Project Documentation

File: CtrlX_Module_01_2025.project

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Profile: ctrlX PLC 1.20.7

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1 POU: PRG_Student

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(*
       Practical Work 01 / Write your first PLC Code here

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       Project:        HEVS Pack 2022
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       Date:               2025 January 29
*)
PROGRAM PRG_Student
VAR
    iCount : UINT := 3;
    startFromNodeRed : BOOL;
    stopFromNodeRed : BOOL;

    amplitude : REAL := 10.0;
    frequency_Hz : REAL := 0.1;
    sampleTime_s : REAL := 0.04;
    t_s : REAL := 0.0;
    sinusSignal : REAL;

    rTrigStart : R_TRIG;
    rTrigStop : R_TRIG;
    tonConveyorStop : TON;
END_VAR

VAR CONSTANT
    PI : REAL := 3.14159;
END_VAR
```

```
IF iCount >= 100 THEN
    iCount := 0;
END_IF;

iCount := iCount + 1;

// Sinus generator
t_s := t_s + sampleTime_s;
sinusSignal := amplitude * SIN(2 * PI * frequency_Hz * t_s);

// Start conveyor
IF rTrigStart.Q THEN
    GVL_Abox.uaAboxInterface.uaDigitalOut.Output_0_4 := TRUE;
END_IF

// Stop conveyor
IF rTrigStop.Q OR tonConveyorStop.Q THEN
    GVL_Abox.uaAboxInterface.uaDigitalOut.Output_0_4 := FALSE;
END_IF
```

```
21
22      // Call function block
23      rTrigStart ( CLK := startFromNodeRed ) ;
24      rTrigStop ( CLK := stopFromNodeRed ) ;
25      tonConveyorStop ( IN  :=  GVL_Abox . uaAboxInterface . uaDigitalOut . Output_0_4 ,
26                        PT  :=  T#5S ) ;
27
```