TASK 2

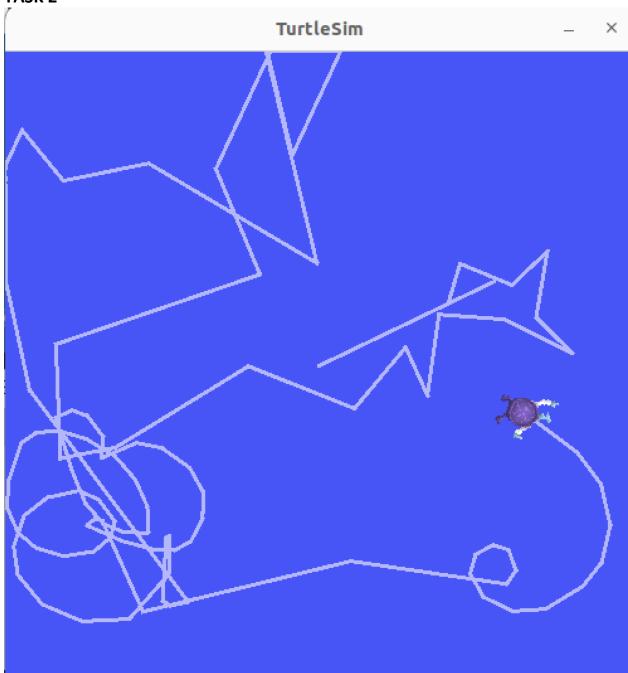**TASK 3**
1. ros2 topic list

```
ajain@ajain-VM:~$ ros2 topic list
/parameter_events
/rosout
/turtle1/cmd_vel
/turtle1/color_sensor
/turtle1/pose
ajain@ajain-VM:~$ 
```

2. ros2 topic type /turtle1/color_sensor

```
ajain@ajain-VM:~$ ros2 topic type /turtle1/color_sensor
turtlesim/msg/Color
ajain@ajain-VM:~$ 
```

3. ros2 topic info /turtle1/color_sensor

```
ajain@ajain-VM:~$ ros2 topic info /turtle1/color_sensor
Type: turtlesim/msg/Color
Publisher count: 1
Subscription count: 0
ajain@ajain-VM:~$
```

4. ros2 interface show turtlesim/msg/Color

```
ajain@ajain-VM:~$ ros2 interface show turtlesim/msg/Color
uint8 r
uint8 g
uint8 b
ajain@ajain-VM:~$
```

TASK 5

```
mkdir -p project1/src
cd project1/src/
ros2 pkg create --build-type ament_python --node-name runturtleinacircle task4
```

```
ajain@ajain-VM:~$ mkdir -p project1/src
ajain@ajain-VM:~$ cd project1/src/
ajain@ajain-VM:~/project1/src$ ros2 pkg create --build-type ament_python --node-name runturtleinac
ircle task4
going to create a new package
package name: task4
destination directory: /home/ajain/project1/src
package format: 3
version: 0.0.0
description: TODO: Package description
maintainer: ['ajain <ajain@todo.todo>']
licenses: ['TODO: License declaration']
build type: ament_python
dependencies: []
node_name: runturtleinacircle
creating folder ./task4
creating ./task4/package.xml
creating source folder
creating folder ./task4/task4
creating ./task4/setup.py
creating ./task4/setup.cfg
creating folder ./task4/resource
creating ./task4/resource/task4
creating ./task4/task4/__init__.py
creating folder ./task4/test
creating ./task4/test/test_copyright.py
creating ./task4/test/test_flake8.py
creating ./task4/test/test_pep257.py
creating ./task4/task4/runturtleinacircle.py

[WARNING]: Unknown license 'TODO: License declaration'.  This has been set in the package.xml, but
 no LICENSE file has been created.
It is recommended to use one of the ament license identitifers:
Apache-2.0
BSL-1.0
BSD-2.0
BSD-2-Clause
BSD-3-Clause
GPL-3.0-only
LGPL-3.0-only
MIT
MIT-0
ajain@ajain-VM:~/project1/src$
```

mv '/home/ajain/Desktop/runturtleinacircle.py' task4/task4/
colcon build
source install/local_setup.bash
ros2 run task4 runturtleinacircle

```
ajain@ajain-VM:~/project1/src$ mv '/home/ajain/Desktop/runturtleinacircle.py' task4/task4/
ajain@ajain-VM:~/project1/src$ colcon build
Starting >>> task4
--- stderr: task4
/usr/lib/python3/dist-packages/setuptools/command/install.py:34: SetuptoolsDeprecationWarning: set
up.py install is deprecated. Use build and pip and other standards-based tools.
  warnings.warn(
---
Finished <<< task4 [0.44s]

Summary: 1 package finished [0.52s]
  1 package had stderr output: task4
ajain@ajain-VM:~/project1/src$ source install/local_setup.bash
ajain@ajain-VM:~/project1/src$ ros2 run task4 runturtleinacircle
```

ros2 run turtlesim turtlesim_node

94099815.977488359] [turtle_controller_1]: Color Sensor Data: R=179, G=184, B=255
94099815.993143235] [turtle_controller_1]: Color Sensor Data: R=179, G=184, B=255
94099816.008924693] [turtle_controller_1]: Color Sensor Data: R=179, G=184, B=255
94099816.026325273] [turtle_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Publishing twist message
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
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e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
e_controller_1]: Color Sensor Data: R=179, G=184, B=255
[INFO] [1694099816.441284516] [turtle_controller_1]: Color Sensor Data: R=179, G=184, B=255
[INFO] [1694099816.459334094] [turtle_controller_1]: Color Sensor Data: R=179, G=184, B=255
[INFO] [1694099816.472852850] [turtle_controller_1]: Color Sensor Data: R=179, G=184, B=255

e QT_QPA_PLATFORM=wayland

lesim with node name /tu

le [turtle1] at x=[5.544

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lesim with node name /tu

le [turtle1] at x=[5.544