66757D Virtual Skills

74 Points

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195 NeoCity Way

```python
#region VEXcode Generated Robot Configuration
import math
import random
from vexcode_vrc import *
from vexcode_vrc.events import get_Task_func

# Brain should be defined by default
brain=Brain()

drivetrain = Drivetrain("drivetrain", 0)
arm_motor = Motor("ArmMotor", 3)
rotation = Rotation("Rotation", 7)
intake_motor = Motor("IntakeMotor", 8)
optical = Optical("Optical", 11)
gps = GPS("GPS", 20)

#endregion VEXcode Generated Robot Configuration
# ------------------------------------------
#
#   Project:      VEXcode Project
#   Author:       Gavin Ramos
#   Created:
#   Description:  VEXcode VR Python Project
#
# ------------------------------------------


# Initial Configuration ran before autonomous
def InitialConf():
    arm_motor.set_velocity(300, PERCENT)
    intake_motor.set_velocity(500, PERCENT)
    drivetrain.set_drive_velocity(300, PERCENT)
    drivetrain.set_turn_velocity(300, PERCENT)
    drivetrain.set_heading(0, DEGREES)


def main():
    InitialConf()
    arm_motor.spin(FORWARD)
    drivetrain.drive_for(FORWARD, 58, INCHES)
    drivetrain.turn_to_heading(270, DEGREES)
    # shoot red   ------------------------------ Shoots the Matchload using for as to
        not go too far in the code
    intake_motor.spin_for(REVERSE, 1.2, TURNS)
    # intake ----------------------------------- Intakes Field Load
    intake_motor.spin(FORWARD)
    drivetrain.turn_to_heading(25, DEGREES)
    drivetrain.turn_to_heading(270, DEGREES)
    # Shoot Red -------------------------------- Shoots the Field Load
    intake_motor.spin_for(REVERSE, 1.2, TURNS)
    arm_motor.stop()
    # intake
    intake_motor.spin(FORWARD)
    drivetrain.turn_to_heading(90, DEGREES)
    drivetrain.drive_for(FORWARD, 4, INCHES)
    drivetrain.turn_to_heading(45, DEGREES)
    drivetrain.drive_for(FORWARD, 20, INCHES)
    drivetrain.turn_to_heading(90, DEGREES)
    # shoot
    intake_motor.spin_for(REVERSE, 2, TURNS, wait=False)
    drivetrain.drive_for(FORWARD, 27, INCHES)
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drivetrain.drive_for(REVERSE, 23, INCHES)
drivetrain.turn_to_heading(160, DEGREES)
# intake
intake_motor.spin(FORWARD)
drivetrain.drive_for(FORWARD, 7, INCHES)
drivetrain.drive_for(REVERSE, 2, INCHES)
drivetrain.turn_to_heading(93, DEGREES)
# shoot
intake_motor.spin_for(REVERSE, 2, TURNS, wait=False)
drivetrain.drive_for(FORWARD, 27, INCHES)
drivetrain.drive_for(REVERSE, 32, INCHES)
# intake
intake_motor.spin(FORWARD)
drivetrain.turn_to_heading(35, DEGREES)
drivetrain.drive_for(FORWARD, 10, INCHES)
drivetrain.drive_for(REVERSE, 5, INCHES)
drivetrain.turn_to_heading(100, DEGREES)
# shoot
intake_motor.spin_for(REVERSE, 2, TURNS, wait=False)
drivetrain.drive_for(FORWARD, 25, INCHES)
drivetrain.drive_for(REVERSE, 25, INCHES)
drivetrain.turn_to_heading(15, DEGREES)
# intake
intake_motor.spin(FORWARD)
drivetrain.drive_for(FORWARD, 25, INCHES)
drivetrain.drive_for(REVERSE, 45, INCHES)
drivetrain.turn_to_heading(90, DEGREES)
# shoot
intake_motor.spin_for(REVERSE, 2, TURNS, wait=False)
drivetrain.drive_for(FORWARD, 27, INCHES)
drivetrain.drive_for(REVERSE, 20, INCHES)
drivetrain.turn_to_heading(160, DEGREES)
intake_motor.spin(FORWARD)
drivetrain.drive_for(FORWARD, 5, INCHES)
drivetrain.drive_for(REVERSE, 5, INCHES)
drivetrain.turn_to_heading(100, DEGREES)
# shoot
intake_motor.spin_for(REVERSE, 2, TURNS, wait=False)
drivetrain.drive_for(FORWARD, 25, INCHES)
drivetrain.drive_for(REVERSE, 20, INCHES)
# intake
intake_motor.spin(FORWARD)
drivetrain.turn_to_heading(175, DEGREES)
drivetrain.drive_for(FORWARD, 23, INCHES)
drivetrain.drive_for(REVERSE, 15, INCHES)
drivetrain.turn_to_heading(90, DEGREES)
# Shoot ---------------------------------- Goes to the Other Side
intake_motor.spin(REVERSE)
drivetrain.drive_for(FORWARD, 25, INCHES)
drivetrain.drive_for(REVERSE, 1, INCHES)
# Intake
intake_motor.spin(FORWARD)
drivetrain.turn_to_heading(135, DEGREES)
drivetrain.drive_for(FORWARD, 58, INCHES)
drivetrain.turn_to_heading(10, DEGREES)
# Shoots directly on goalzone
intake_motor.spin(REVERSE)
drivetrain.drive_for(FORWARD, 16, INCHES)
wait(0.7, SECONDS)
drivetrain.drive_for(REVERSE, 3, INCHES)
drivetrain.turn_to_heading(230, DEGREES)
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drivetrain.drive_for(FORWARD, 25, INCHES)
# intake
intake_motor.spin(FORWARD)
drivetrain.turn_to_heading(270, DEGREES)
drivetrain.drive_for(FORWARD, 30, INCHES)
drivetrain.drive_for(REVERSE, 35, INCHES)
drivetrain.turn_to_heading(15, DEGREES)
# shoot
intake_motor.spin(REVERSE)
drivetrain.drive_for(FORWARD, 20, INCHES)
drivetrain.drive_for(REVERSE, 2, INCHES)
drivetrain.turn_to_heading(270, DEGREES)
# intake ----------------------------------- Moves to Loading Side.
# START LOADS
intake_motor.spin(FORWARD)
drivetrain.drive_for(FORWARD, 80, INCHES)
drivetrain.turn_to_heading(230, DEGREES)
drivetrain.drive_for(FORWARD, 30, INCHES)
drivetrain.drive_for(REVERSE, 55, INCHES)
drivetrain.turn_to_heading(70, DEGREES)
# shoot
intake_motor.spin(REVERSE)
drivetrain.drive_for(FORWARD, 25, INCHES)
drivetrain.drive_for(REVERSE, 25, INCHES)
# intake
intake_motor.spin(FORWARD)
drivetrain.turn_to_heading(220, DEGREES)
drivetrain.drive_for(FORWARD, 55, INCHES)
drivetrain.drive_for(REVERSE, 55, INCHES)
drivetrain.turn_to_heading(80, DEGREES)
# shoot
intake_motor.spin(REVERSE)
drivetrain.drive_for(FORWARD, 25, INCHES)
drivetrain.drive_for(REVERSE, 25, INCHES)
drivetrain.turn_to_heading(220, DEGREES)
# intake
intake_motor.spin(FORWARD)
drivetrain.drive_for(FORWARD, 55, INCHES)
drivetrain.drive_for(REVERSE, 55, INCHES)
drivetrain.turn_to_heading(87, DEGREES)
# shoot
intake_motor.spin(REVERSE)
drivetrain.drive_for(FORWARD, 26, INCHES)
drivetrain.turn_to_heading(315, DEGREES)
# intake
# GOTO TOP ------------------------------- Goes to the top to pick up LZ1
intake_motor.spin(FORWARD)
drivetrain.drive_for(FORWARD, 92, INCHES)
drivetrain.turn_to_heading(77, DEGREES)
drivetrain.drive_for(FORWARD, 97, INCHES)
# Shoot LZ1 (Load Zone 1)
intake_motor.spin(REVERSE)
drivetrain.turn_to_heading(165, DEGREES)
drivetrain.drive_for(FORWARD, 5.5, INCHES)
drivetrain.turn_to_heading(42, DEGREES)
intake_motor.spin(FORWARD)
# Intake OZ1 (Triball opposing LZ1)
drivetrain.drive_for(FORWARD, 10.5, INCHES)
intake_motor.spin(REVERSE)
# Shoot OZ1
drivetrain.turn_to_heading(160, DEGREES)
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    drivetrain.drive_for(FORWARD, 11, INCHES)

# system event handlers
# add 15ms delay to make sure events are registered correctly.
wait(15, MSEC)

# VR threads TEST - Do not delete
vr_thread(main)
```