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Assignment: Team 201B Vex IQ 2022 Slapshot program Line Shooter 03 20221130

Notes: Flakes out after shooting pucks and simple turn left 90 degrees

Project Name: line shooter program 03

Project Type: Blocks

Date: Wed Nov 30 2022

```

when Brain Left button pressed
  set Shooter velocity to 40 %
  spin PuckShaf forward for 17 degrees and don't wait
  spin Shooter forward
  wait 2 seconds
  spin PuckShaf reverse for 20 degrees
  repeat 5
    play note C whole
  Puckshaf out
  wait 1 seconds
  Puckshaf in

when started
  play sound wrong way jared
  RLP purple
  set Shooter velocity to 40 %
  set PuckShaf stopping to brake

define Puckshaf out
  set PuckShaf stopping to hold
  set PuckShaf velocity to 50 %
  set PuckShaf max torque to 50 %
  spin PuckShaf forward for 20 degrees and don't wait

define Puckshaf in
  set PuckShaf stopping to hold
  set PuckShaf velocity to 50 %
  set PuckShaf max torque to 50 %
  spin PuckShaf reverse for 20 degrees and don't wait

when Brain Right button pressed
  drive forward for 20 inches
  turn right for 20 degrees
  spin Arm forward for 200 degrees
  drive reverse for 4 inches
  turn left for 60 degrees
  spin Shooter reverse
  spin PuckShaf reverse for 50 degrees
  spin Arm forward for 190 degrees
  wait 1 seconds
  spin Arm reverse for 180 degrees
  turn right for 20 degrees
  spin Arm forward for 200 degrees
  drive forward for 15 inches
  turn left for 20 degrees
  drive reverse for 4 inches
  drive forward for 4 inches
  Shoot Puckshaf
  play note C whole

when Controller button R Up pressed
  set Shooter velocity to 40 %
  set Shooter max torque to 100 %
  spin Shooter reverse
  wait 3 seconds
  when Controller button R Up released
    spin PuckShaf reverse for 20 stop Shooter
    repeat 5
      play note C whole
    Puckshaf out
    wait 1 seconds
    Puckshaf in
    wait 1 seconds
    play sound headlight on
    turn left for 60 degrees
    drive reverse for 6 inches
    turn right for 60 degrees
    drive reverse for 2 mm

when Controller button R Down pressed
  set Shooter velocity to 100 %
  set Shooter max torque to 100 %
  spin Shooter forward
  wait 3 seconds
  when Controller button R Down released
    stop Shooter

when Controller button E Up pressed
  set Arm velocity to 50 %
  set Arm max torque to 100 %
  spin Arm reverse
  wait 3 seconds
  when Controller button E Up released
    set Arm stopping to hold
    stop Arm

when Controller button E Down pressed
  set Arm velocity to 50 %
  set Arm max torque to 100 %
  spin Arm forward
  wait 3 seconds
  when Controller button E Down released
    set Arm stopping to hold
    stop Arm

when Controller button F Up pressed
  set Combine velocity to 100 %
  set Combine max torque to 100 %
  spin Combine reverse
  wait 3 seconds
  when Controller button F Up released
    stop Combine

when Controller button L Up pressed
  set PuckShaf velocity to 50 %
  set PuckShaf max torque to 100 %
  spin PuckShaf reverse
  wait 3 seconds
  when Controller button L Up released
    set PuckShaf stopping to hold
    stop PuckShaf

Move arm up out of way
Shoot pucks
Shoot Puckshaf
Go get yellow
  
```

```
when Brain Left button pressed
  set Shooter velocity to 40 %
  spin PuckShelf forward for 17 degrees and don't wait
  spin Shooter forward
  wait 5 seconds
  spin PuckShelf reverse for 20 degrees
  repeat 5
    play note C whole
    Puckshelf out
    wait 1 seconds
    Puckshelf in
```

The image shows a Scratch script for a Vex IQ line shooter program. The script starts with a yellow 'when Brain Left button pressed' block. This is followed by a blue 'set Shooter velocity to 40 %' block. Then, there are two blue 'spin' blocks: 'spin PuckShelf forward for 17 degrees and don't wait' and 'spin Shooter forward'. This is followed by an orange 'wait 5 seconds' block. Next is a blue 'spin PuckShelf reverse for 20 degrees' block. Finally, there is an orange 'repeat 5' block containing a purple 'play note C whole' block, a pink 'Puckshelf out' block, an orange 'wait 1 seconds' block, and a pink 'Puckshelf in' block.

```
define Shoot Puckshelf
  set Shooter velocity to 40 %
  spin PuckShelf forward for 17 degrees and don't wait
  spin Shooter forward
  wait .1 seconds
  spin PuckShelf reverse for 20 degrees
  repeat 5
    play note C whole
    Puckshelf out
    wait 1 seconds
    Puckshelf in
```

when started

play sound wrong way (slow)

R.I.P purple

set Shooter velocity to 40 %

set PuckShelf stopping to brake

define Puckshelf out

set PuckShelf stopping to hold

set PuckShelf velocity to 50 %

set PuckShelf max torque to 50 %

spin PuckShelf forward for 70 degrees and don't wait

```
when Brain Right button pressed
  drive forward for 26 inches
  turn right for 40 degrees
  spin Arm forward for 200 degrees
  drive reverse for 6 inches
  turn left for 40 degrees
  spin Shooter reverse
  spin PuckShelf reverse for 10 degrees
  spin Arm forward for 190 degrees
  wait 1 seconds
  spin Arm reverse for 190 degrees
  turn right for 20 degrees
  spin Arm forward for 500 degrees
  drive forward for 18 inches
  turn left for 20 degrees
  drive reverse for 4 inches
  drive forward for 4 inches
  Shoot Puckshelf
  play note C whole
```

```
spin Arm forward for 390 degrees
wait .5 seconds
spin Arm forward for -390 degrees
wait .1 seconds
turn right for -20 degrees
drive forward for 18 inches
turn right for 140 degrees
spin Arm forward for 390 degrees
wait .5 seconds
spin Arm forward for -390 degrees
turn left for 40 degrees
drive reverse for 39 inches
turn left for 100 degrees
drive reverse for 15 inches
turn left for 90 degrees
drive reverse for 5 inches
play note B quarter
play sound tada
```



```

drive forward for 27 inches ▶
turn right for 75 degrees ▶
spin Arm forward for 150 degrees ▶
drive reverse for 5 inches ▶
spin Arm forward for 50 degrees ▶
turn left for 20 degrees ▶
drive reverse for 2 inches ▶
spin Shooter forward
spin PuckShelf forward for 17 degrees ◀ and don't wait
turn left for 35 degrees ▶
spin Arm forward for 210 degrees ▶
wait 1 seconds
spin Arm reverse for 210 degrees ▶
turn right for 35 degrees ▶
spin Arm forward for 360 degrees ▶
turn left for 10 degrees ▶
drive forward for 19 inches ▶
turn left for 25 degrees ▶
set Shooter velocity to 45 %
spin PuckShelf forward for 17 degrees ◀ and don't wait
spin Shooter forward
wait .1 seconds
spin PuckShelf reverse for 20 degrees ▶
repeat 5
  play note C whole
  Puckshelf out
  wait 1 seconds
  Puckshelf in
  wait 1 seconds
  play sound headlight on
turn left for 90 degrees ▶
drive reverse for 9 inches ▶
turn right for 90 degrees ▶
drive reverse for 2 mm ▶

```

define Puckshelf in

set PuckShelf stopping to hold

set PuckShelf velocity to 50 %

set PuckShelf max torque to 50 %

spin PuckShelf reverse for 70 degrees and don't wait

Move arm up out of way



Shoot pucks

Shoot Puckshelf

turn left for 90 degrees ▶

play note C half

drive reverse for 7 inches ▶

play note C quarter

turn right for 45 degrees ▶

play sound tada

when Controller button

R Up

pressed

set

Shooter

velocity to

40

%

set

Shooter

max torque to

100

%

spin

Shooter

reverse

when Controller button

R Up

released

stop

Shooter

when Controller button

R Down

pressed

set

Shooter

velocity to

100

%

set

Shooter

max torque to

100

%

spin

Shooter

forward

Go get yellow

when Controller button

R Down

released

stop

Shooter

when Controller button

E Up

pressed

set

Arm

velocity to

50

%

set

Arm

max torque to

100

%

spin

Arm

reverse

when Controller button E Up released

set Arm stopping to hold

stop Arm

when Controller button

E Down

pressed

set

Arm

velocity to

50

%

set

Arm

max torque to

100

%

spin

Arm

forward

when Controller button E Down released

set Arm stopping to hold

stop Arm

when Controller button **F Up** **pressed**

set **Combine** velocity to **100** **%**

set **Combine** max torque to **100** **%**

spin **Combine** **reverse**

when Controller button

F Up

released

stop

Combine

when Controller button

L Up

pressed

set

PuckShelf

velocity to

50

%

set

PuckShelf

max torque to

100

%

spin

PuckShelf

reverse

when Controller button

L Up

released

set

PuckShelf

stopping to

hold

stop

PuckShelf