Day 25 CS570

Quiz on Protocols, Gyros, PIDControllers, and RobotContainers

Name: _____

HC: _____

1. (10 pts) Write code for a Protocol called `Motor` theis protocol should have one method called `set_raw_output`.

2. (10 pts) Write a `run` method for an autonomous routine that asks a robot to move forward 2 meters. Use a PID controller to make sure that the robot moves forward the proper distance. You can assume that the PIDController and other necessary objects were made in the `init` method.

3. (10 pts.) Fill in the blanks to make this **RobotContainer** work:

```python
import wpilib

from autoroutine import AutoRoutine
from drivestraight import DriveStraight
from drivetrain import Drivetrain
from gyroturn import GyroTurn


class RobotContainer:

    def __init__(self) -> None:
        self.controller = wpilib.Joystick(0)
        # Create SmartDashboard chooser for autonomous routines
        self.chooser = wpilib._____()
        self.drivetrain = Drivetrain()
        self._configure()

    def _configure(self):
        self.chooser._____("Twist 90 degrees", GyroTurn(self.drivetrain, 90))
        self.chooser._____("Go straight 2m", DriveStraight(self.drivetrain, 2))
        wpilib.SmartDashboard._____(self.chooser)

    def get_autonomous(self) -> AutoRoutine:
        return self.chooser._____()
```