File: C:\Users\M4rc05\Documents\Vex\Starstruck\2223-G\4-5-2017\Autonomous Recording\AutonomousRecording.c

```
#pragma config(Sensor, dgtl1,  leftEncoder,    sensorQuadEncoder)
#pragma config(Sensor, dgtl3,  rightEncoder,   sensorQuadEncoder)
#pragma config(Motor,  port1,           RightMotor,    tmotorVex393_HBridge, openLoop, driveRight, encoderPort, dgtl3)
#pragma config(Motor,  port10,          LeftMotor,     tmotorVex393_HBridge, openLoop, reversed, driveLeft, encoderPort, dgtl1)
#pragma config(DatalogSeries, 0, "leftEncoder", Sensors, Sensor, dgtl1, 10)
#pragma config(DatalogSeries, 1, "rightEncoder", Sensors, Sensor, dgtl3, 10)
#pragma config(DatalogSeries, 2, "LeftMotor", Motors, MotorPower, port10, 10)
#pragma config(DatalogSeries, 3, "RightMotor", Motors, MotorPower, port1, 10)
//*!!Code automatically generated by 'ROBOTC' configuration wizard               !!*//

short baseLeft[1000], baseRight[1000], encoderLeft[1000], encoderRight[1000];
int threshold = 15, buttonToggleState = 0, buttonPressed = 0;

task main(){
  datalogClear();
  for(int c = 0; true;){

    //Toggle button
    if( vexRT[Btn8R]){
      if(!buttonPressed){
        buttonToggleState = 1 - buttonToggleState;
        buttonPressed = 1;
      }
    }
    else buttonPressed = 0;

    //Control the base taking into account the threshold
    motor[LeftMotor] = (vexRT[Ch2]>threshold  || vexRT[Ch2]< -(threshold) || vexRT[Ch1]>threshold || vexRT[Ch1]< -(threshold))? (vexRT[Ch2] - vexRT[Ch1]) : 0;
    motor[RightMotor] = (vexRT[Ch2]>threshold  || vexRT[Ch2]< -(threshold) || vexRT[Ch1]>threshold || vexRT[Ch1]< -(threshold)) ? (vexRT[Ch2] + vexRT[Ch1]) : 0;

    //Record Values only if button 8 right was pressed
    if (buttonToggleState){
      c++;
      baseLeft[c] =  (vexRT[Ch2]>threshold  || vexRT[Ch2]< -(threshold) || vexRT[Ch1]>threshold || vexRT[Ch1]< -(threshold)) ? (vexRT[Ch2] - vexRT[Ch1]) : 0;
      baseRight[c] = (vexRT[Ch2]>threshold  || vexRT[Ch2]< -(threshold) || vexRT[Ch1]>threshold || vexRT[Ch1]< -(threshold)) ? (vexRT[Ch2] + vexRT[Ch1]) : 0;
      encoderLeft[c] = SensorValue[leftEncoder];  encoderRight[c] = SensorValue[rightEncoder];  //Read encoder values
    }

    //Do the autonomous after pressing button 7 left
    if(vexRT[Btn7L] == 1){
```

```
      SensorValue[leftEncoder] = 0;
      SensorValue[rightEncoder] = 0;
      for(int d = 0; d < sizeof(baseLeft)/sizeof(short); d++){
        for(int e = 0; e<10; e++){
          motor[LeftMotor] = SensorValue[leftEncoder] != encoderLeft[d] ? baseLeft[d] : 0;
          motor[RightMotor] = SensorValue[rightEncoder] != encoderRight[d]  ? baseRight[d] : 0;
          wait1Msec(1);
        }
      }
    }

    //End the loop by waiting 20 milliseconds
    wait1Msec(10);
  }
}
```