

Final conference May 18th presentation

Work group assessments

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agenda

- Short Explanation of the first Euriac project
- The reason that we want to have an assessment
- Working task for the people to think about an assessment
 - Discussion and an example
- Presenting the test assessment for the unit robotics
- Questions

Starting first project

- Questionnaire in the industry
- In the beginning choosing 4 work fields for units
 - Working with sensors
 - Working with frequency controllers
 - Working with analogue in and outputs
 - Working with safety systems
- Testing the units
- Problem given a grade to the unit

From work tasks to units of learning outcomes

- 1 professional work task from the world of work are used as the basis for designing the units
- For Example connecting and installing a frequency controller on a 3 phase motor

Definition of the learning outcomes

" Statement of what a learner knows, understands and is able to do after a learning process has ended"

Result after the first tests

- Units are working, but we must have a way to give the students feedback.
- Step 2 prepare an assessment that we can all use

The way to the assessment

- Description of the unit handles 3 (fields)
 - Knowledge
 - Skills
 - Competences

- First test faze only a theoretical test and an observation
 - Results were invalid for a good mark

description of the 3 fields

- Knowledge
 - Theoretical or based on facts
- Skills
 - Ability to apply knowledge and proven experience to accomplish tasks and solve problems. According to the European qualifications framework skills are described as cognitive.
 - Involving the use of logical, intuitive and creative thinking or practical involving manual skill and the use of methods, materials, tools and equipment.
- Competences
 - Proven ability to use knowledge, skills and personal, social and methodological abilities, in work or study situations and in professional and personal development. According to the European qualifications framework, competence is described as responsibility and independence.

Work task about the making of an assessment

Example

- Case: Flower or vegetable garden.
We have some students working in the garden and we must give them an assessment.
The assessment must contain knowledge, skills and competences
- Question to you ; how to assess knowledge, skills and competences?

Procedure

- discuss in small groups what you would put in the assessment.

- **Examples for knowledge**
- When can you plant your plants or vegetables?
- How to plant them.
- What kind of environment do they need?

- **Examples for Skills**
- What kind of tools do they use?
- How do they use the tools?

- **Examples for competences**
- How do they treat the garden?
- How do they communicate with the owner?
 - Does the person give advice to the owner?
 - Is he discussing with the owner about a good solution?
- Is he planning the right actions?
- Is he able to make a plan for the garden?

Final idea of the EUCVET group Automation

A description for the 3 fields

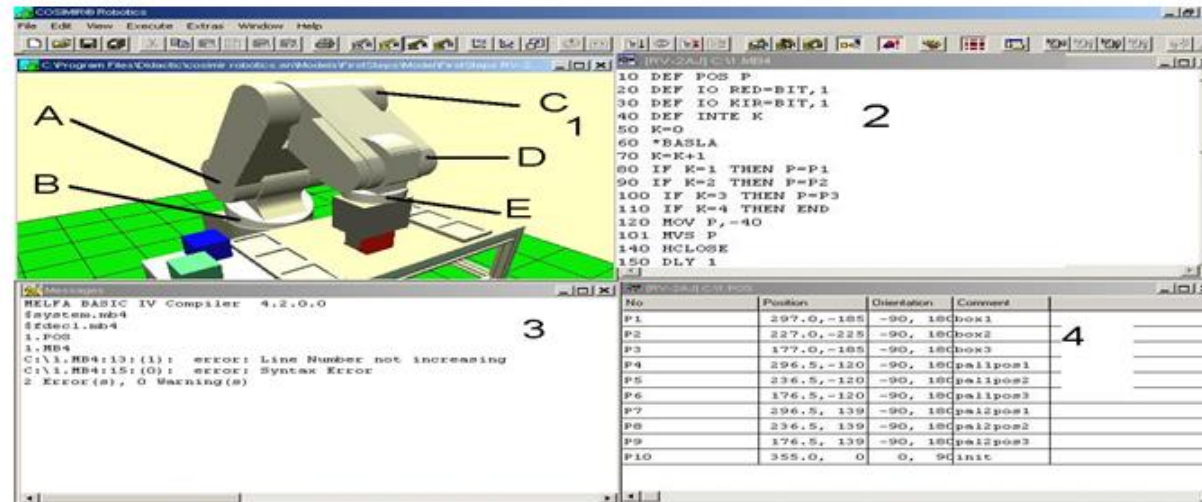
- Knowledge
 - Theoretical test
- Skills
 - Matrix for the robotics task
- Competences
 - Matrix of the 3 main competences

EUCVET TEST MOBILITY (05-22 APRIL 2016) EXAMINATION

NAME :
SURNAME :
SCHOOL :
COUNTRY :

TIME : 40 minutes.

1. Which one is Robot programming software?
- a. Cosimir Factory
 - b. Cosimir Robotics
 - c. Cosirop
 - d. Command Programing



The screenshot shows the COSMIR Robotics software interface. It includes a 3D model of a robotic arm with labels A, B, C1, D, and E. The code editor displays the following program:

```

10 DEF POS P
20 DEF IO RED=BIT,1
30 DEF IO KIR=BIT,1
40 DEF INTE K
50 K=0
60 *BASLA
70 K=K+1
80 IF K=1 THEN P=P1
90 IF K=2 THEN P=P2
100 IF K=3 THEN P=P3
110 IF K=4 THEN END
120 MOV P,-40
101 MVS P
140 HCLOSE
150 DLY 1

```

The message window shows the following error messages:

```

MELFA BASIC IV Compiler 4.2.0.0
SayCom.nb4
$ERR01.nb4
1.POS
1.NB4
C:\1.NB4:13: (1): error: Line Number not increasing
C:\1.NB4:15: (0): error: Syntax Error
2 Error(s), 0 Warning(s)

```

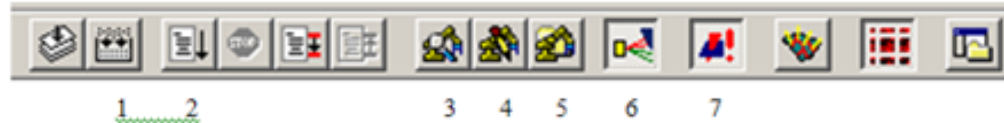
The bottom right pane shows a table of robot positions:

No	Position	Distation	Comment
P1	297.0,-185	-90, 180	box1
P2	227.0,-225	-90, 180	box2
P3	177.0,-185	-90, 180	box3
P4	296.5,-120	-90, 180	pal1pos1
P5	236.5,-120	-90, 180	pal1pos2
P6	176.5,-120	-90, 180	pal1pos3
P7	296.5, 139	-90, 180	pal2pos1
P8	236.5, 139	-90, 180	pal2pos2
P9	176.5, 139	-90, 180	pal2pos3
P10	355.0, 0	0, 90	init

2. Look at the screen above. Which one is the robot position window?
- a. 1
 - b. 2
 - c. 3
 - d. 4
3. Look at the screen above. Which one is the robot workcell window?
- a. 1
 - b. 2
 - c. 3
 - d. 4

8. What is the function of the action in simulation window while pressing SHIFT button with pressing the left mouse button?

- a. Zoom b. Rotate c. Move d. None



9. Look at the tool bar above. which one is the **Model Explorer** button that opens information window about robots at workcell, objects, inputs and outputs?

- a. 6 b. 5 c. 4 d. 3

10. Which one is the **Model Libraries** button that adds things like robots, objects, assembling unit to workcell?

- a. 7 b. 6 c. 5 d. 4

11. Which one is the **Compile** button in simulation?

- a. 1 b. 2 c. 3 d. 4

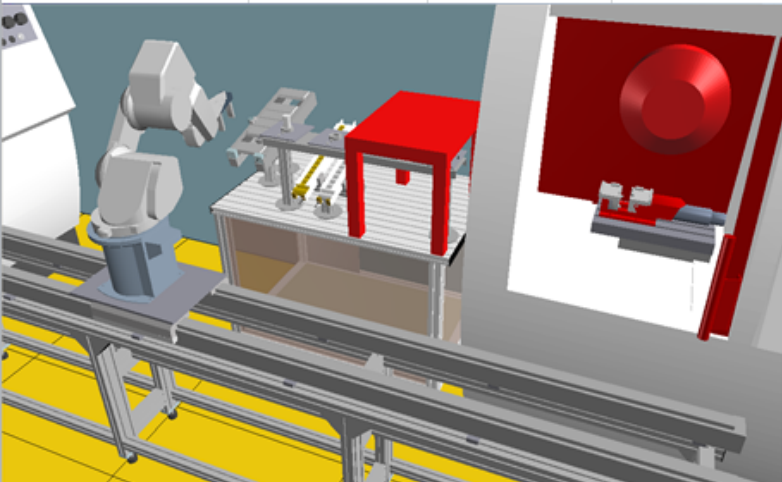
12. Which button do we have to press for starting simulation program cycle?

- a. 4 b. 3 c. 2 d. 1

13. What is the unit of 2 at the command **DLY 2**?

- a. second b. hour c. milisecond d. split-second

Real test for the unit robotics

TASK			
<ul style="list-style-type: none"> Take 3 cylinders from feeder 1 and take 3 cylinders from feeder 2. Put them in the correct position on the table, according with the pattern			
			
	YES	NO	
START ROBOT			STUDENT:
START THE PROGRAM			MARK
MAKE CONNECTIONS. ROBOT--COMPUTER			
CREATING PROGRAM			
PROGRAM SIMULATION			
UPLOAD PROGRAM TO THE ROBOT			
TEACH & AUTO MODE WORKING			
TEACHING POSITIONS			
WORK ACCORDING TO PROCEDURE			
RUN THE PROGRAM WITHOUT ERROS			
FAULT FINDING			

Real test for the unit robotics

DESCRIPTORS										
SELF ORGANISATION				SYSTEMATIC THINKING				INDEPENDENT THINKING		
UNDERSTAND				VISUALISE				SOLVING		
SAFETY				DOCUMENTATION				READING THE TASK		
TIME MANAGEMENT				FAULT FINDING				COMMUNICATION		
EQF 3	USES STANDARD PROCEDURES TO SOLVE TASKS								STUDENT:	
EQF 4	HANDLES PROBLEMS TYPICAL TO THE PROCEDURES								MARK	
EQF 5	WORKS AS PART OF A TEAM AND ANALYSING ONE OPTIMOUS PROCEDURES DEPENDING THE CONTEXT									

- [assessment in excel](#)
- [description of the unit robotics](#)