Exercise - 2

21\_AIE\_213

Robotics operating System– SEM-IV

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Q1. Code of modified number\_counter

#!/usr/bin/env python3

import rclpy

from rclpy.node import Node

from example\_interfaces.msg import Int16

#from std\_msgs.msg import String

from example\_interfaces.srv import SetBool

class NumberCounterNode(Node):

def \_\_init\_\_(self):

super().\_\_init\_\_("number\_counter")

self.counter\_ = 0

self.number\_subscriber\_ = self.create\_subscription(

Int16, "number", self.callback\_number\_counter, 10)

self.counter\_publisher\_ = self.create\_publisher(Int16, "number\_counter",10)

# Create a subscription, names the topic,callback function which reieves msg from topic, queue size is 10

self.server=self.create\_service(SetBool,"reset\_count",self.callback\_reset)

self.get\_logger().info("Number Counter has started!")

def callback\_number\_counter(self, msg):

self.counter\_ += msg.data

self.get\_logger().info(f"{self.counter\_}")

counter\_msg = Int16()

counter\_msg.data = self.counter\_

self.counter\_publisher\_.publish(counter\_msg)

def callback\_reset(self,request,response):

if request.data:

self.counter\_=0

self.get\_logger().info("count reset")

response.success=True

response.message="count reset sucessfully"

else:

response.success=False

response.message="count reset unsucessfully"

return response

def main(args=None):

rclpy.init(args=args)

#Code goes here

node = NumberCounterNode()

rclpy.spin(node)

rclpy.shutdown()

if \_\_name\_\_ == "\_\_main\_\_":

main()