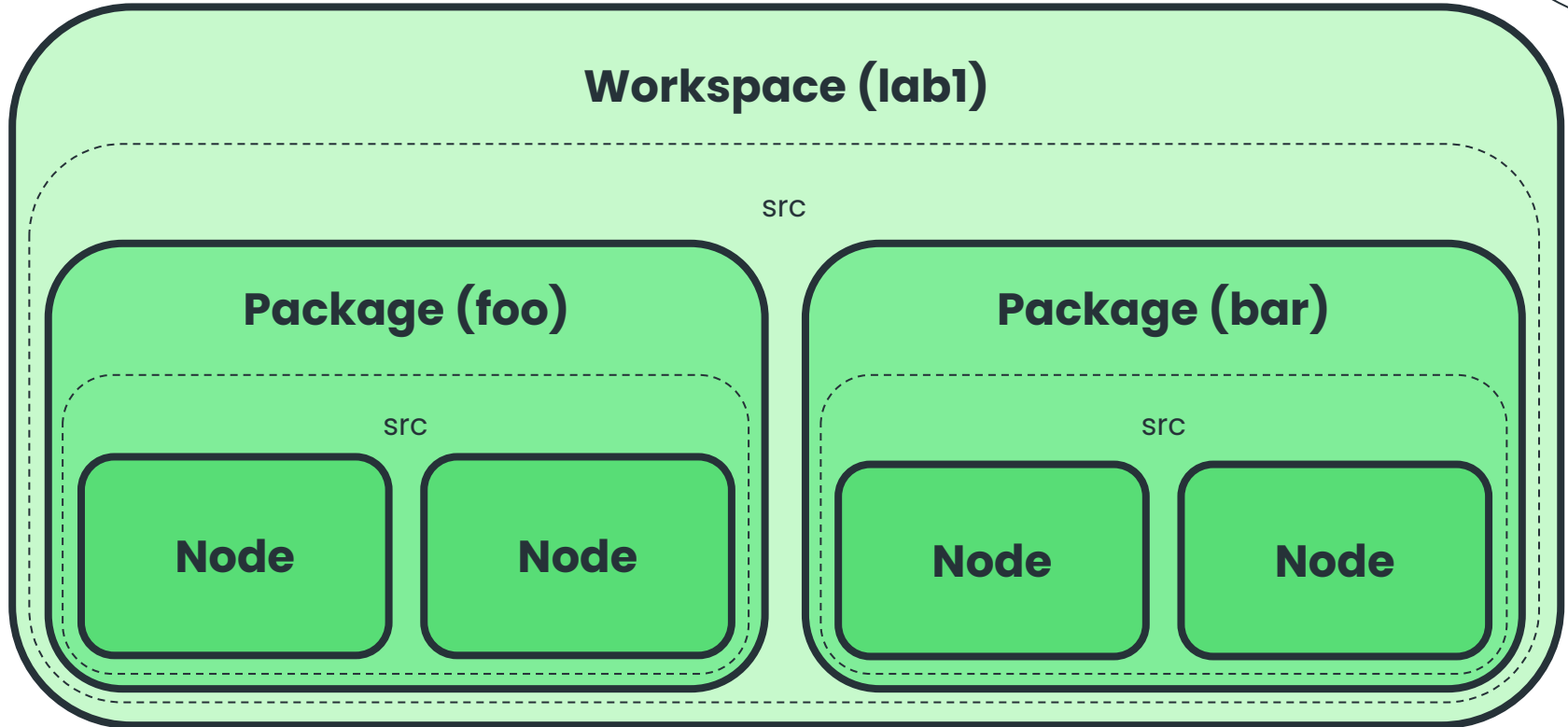


Lab 2

Writing publisher and
subscriber nodes

(Driving 2 turtles!!!)

Recap of ROS Workspaces



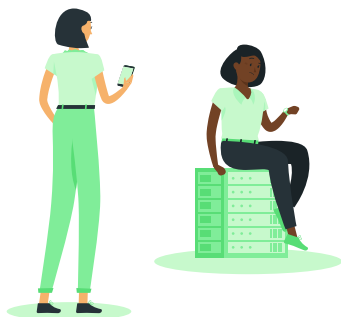
ROS Communication Concepts

Data Streams

Topics, Message Types

Many-to-Many Nodes (Pub/Sub)

Unidirectional Communication



Request/Response

Services, Request and Response Types

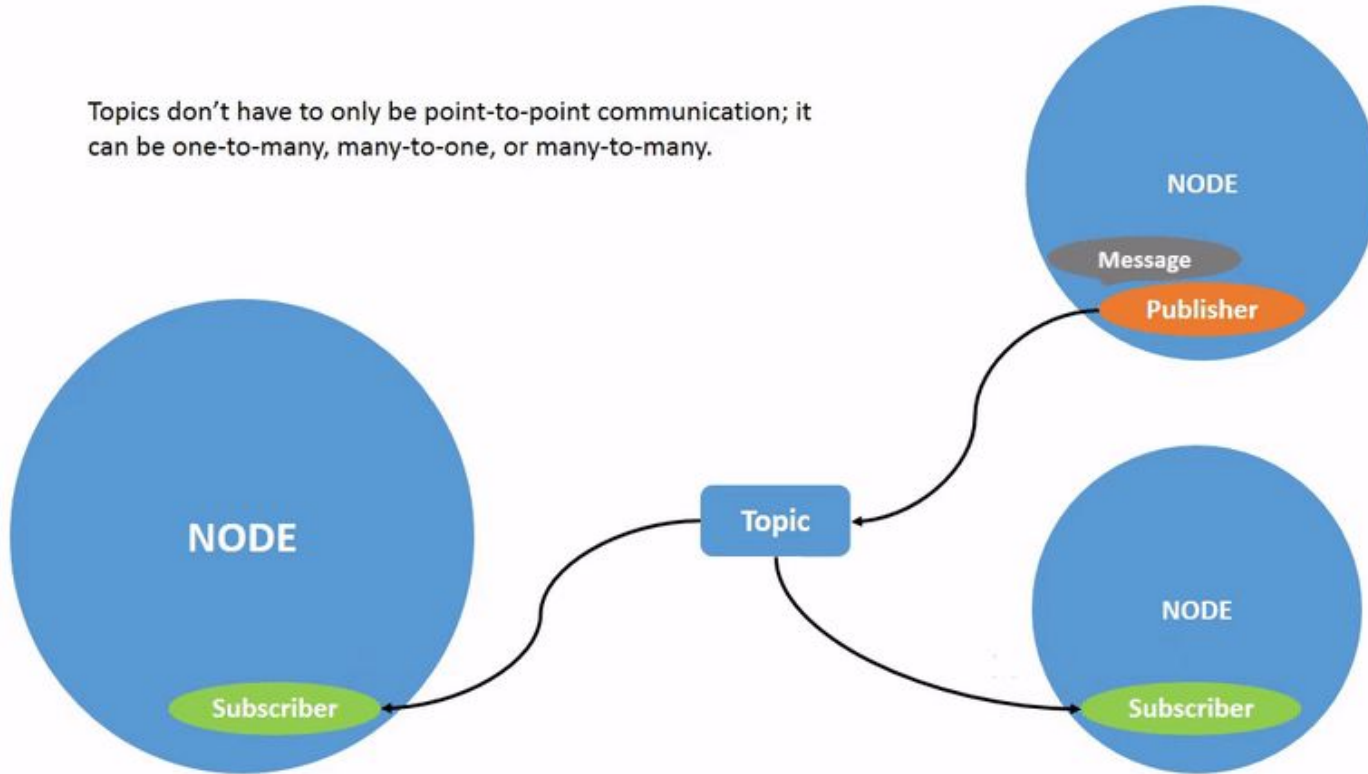
One-to-Many Nodes

Bidirectional Communication



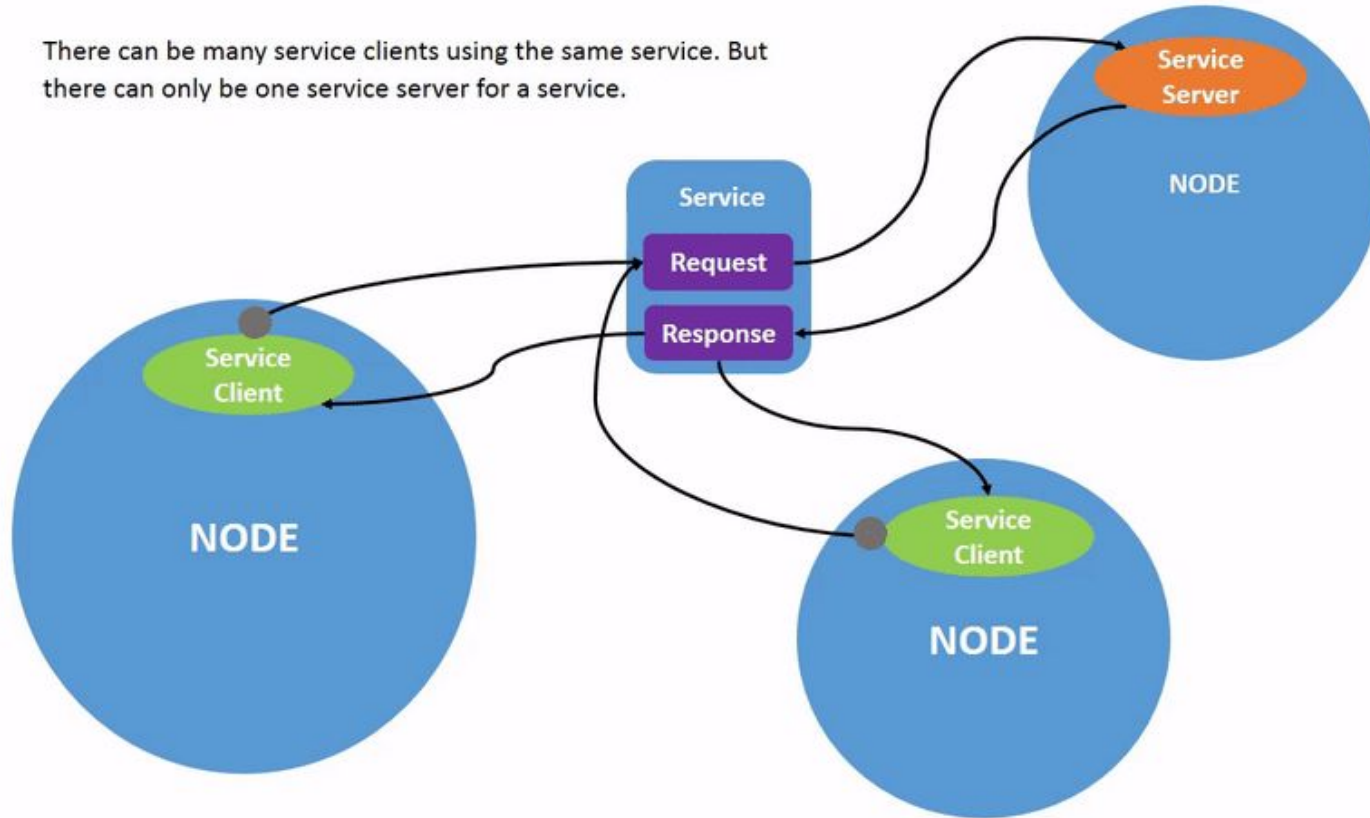
ROS Data Streams (Topics)

Topics don't have to only be point-to-point communication; it can be one-to-many, many-to-one, or many-to-many.



ROS Request/Reply (Services)

There can be many service clients using the same service. But there can only be one service server for a service.



Checkpoints

1

Talk to yourself

Write your own publisher and subscriber nodes

2

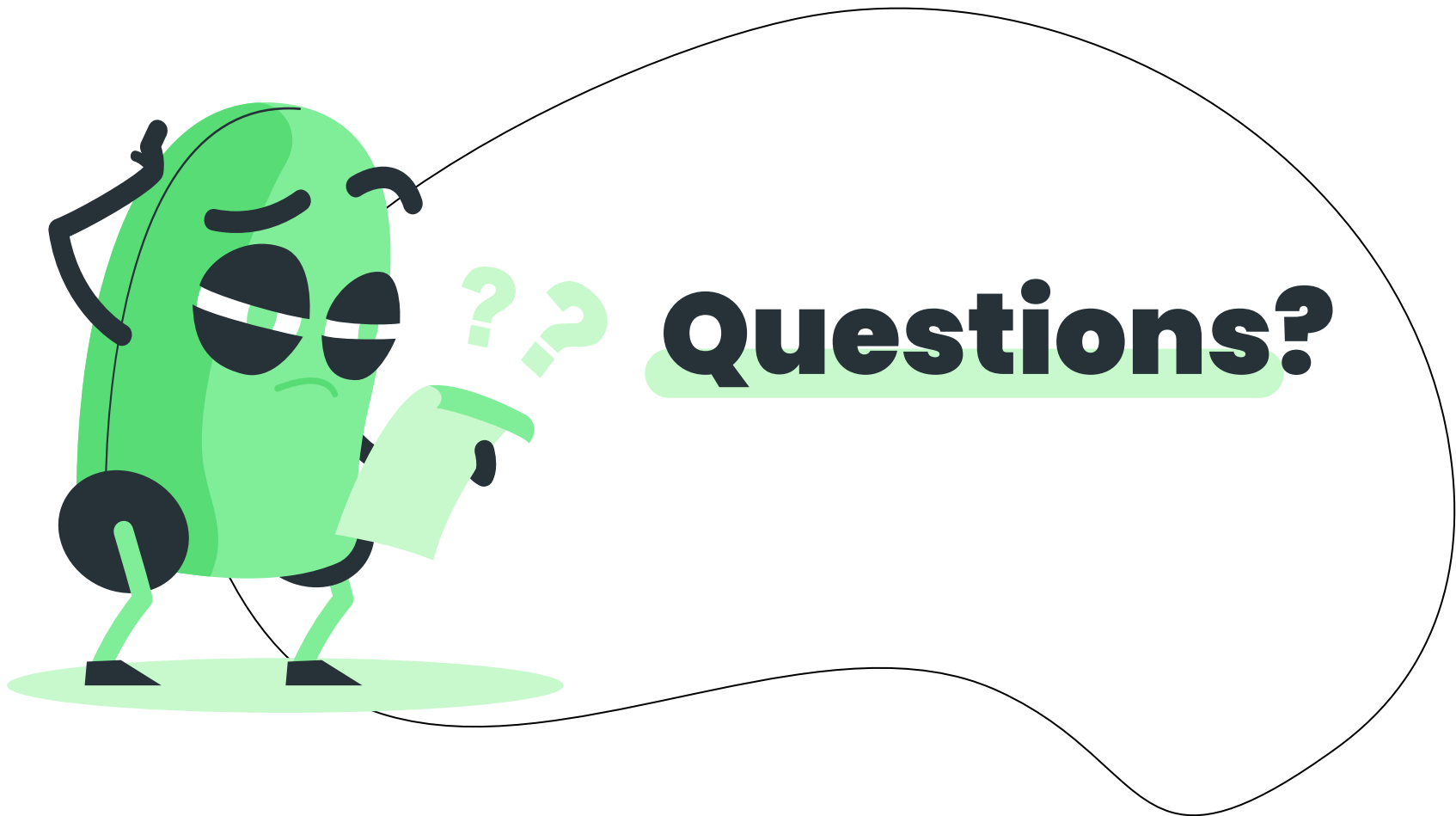
Drive that 2nd turtle!

Write a node to interface with existing ROS code

3

Turtle army!!!

Use ROS services to teleport your turtles and drive them in circles



Questions?

Don't Forget...

If you run into an error:

- `catkin_make`
- `source devel/setup.bash`
- `chmod +x *.py`

Use `pkill -u $(whoami)` to log out

