

MINISTERUL EDUCAȚIEI NAȚIONALE  
**UNIVERSITATEA**  
***Petru Maior***  
T Â R G U - M U R E Ș

Universitatea „Petru Maior” din Târgu-Mureș  
Facultatea de Inginerie  
Catedra de Inginerie Electrică

# **Proiect Sisteme SCADA**

## **Simularea unui Protocol MODBUS RTU**

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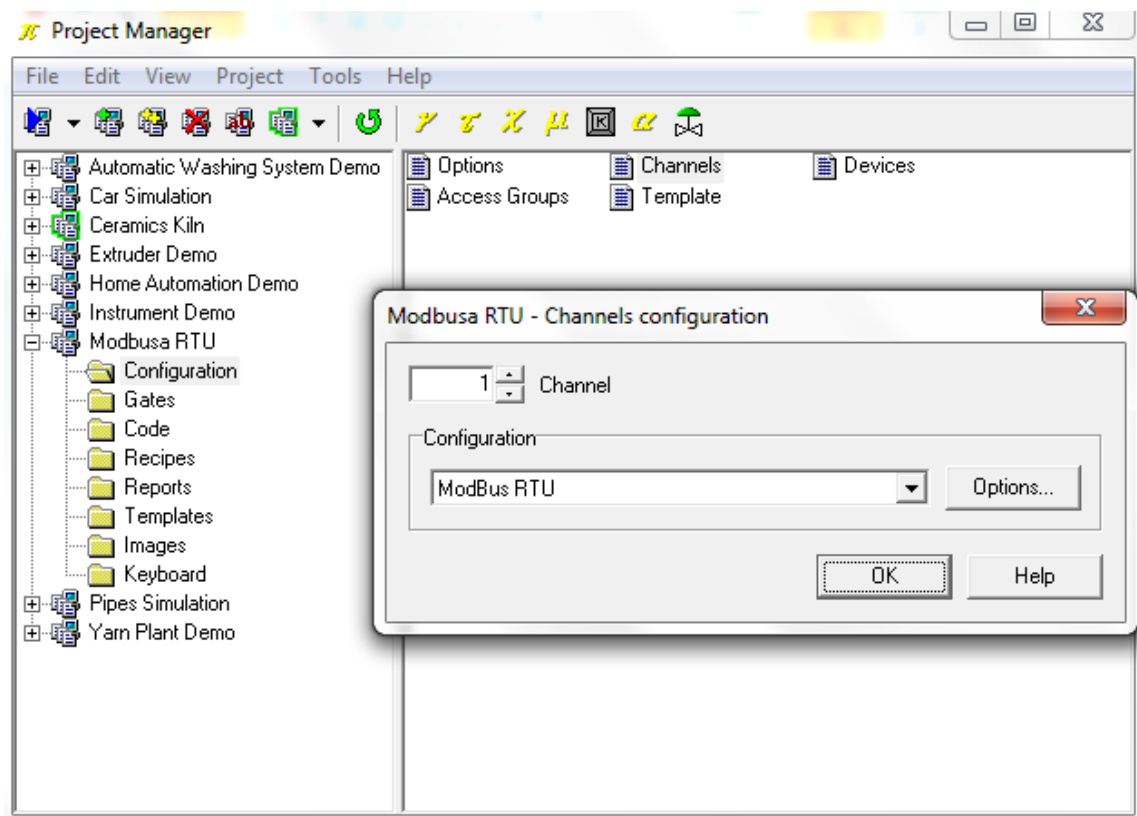
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**Master SACPI**  
**Anul**  
**I**

# DESCRIEREA PROIECTULUI

In acest proiect am simulat un Protocol MODBUS RTU cu ajutorul programului WINLOG SCADA LITE .

Am creat un canal - **Modbus RTU**



Am creat **Portile Numerice** :

- Temp1, Temp2, SetPoint1, SetPoint2, Output1 si Output2

Gate Builder - modbusa rtu

File Edit View Help

	Channel	Device	Gate ID	N ID	Address	Description	Measure	Variable type	Tolerance	Min. value	Max. value	Start value	Type	ID	N ID	Measured val. 1	En
1	1	2	Temp	2	3:005	Temperatura - PV - valoare masurata - TestDevice2	°C	S_WORD		0	0	0				0	0
2	1	1	SP	1	3:010	Temperatura - SP - SetPoint Value - TestDevice1	°C	S_WORD		0	0	0				0	0
3	1	1	OUT	1	3:015	Control Output - OP - Value - TestDevice1	%	U_WORD		0	0	0				0	0
4	1	2	SP	2	3:010	Temperatura - SP - Setpoint value - TestDevice2	°C	S_WORD		0	0	0				0	0
5	1	2	OUT	2	3:015	Control Output - OP - Value - TestDevice2	%	U_WORD		0	0	0				0	0
6	1	1	Temp	1	3:005	Temperatura - PV - Valoare masurata - TestDevice1	°C	S_WORD		0	0	0				0	0

Numerical gates

Cu ajutorul optiunii Gate Builder:

Gate Builder - modbusa rtu

File Edit View Help

	Channel	Device	Gate ID	N ID	Address	Description	Measure	Variable type	Tolerance	Min. value	Max. value	Start value	Type	ID	N ID	Measured val. 1	Engineering val. 1	Measured val. 2	Engineering val. 2	Decimal digits	Sample	Sample freq.
1	1	2	Temp	2	3:005	Temperatura - PV - valoare masurata - °C	°C	S_WORD		0	0	0				0	0	1	1	1	Always	1
2	1	1	SP	1	3:010	Temperatura - SP - SetPoint Value - T1 °C	°C	S_WORD		0	0	0				0	0	1	1	1	Always	1
3	1	1	OUT	1	3:015	Control Output - OP - Value - TestDev1 %	%	U_WORD		0	0	0				0	0	1	1	1	Always	1
4	1	2	SP	2	3:010	Temperatura - SP - Setpoint value - T2 °C	°C	S_WORD		0	0	0				0	0	1	1	1	Always	1
5	1	2	OUT	2	3:015	Control Output - OP - Value - TestDev1 %	%	U_WORD		0	0	0				0	0	1	1	1	Always	1
6	1	1	Temp	1	3:005	Temperatura - PV - Valoare masurata - °C	°C	S_WORD		0	0	0				0	0	1	1	1	Always	1

Numerical gates

General Sampling Value Conversion Tolerance

1 Channel → Protocol: **ModBus RTU**

2 Device

3:005 Address

Always Sample Read block

1 Sample frequency (s)

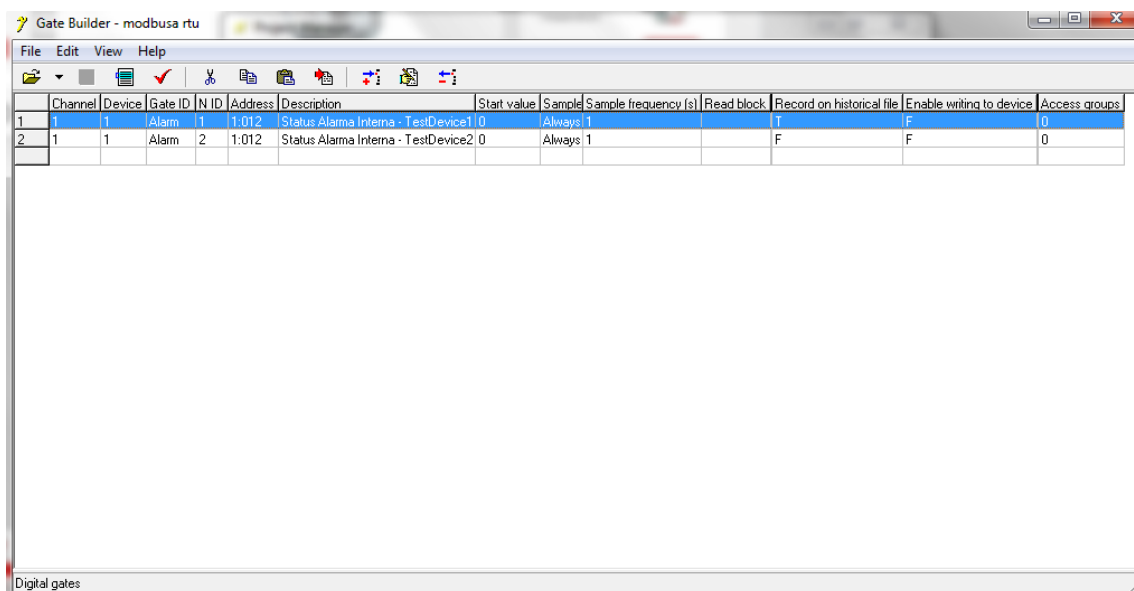
Ok Cancel Help

Numerical gates

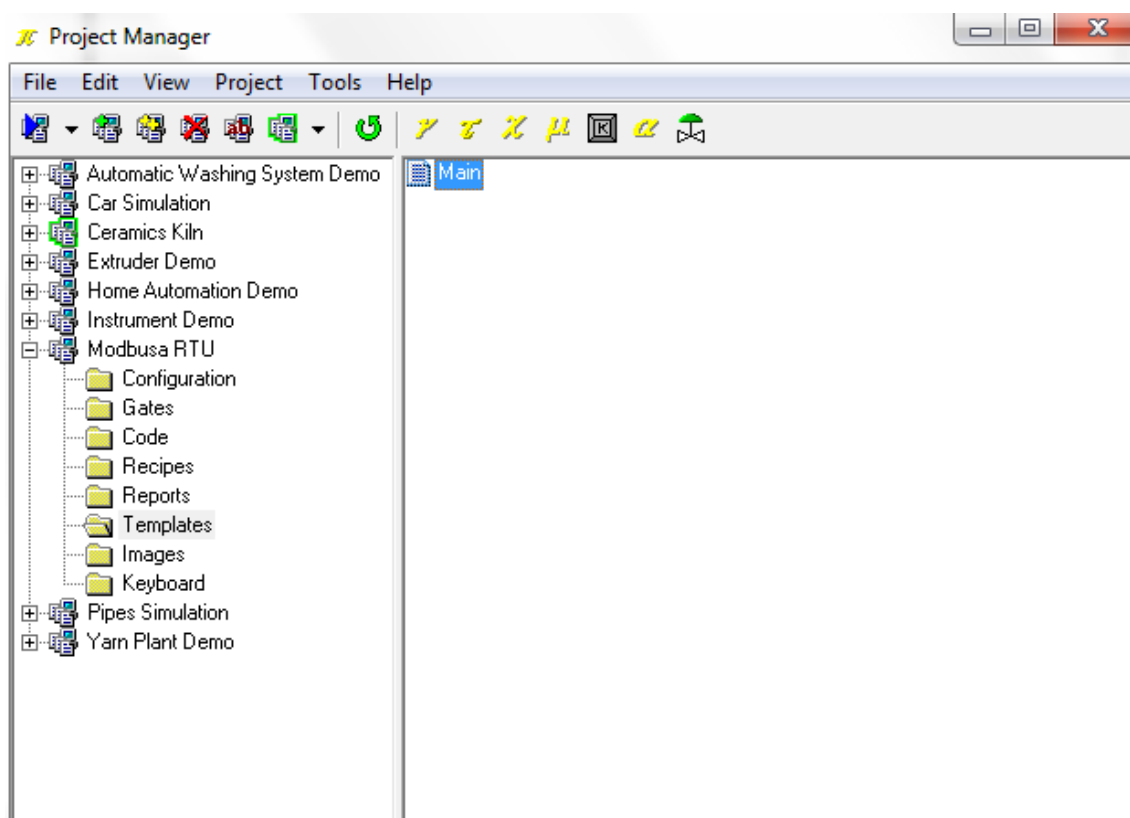
RO 19:47

Am creat Portile Digitale pentru Alarmer:

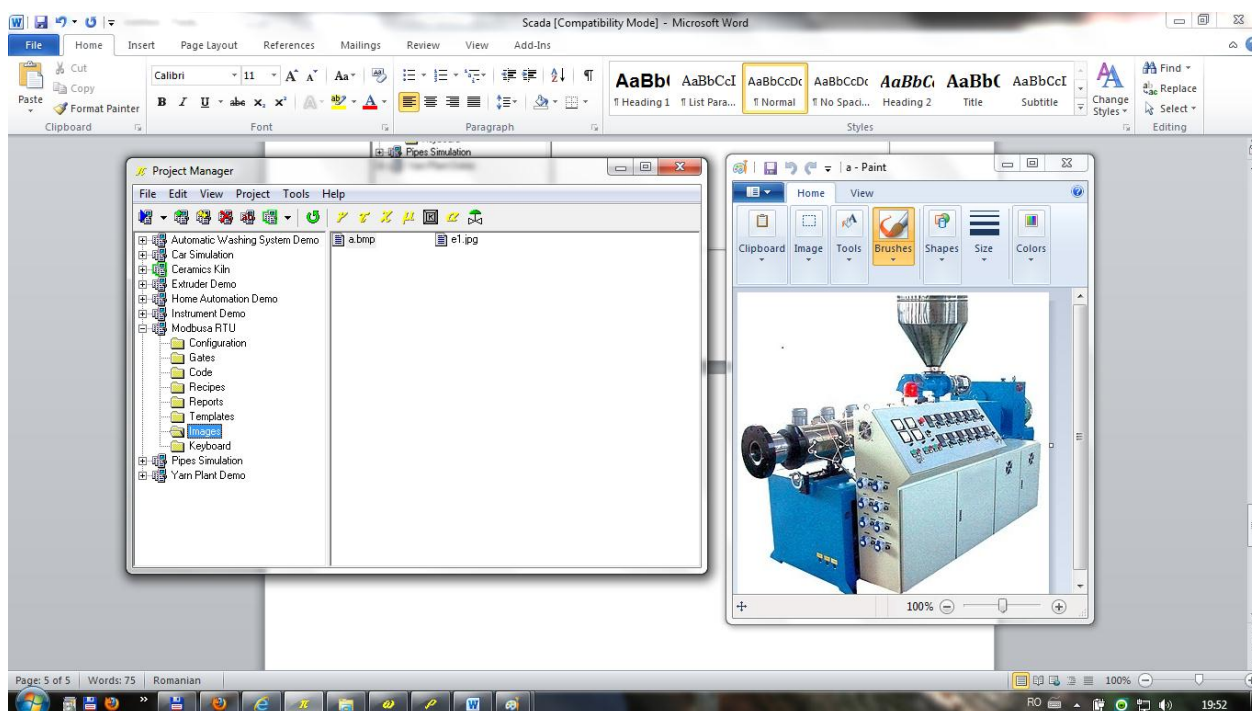
- Alarma1 si Alarma2



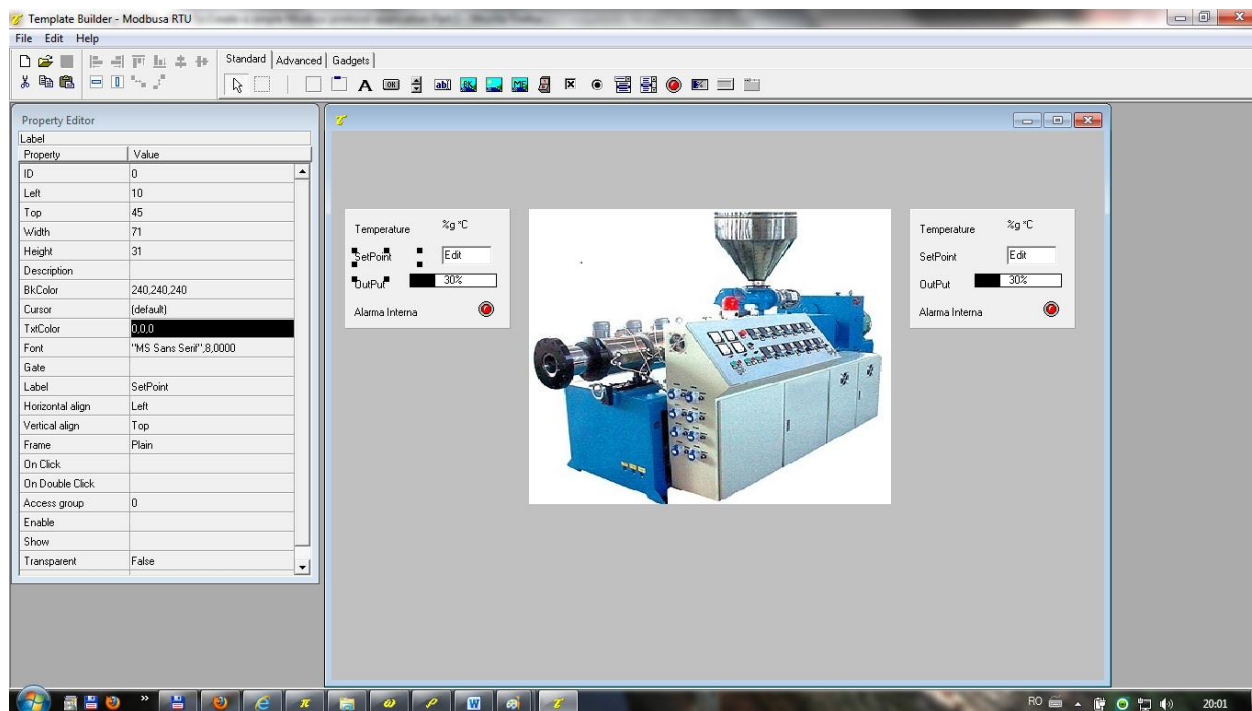
Iar apoi am creat Template-ul proiectului (Main):



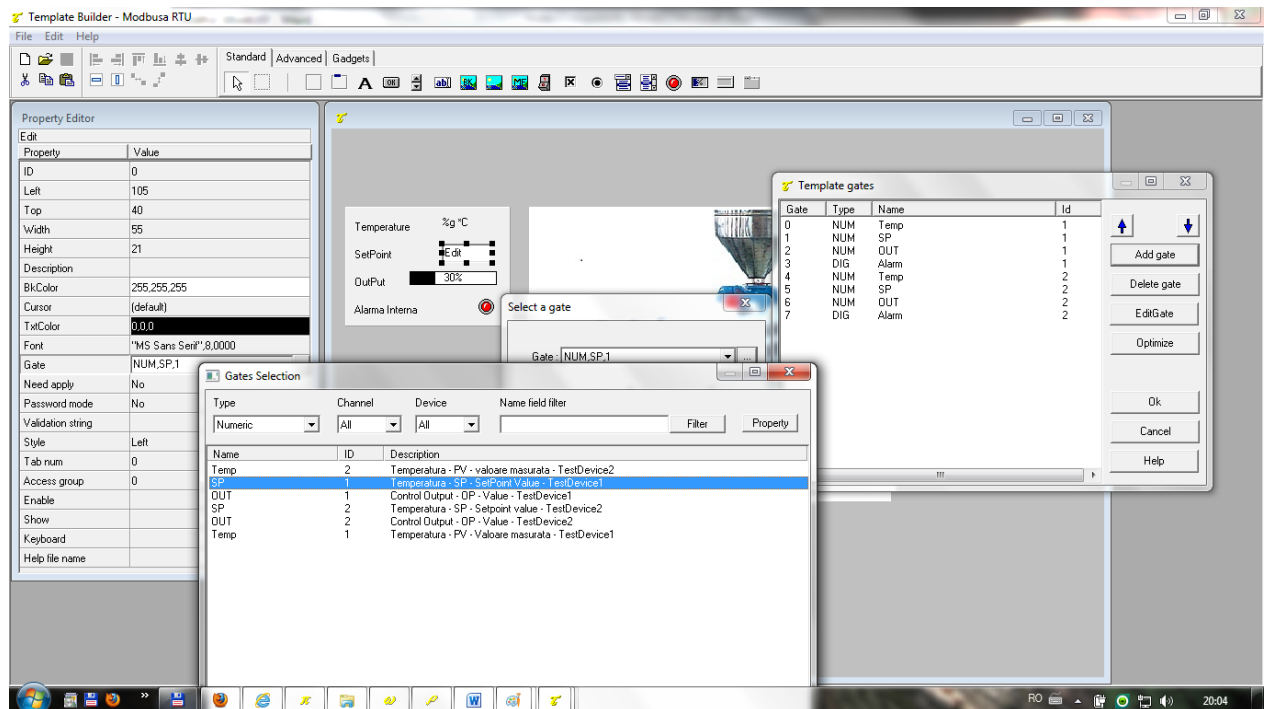
Unde am adugat poza unui extruder :



In Template am mai adugat 2 meniuri aferente celor 8 porti digitale si numerice:



Pentru fiecare optiune am atasat o poarta creata anterior:



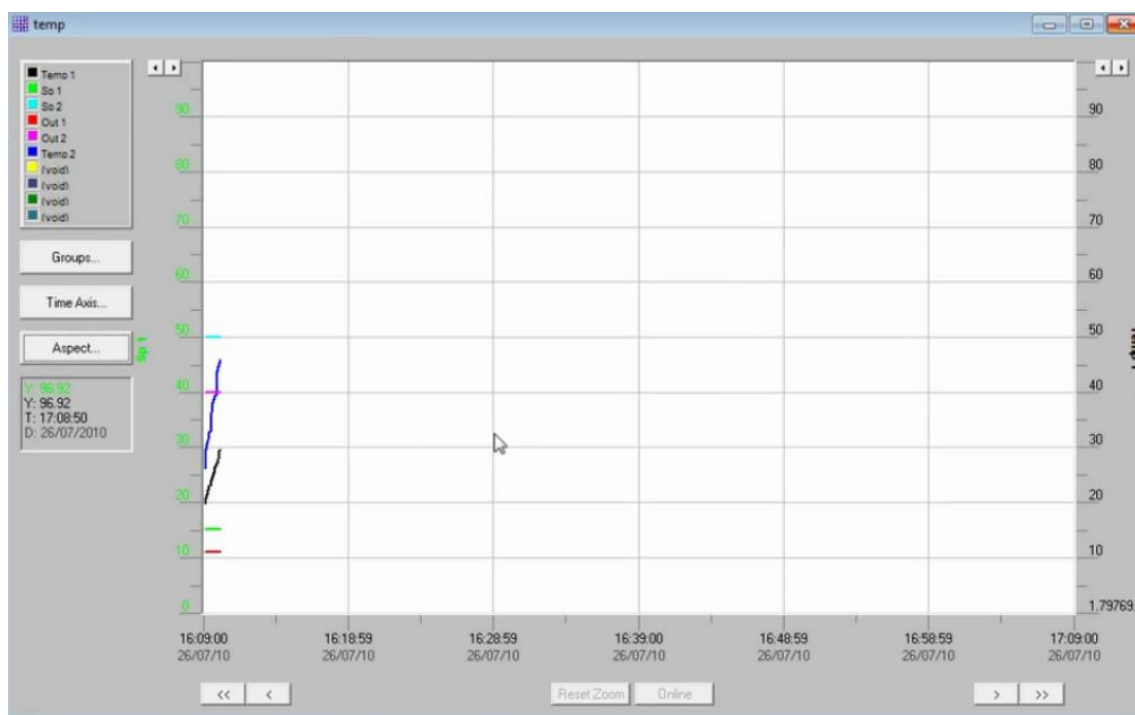
Template-ul finalizat l-am deschis cu ajutorul aplicatiei “Runtime” inclusa in programul Winlog SCADA) :



Pentru simularea in Timp REAL trebuie conectat la portul calculatorului dispozitivul aferent proiectului, din aceasta cauza proiectul apare sub icoanele de forma



Odata conectat dispozitivul se poate face simularea grafica de forma :



Optiune care se poate accesa din meniul Supervision -> Charts.

Multumesc !!!