

ControlTech



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A ROCKWELL AUTOMATION PARTNER

PRŮMYSLOVÉ A EDUKATIVNÍ ROBOTY

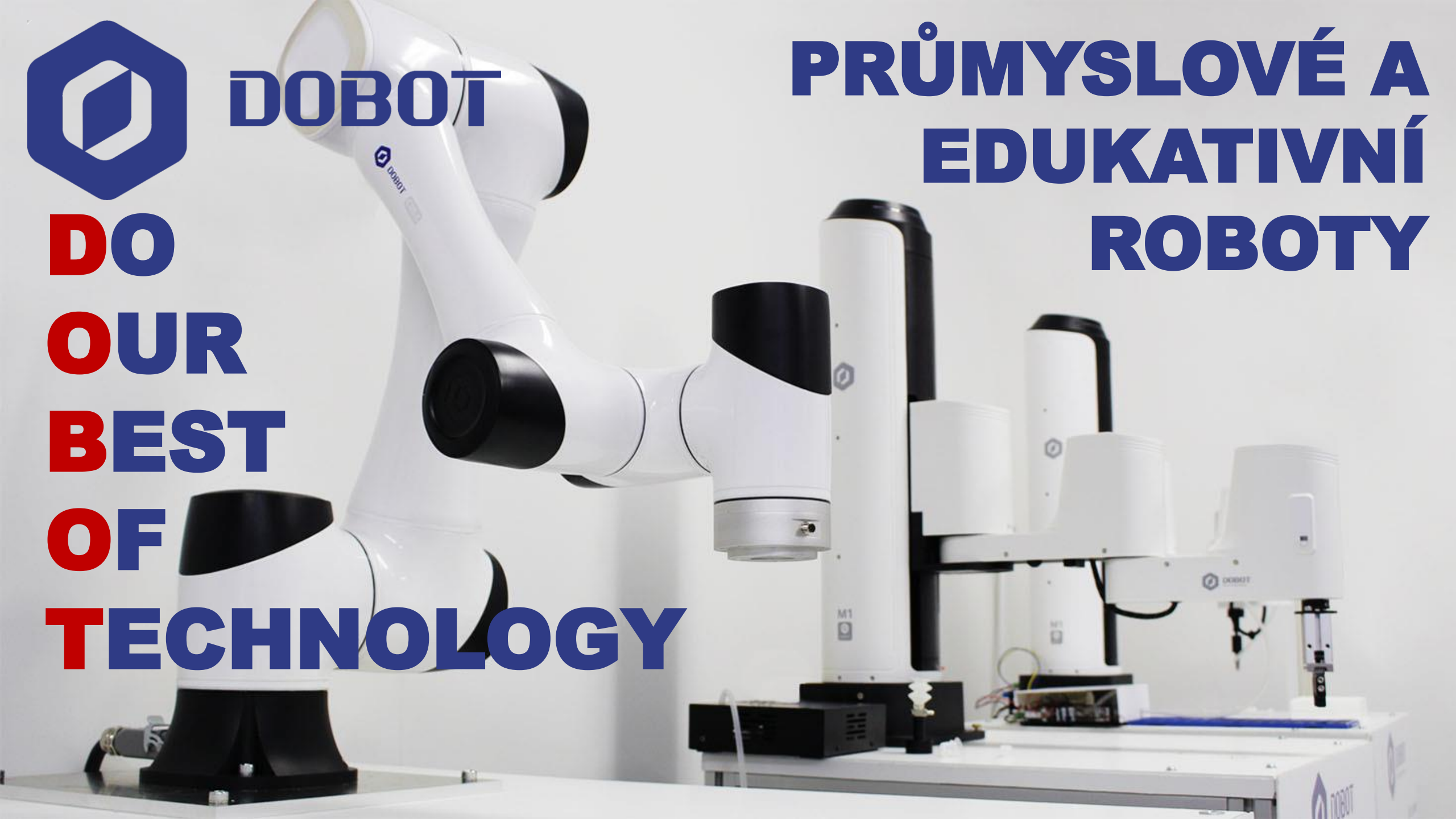
VLADYKA PAVEL



DOBOT

**DO
OUR
BEST
OF
TECHNOLOGY**

**PRŮMYSLOVÉ A
EDUKATIVNÍ
ROBOTY**





DOBOT

CR6-5

ROBOTA PRACOVAT NAUČTE
jednoduše a bez programování

ControlTech





DOBOT



DOBOT

Secondly, press the upper button - start to record the trajectory

Firstly, press the middle Enter button - switch to the Manual Mode





DOBOT



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**Opakovatelnost
0,03 mm**



**Rychlost
3m/s – 180°/s**



**Nosnost
5 kg**



**Dosah
900 mm**



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Hmotnost (kg)	23kg		I/O porty robota	DI	2
Užitečné zatížení (kg)	5kg			DO	2
Dosah (mm)	900mm			AI	2
Maximální rychlost	3m/s			AO	0
Rozsah (°)	J1	±180	I/O porty řídicí jednotky	Kom.	RS485
	J2	±180		DI	16
	J3	±160		DO	16
	J4	±180		AI	2
	J5	±180		AO	2
	J6	±360		Opakovatelnost	±0.03mm
Rychlost (°/s)	J1	180°/s	Napájení	100~240VAC, 50~60Hz	
	J2	180°/s	Komunikace	TCP/IP, Modbus, Wi-Fi	
	J3	180°/s	IP klasifikace	IP54	
	J4	180°/s	Teplotní rozsah	0~45°	
	J5	180°/s	Zdroj	Okolo 200W	
	J6	180°/s	Materiál	Aluminum, ABS	





DOBOT

**NEUTRÁCEJTE ZA TEACH PENDANT
vyberte si tablet, kterým budete
robota ovládat**



iOS

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DOBOT

The image shows the control interface for a DOBOT CR6-5 robot arm. The interface is dark-themed and features a top navigation bar with icons for Home, Disconnect, Auto mode, a document icon, and Manager. The robot model 'CR6-5' is displayed in the top right, along with status indicators 'R:1', 'D:1', 'N:1', a camera icon, a green robot icon, an 'ON' toggle, and a red emergency stop button. The main area is divided into four large buttons: Monitor, Program, Setting, and Craft. On the right side, there is a 'Joint' control panel with a 'Change coordinate' button, 'Tool: No.0', 'User: No.0', and a 'speed:22' input field. Below this, there are six joint position controls, each with a minus sign, a numerical value, and a plus sign.

Joint	Position
J1	-41.0077
J2	32.0513
J3	125.1066
J4	-68.0581
J5	-86.1615
J6	-0.6371



DOBOT

DOBOT CR6-5

The control interface for the DOBOT CR6-5 robot. It features a dark grey background with a top navigation bar and a main grid of application icons. The top bar includes a home icon, a 'Disconnect' button, an 'Auto' mode toggle, a document icon, a 'Manager' button, the model name 'CR6-5', a camera icon, a 'D:1' indicator, an 'ON' power toggle, and a red emergency stop button. The main grid contains icons for 'Drag teach', 'Conveyor belt', 'Palletizing', 'Welding', and 'Vision'. The 'Vision' icon is currently selected.

Home Disconnect Auto Manager CR6-5 R:1 D:1 N:1 ON

Drag teach Conveyor belt Palletizing Welding Vision




DOBOT

DOBOT CR6-5

The screenshot shows the DOBOT CR6-5 control interface. At the top, there is a navigation bar with the following elements from left to right: a Home icon, a Connect icon, an Auto mode toggle switch, a Manager icon, the text 'CR6-5', a camera icon, a robot arm icon, an OFF mode toggle switch, and a red emergency stop button. Below the navigation bar, the main interface area contains three large, dark buttons with white icons and text: 'Script program' (with a document and pencil icon), 'Graph program' (with a document and plus sign icon), and 'Blockly program' (with a document and blockly icon).



DOBOT



blockly_test_001

Speed 30 (1 - 100)
Accel 15 (1 - 100)
repeat 10 times
do
Go
Point "P1"
Go Param User 0 Tool 0
CP 1 Speed 50 Accel 20
SYNC 1
Go
Point "P2"
Go Param User 0 Tool 0
CP 1 Speed 50 Accel 20
SYNC 1
Go
Point "P3"

Logic
Loops
Math
Text
Lists
Variables
Variables(Custom)
Functions
Motion(Absolute)
Motion(Relative)
I/O
TCP/UDP
Modbus
System

edit debug point Save

CR6-5

CR6-5

Disconnect Auto Manager

R:1
D:1
N:1

ON

+

-

+

-



DOBOT

CR6-5

R:1
D:1
N:1

ON

test00

edit debug point Save

MOVE

Relative

SIX AXIS


IO

TOP/END

```
while(times < 5)  
  
Go(P1,"User=0 Tool=0 CP=1 Speed=50 Accel=20 SYNC=1")  
  
Go(P3,"User=0 Tool=0 CP=1 Speed=50 Accel=20 SYNC=1")  
  
Go(P2,"User=0 Tool=0 CP=1 Speed=50 Accel=20 SYNC=1")
```



DOBOT



CR6-5

DOBOT

CR6-5

Home Disconnect Auto Manager R:1 D:1 N:1 ON

Script_test_001

edit debug point Manage thread Add thread Save

Global variable src0.lua

```
1 SpeedS(40)
2 Go(P1,"User=0 Tool=0 CP=1 Speed=50 Accel=20 SYNC=1")
3 Go(P2,"User=0 Tool=0 CP=1 Speed=50 Accel=20 SYNC=1")
4 Go(P3,"User=0 Tool=0 CP=1 Speed=30 Accel=10 SYNC=1")
5
```

Fx



DOBOT

Manual

CR6-5

R:1
D:1
N:1

ON

NEW_FILE

edit debug point

Manage thread Add thread Save

No	Name	X	Y	Z	RX	RY	RZ	Arm	Tool	User	
<input type="checkbox"/>	1	P1	-355.4821	-161.7151	245.7184	179.0539	3.8269	92.761	1,1,1,-1	No.0	No.0
<input type="checkbox"/>	2	P2	-415.3282	-298.7509	86.0363	-175.0065	3.7567	109.8721	1,1,1,-1	No.0	No.0
<input type="checkbox"/>	3	P3	-461.4465	205.1187	77.4799	-179.0551	3.8278	49.6912	1,1,1,-1	No.0	No.0



DOBOT

DOBOT CR6-5

The image shows a screenshot of the DOBOT CR6-5 control interface. The interface is dark-themed and features a top navigation bar with several icons: a home icon, a disconnect icon, an 'Auto' mode toggle, a document icon, and a user profile icon labeled 'Manager'. On the right side of the top bar, there are status indicators for 'R:1', 'D:1', and 'N:1', a camera icon, a robot arm icon, an 'ON' mode toggle, and a red emergency stop button. The main content area displays 'Current crew: Manager' and a dropdown menu with the following options: 'Observer', 'Operator', 'Programer', and 'Manager'. Below the dropdown is a 'Password:' label and a text input field. At the bottom of the interface is a 'CHANGE USER' button.



DOBOT

SCARA M-1



Opakovateľnosť
0,02 mm



Rychlosť
200°/s



Nosnosť
1,5 kg



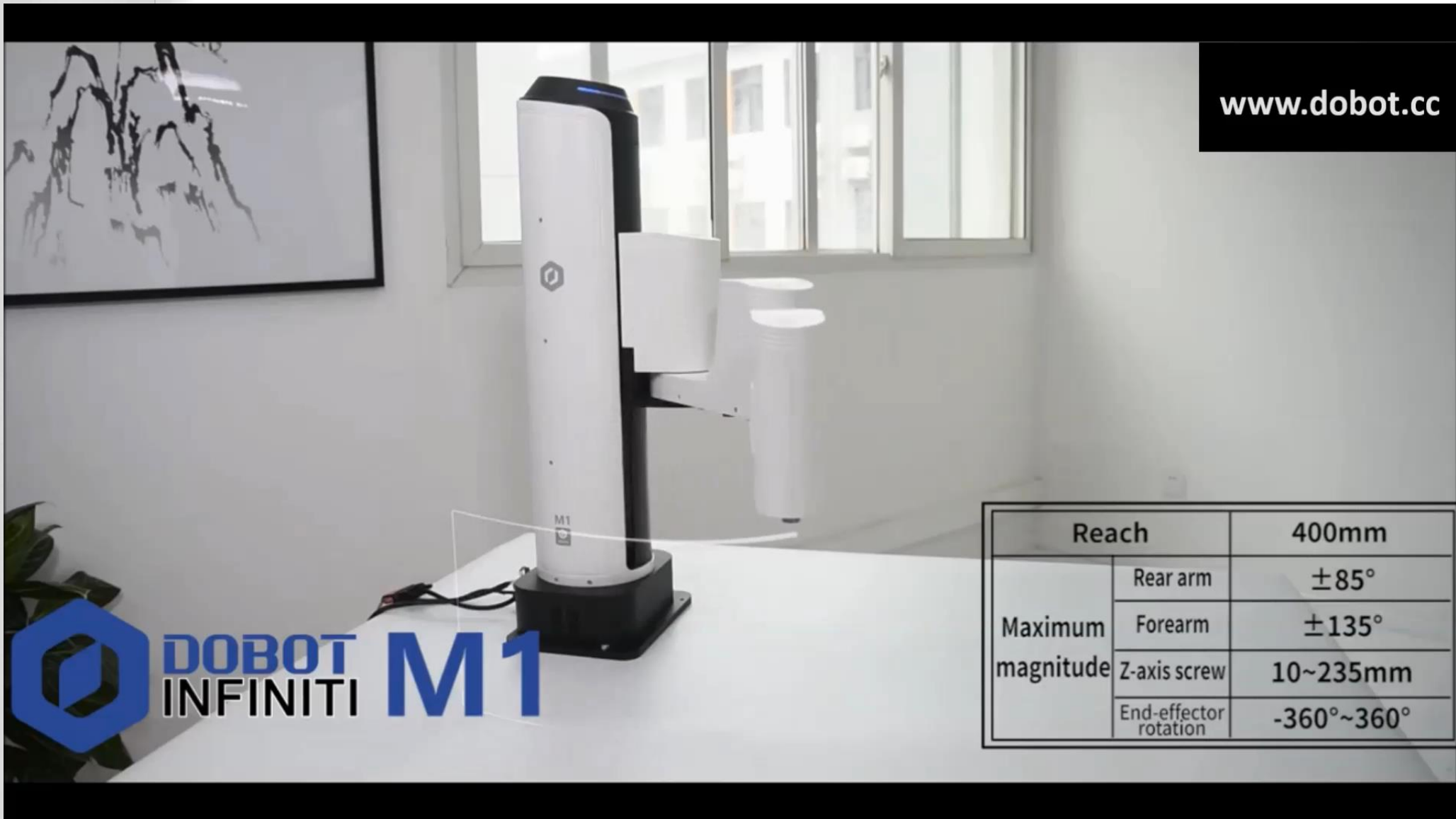
Dosah
400 mm



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www.dobot.cc

 **DOBOT**
INFINITI **M1**

	Reach	400mm
Maximum magnitude	Rear arm	$\pm 85^\circ$
	Forearm	$\pm 135^\circ$
	Z-axis screw	10~235mm
	End-effector rotation	$-360^\circ \sim 360^\circ$

M1





DOBOT

M1Studio-V1.0.4 >> C:/Program Files/M1Studio/config/pbstore/Playback_Test_PV_01.playback

Settings Tools Help

Connect

DOBOT

Emergency Stop

Playback Script

New Open Save Save As Start Stop Infinite Loop Loop 5 DynRatio 100% 1% 200%

Option	Index	Name	Type	Content
	0		OUTPUT	OUT18=0V
	1		MOVJ	To(154.0141, 298.2269, 96.0000, 22.6511), Vel/Jerk(20%, 50%), ArmOrientation(Right)
	2		MOVJ	To(154.0141, 298.2269, 69.0000, 22.6511), Vel/Jerk(20%, 50%), ArmOrientation(Right)
	3		OUTPUT	OUT17=0V
	4		MOVJ	To(154.0141, 298.2269, 96.0000, 22.6511), Vel/Jerk(20%, 50%), ArmOrientation(Right)
	5		MOVJ	To(78.1350, -386.5726, 96.0000, -161.1687), Vel/Jerk(50%, 50%), ArmOrientation(Left)
	6		MOVJ	To(78.1350, -386.5726, 69.0000, -161.1687), Vel/Jerk(20%, 50%), ArmOrientation(Left)
	7		OUTPUT	OUT17=24V
	8		MOVJ	To(78.1350, -386.5726, 96.0000, -161.1687), Vel/Jerk(20%, 50%), ArmOrientation(Left)
	9		WAIT	Pause 1.00 S
	10		MOVJ	To(78.1350, -386.5726, 69.0000, -161.1687), Vel/Jerk(20%, 50%), ArmOrientation(Left)
	11		OUTPUT	OUT17=0V
	12		MOVJ	To(78.1350, -386.5726, 96.0000, -161.1687), Vel/Jerk(20%, 50%), ArmOrientation(Left)
	13		MOVJ	To(154.0141, 298.2269, 96.0000, 22.6511), Vel/Jerk(50%, 50%), ArmOrientation(Right)
	14		MOVJ	To(154.0141, 298.2269, 69.0000, 22.6511), Vel/Jerk(20%, 50%), ArmOrientation(Right)
	15		OUTPUT	OUT17=24V
	16		MOVJ	To(154.0141, 298.2269, 96.0000, 22.6511), Vel/Jerk(20%, 50%), ArmOrientation(Right)
	17		WAIT	Pause 1.00 S

Operation Panel

X: 0,000 Joint1: 0,000
Y: 0,000 Joint2: 0,000
Z: 0,000 Joint3: 0,000
R: 0,000 Joint4: 0,000

Joint: [Dropdown]

J1+ J2+ J3+ J4+

Vel: 35% Acc: 52%

Motor: [Slider] Power: [Slider]

Apply DynRatio

Buttons: Add At Last, Insert Before Selected Row, OverWrite Selected Row, Enable Hand Hold Teach, Add Motion Command, Add Wait Command, Add I/O Command, Output, Trigger



DOBOT

M1Studio-V1.0.4 >> C:/Program Files/M1Studio/config/bystore/Example.blockly

Settings Tools Help



Playback Script Blockly



Logic

Loops

Math

Text

Lists

Colour

Variables

Functions

▼ DobotAPI

Basic

Config

Motion

I/O

Set Coordinate Speed VelocityRatio 20 JerkRatio 50

Set Jump Params JumpHeight 20 ZLimit 200

repeat while true

do Set Arm Orientation Left

Jump To X 223 Y 276 Z 60

Set Arm Orientation Right

Jump To X 223 Y 276 Z 60

Set Arm Orientation Right

Go to X 258 Y 177 Z 120



DOBOT

New Open Save Save As Close Close All Add Palette Start Stop

Search: TEST_PV_PETvicka_barvy1

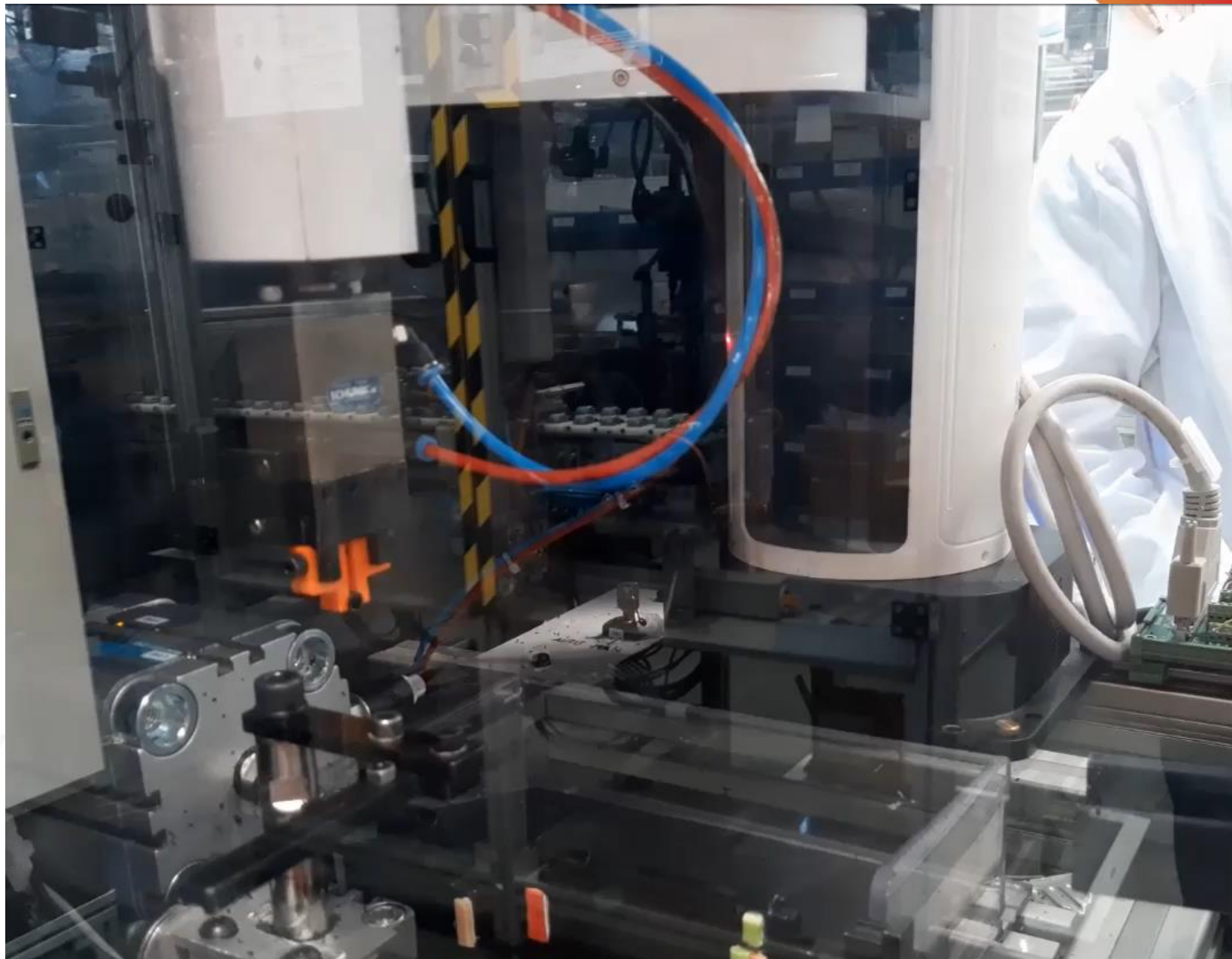
- + Other
 - QueueCmd
 - ? dType.GetQueuedCmdCurrentIndex(api)
 - ? dType.SetQueuedCmdStartExec(api, cmd, isjoint, x, y, z, r, 1)
 - ? dType.SetQueuedCmdStopExec(api, cmd, isjoint, x, y, z, r, 1)
 - ? dType.SetQueuedCmdForceStopExec(api, cmd, isjoint, x, y, z, r, 1)
 - ? dType.SetQueuedCmdClear(api)
 - Pose
 - ? dType.GetPose(api)
 - Alarms
 - ? dType.GetAlarmsState(api, maxLevel)
 - ? dType.ClearAllAlarmsState(api)
 - ArmOrientation
 - ? dType.SetArmOrientation(api, arm, x, y, z, r, 1)
 - ? dType.GetArmOrientation(api)
 - JOG
 - ? dType.SetJOGCommonParams(api, isjoint, x, y, z, r, 1)
 - ? dType.GetJOGCommonParams(api)
 - ? dType.SetJOGCmd(api, isjoint, cmd, x, y, z, r, 1)
 - PTP
 - ? dType.SetPTPJumpParams(api, jumpMode, x, y, z, r, 1)
 - ? dType.GetPTPJumpParams(api)
 - ? dType.SetPTPCommonParams(api, x, y, z, r, 1)
 - ? dType.GetPTPCommonParams(api)
 - ? dType.SetPTPCmd(api, ptpMode, x, y, z, r, 1)
 - ARC
 - ? dType.SetARCCmd(api, arcMode, x, y, z, r, 1)
 - WAIT
 - TRIG

```
25 while not (dType.GetIODI(api, 19)[0]) == 0: # Cekani na stisk tlacitka
26     pass
27     if (dType.GetIODI(api, 20)[0]) == 1:
28         break
29     dType.SetArmOrientation(api, 1, 1)
30     dType.SetPTPCmd(api, 0, 79.55, 189, 27, 331, 1)
31     close_grip()
32     dType.SetArmOrientation(api, 1, 1)
33     dType.SetPTPCmd(api, 0, 162, 314, 89, 331, 1)
34     print(dType.GetIODI(api, 17)[0])
35     print(dType.GetIODI(api, 18)[0])
36     dType.SetWAITCmdEx(api, 1000, 1)
37     while (dType.GetIODI(api, 18)[0]) == 1 and (dType.GetIODI(api, 17)[0]) == 1:
38         pass
39     print(dType.GetIODI(api, 17)[0])
40     print(dType.GetIODI(api, 18)[0])
41     if (dType.GetIODI(api, 18)[0]) == 1 and (dType.GetIODI(api, 17)[0]) == 0:
42         dType.SetArmOrientation(api, 0, 1)
43         dType.SetPTPCmd(api, 0, x1, y, z, r, 1)
44         open_grip()
45         x1=x1-35
46     elif (dType.GetIODI(api, 18)[0]) == 0 and (dType.GetIODI(api, 17)[0]) == 1:
47         dType.SetArmOrientation(api, 0, 1)
48         dType.SetPTPCmd(api, 0, x2, y2, z, r, 1)
49         open_grip()
50         x2=x2-35
51     elif (dType.GetIODI(api, 18)[0]) == 0 and (dType.GetIODI(api, 17)[0]) == 0:
52         dType.SetArmOrientation(api, 0, 1)
53         dType.SetPTPCmd(api, 0, x3, y3, z, r, 1)
54         open_grip()
55         x3=x3-35
```

api : The object of Dobot Library.
cirPoint : List of transition position
cirPoint[0] : Value of x-axis
cirPoint[1] : Value of y-axis
cirPoint[2] : Value of z-axis
cirPoint[3] : Value of r-axis



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DOBOT

DOBOT Magician

All-in-One Robot for Education



reddot award 2018
winner





DOBOT

180°

85°

R 320mm

147mm

135mm

158mm

158mm



500g

Dosah 320 mm
opakovatelnost 0.2 mm
nosnost 500 g

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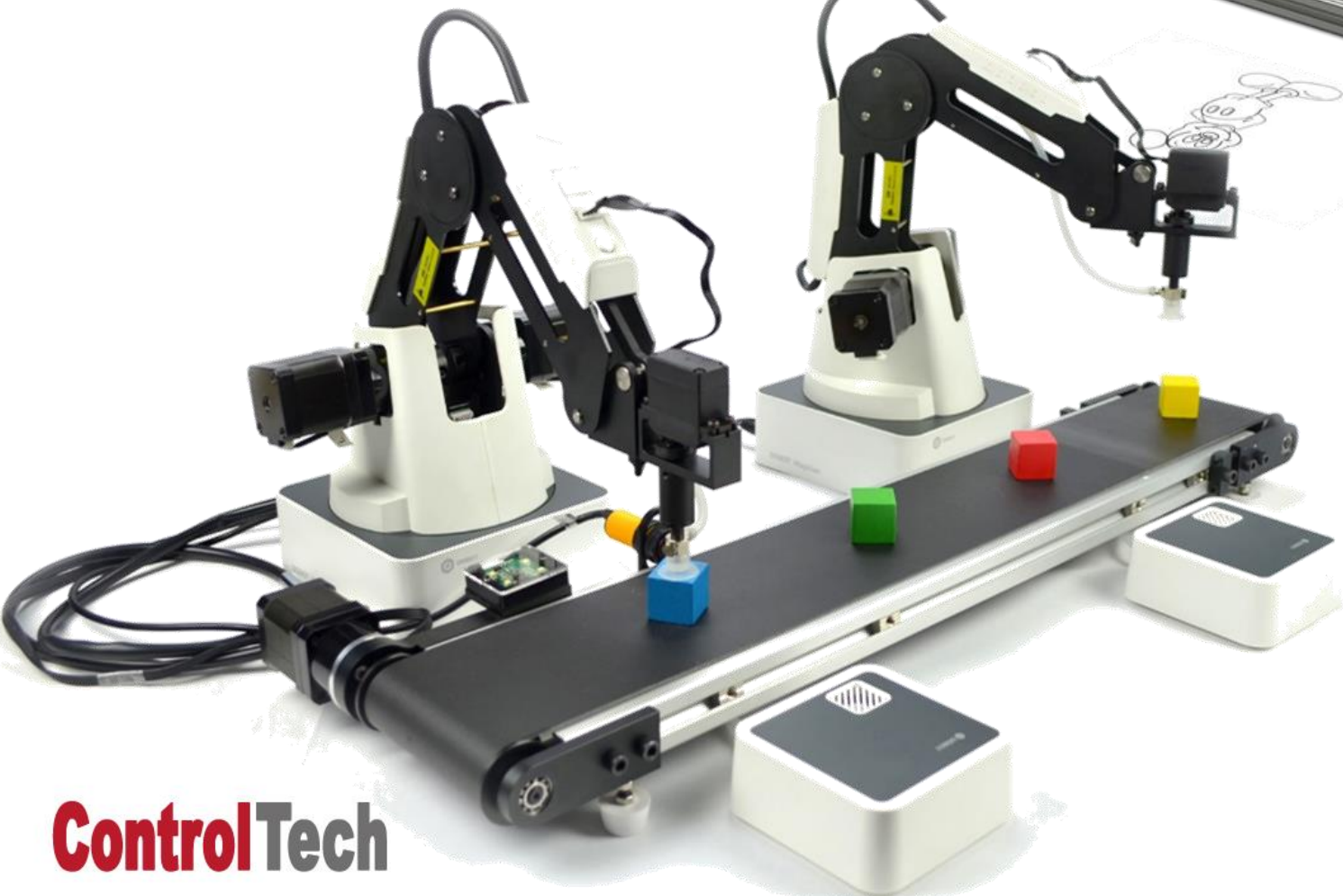


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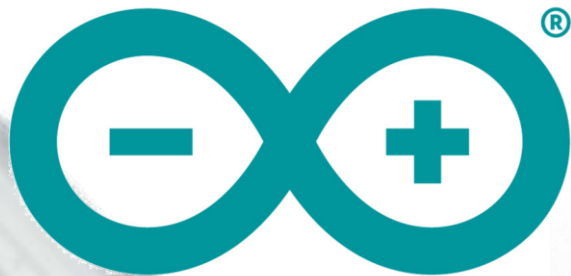


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ARDUINO

EDUCATION



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DOBOT



DobotStudio-V1.6.10

Connect

DOBOT LinearRail Pen

Setting Home Emergency Stop

Applications

Operation Panel

X 0,0000 Y 0,0000 Z 0,0000 R 0,0000

Joint1 0,0000 Joint2 0,0000 Joint3 0,0000 Joint4 0,0000

L 0,0000

Disable Gripper SuctionCup Laser

Speed 100,00

Teaching & Playback

Write & Draw

Blockly

Script

LeapMotion

Mouse

LaserEngraving

3DPrinter




Add More



DOBOT



DobotStudio-V1.6.10



Speed 100,00

LeapMotion

Mouse

LaserEngraving

3DPrinter

Add More

The image shows the DobotStudio software interface. At the top, there are three large icons: a yellow hand, the 'Blockly Google' logo, and the Python logo. Below these are five smaller icons representing different modules: LeapMotion (hand with motion lines), Mouse (computer mouse), LaserEngraving (laser cutter), 3DPrinter (3D printer), and an 'Add More' button with a plus sign. A speed control slider is visible on the right side of the interface, set to 100,00.



DOBOT



DobotStudio-V1.6.10

The interface displays several tool icons: LeapMotion (hand icon), Mouse (mouse icon), LaserEngraving (laser icon), and 3DPrinter (3D printer icon). Below these are logos for Java, C#, Visual Basic, and MATLAB. The top row of the interface shows a yellow hand icon, the Blockly logo (a blue block with 'Blockly' text) over the Google logo, and the Python logo. A speed slider is visible on the right side of the interface.

Speed 100,00

Java™

C#

Visual Basic

MATLAB



COM11



Teaching & Playback

Operation Panel

Easy Pro Speed $- 50 +$ Loop 100 Acc $- 50 +$



Option	MotionStyle	Name	X	Y	Z	R	PauseTime	SuctionCup
1	MOVJ	KROK 001	122.976	180.7739	-38.4769	55.7735	0	SuctionCupOff
2	MOVJ		188.7793	-25.09	13.9731	-7.5706	0.0	SuctionCupOff
3	MOVJ		75.3481	-200.8049	-38.256	-69.4324	0.0	SuctionCupOff
4	MOVJ		191.1944	-37.3886	135.9339	-11.0647	0.0	SuctionCupOff
5	MOVJ		157.2817	-187.2849	31.057	-49.9765	0.0	SuctionCupOff
6	MOVJ		199.4411	31.8717	-20.4231	9.0794	0.0	SuctionCupOff
7	MOVJ		222.1407	116.9612	79.019	27.7676	0.0	SuctionCupOff
8	MOVJ		184.9539	-43.591	-0.7109	-13.2618	0.0	SuctionCupOff
9	MOVJ		164.1302	-185.4772	75.2225	-48.4941	0.0	SuctionCupOff
10	MOVJ		206.341	-128.4213	116.31	-31.8971	0.0	SuctionCupOff
11	MOVJ		169.3341	-152.5164	63.9103	-42.0088	0.0	SuctionCupOff
12	MOVJ		136.5666	-150.5033	28.1913	-47.7794	0.0	SuctionCupOff
13	MOVJ		204.8583	-120.8976	11.1428	-30.5471	0.0	SuctionCupOff
14	MOVJ		208.0085	-27.4501	64.8908	-7.5177	0.0	SuctionCupOff
15	MOVJ		223.9895	38.4529	126.0804	9.7412	0.0	SuctionCupOff
16	MOVJ		174.4121	86.445	24.1449	26.3647	0.0	SuctionCupOff
17	MOVJ		130.9011	182.9993	69.5842	54.4235	0.0	SuctionCupOff
18	MOVJ		152.4365	152.7184	-4.5646	45.0529	0.0	SuctionCupOff
19	MOVJ		209.0913	55.3361	-10.2153	14.8235	0.0	SuctionCupOff

+Point

- PTP Point
- Move Mode
 - MOVJ
 - MOVL
 - JUMP
- ARC Point
- Point Type
 - cirPoint
 - toPoint
- PauseTime

0,00 s

X **222,1406** Y+ Z+
 Y **116,9612** X+ R+ Z1
 Z **79,0190** X- R- Z-
 R **27,7676** Y-

Joint1 **27,7676** J1+ J2+
 Joint2 **22,4895** J4+ J3+ J3-
 Joint3 **18,1184** J1- J2-
 Joint4 **0,0000**

L **0,0000** L+ L-

Disable Gripper SuctionCup Laser

Speed **42,00**



DOBOT

DobotStudio-untitled.playback



COM11



Teaching & Playback



Easy

Pro

Speed

50



Loop

100

Acc

50



Exit

Option

	MotionStyle	Name	X	Y	Z	R	Time	Point
1	MOVJ	KROK 001	188.7796	180.7739	-38.4769	55.7735	0.0	
2	MOVJ		188.7793	-25.09	13.9731	-7.5768	0.0	
3	MOVJ		75.3481	-200.8049	-38.256	-69.4324	0.0	
4	MOVJ		191.1944	-37.3886	135.9339	-11.0647		
5	MOVJ		157.2817	-187.2849	31.057	-49.9765		SuctionCupOff
6	MOVJ		199.4411	31.8717	-20.4231	9.0794		SuctionCupOff
7	MOVJ		222.1407	116.9612	79.019			SuctionCup
8	MOVJ		184.9539	-43.591	-0.7109			SuctionCup
9	MOVJ		164.1302	-185.4772	75.2225			SuctionCup
10	MOVJ		206.341	-128.4213	116.31			SuctionCupOff
11	MOVJ		169.3341	-152.5164	63.9103			SuctionCupOff
12	MOVJ		136.5666	-150.5033	28.1913			SuctionCupOff





COM11



Teaching & Playback

Easy Pro
 Speed
 Loop
 Acc

Option	MotionStyle	Name	X	Y	Z	R	PauseTime	SuctionCup
1	MOVJ	KROK 001	122.976	180.7739	-38.4769	55.7735	0	SuctionCupOff
2	MOVJ		188.7793	-25.09	13.9731	-7.5706	0.0	SuctionCupOff
3	MOVJ		75.3481	-200.8049	-38.256	-69.4324	0.0	SuctionCupOff
4	MOVJ		191.1944	-37.3886	135.9339	-11.0647	0.0	SuctionCupOff
5	MOVJ		157.2817	-187.2849	31.057			Off
6	MOVJ		199.4411	31.8717				Off
7	MOVJ		222.1407	116.9612				Off
8	MOVJ		184.9539	-43.591				Off
9	MOVJ		164.1302	-185.4772				Off
10	MOVJ		206.341	-128.4213				Off
11	MOVJ		169.3341	-152.5164				Off
12	MOVJ		136.5666	-150.5033				Off
13	MOVJ		204.8583	-120.8976				Off
14	MOVJ		208.0085	-27.4501				Off
15	MOVJ		223.9895	38.4529				Off
16	MOVJ		174.4121	86.445	24.1449	26.3647	0.0	SuctionCupOff
17	MOVJ		130.9011	182.9993	69.5842	54.4235	0.0	SuctionCupOff
18	MOVJ		152.4365	152.7184	-4.5646	45.0529	0.0	SuctionCupOff
19	MOVJ		209.0913	55.3361	-10.2153	14.8235	0.0	SuctionCupOff

SuctionCup

SuctionCupOff

SuctionCupOff

SuctionCupOn

SuctionCup

SuctionCup

Gripper

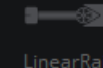
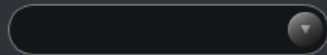
Laser

Pen

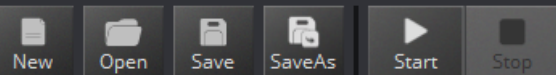
Advanced



DobotStudio-untitled.blockly



Blockly



- Logic
- Loops
- Math
- Text
- Lists
- Colour
- Variables
- Functions
- ▼ DobotAPI
 - Basic
 - Config
 - Motion
 - I/O
 - Additional

```
Home
ChooseEndTools Gripper
SetCoordinateSpeed Velocity 20 Acceleration 50
SetJumpHeight Height 20
JumpTo X 200 Y 0 Z 0
Delaytime 0 s
MoveTo X 200 Y 0 Z 0
Set5VOutput EIO EIO10 IsEnabled ON

Laser ON Power 50
MoveLinearRailTo 0
SetConveyor Motor STEPPER1 Speed 50 mm/s
SetPhotoelectricSensor OFF Version V1 Port GP1
```

```
if GetLevelInput EIO EIO01 = 0
do Gripper Release

set Osa X to 200

repeat 10 times
do MoveTo X Osa X + 10 Y 75 Z 100

? to seznam
in list Osa X insert at first as 200

seznam
```



DobotStudio-untitled.blockly



COM11



Blockly



- Logic
- Loops
- Math
- Text
- Lists
- Colour
- Variables
- Functions
- ▼ DobotAPI
 - Basic
 - Config
 - Motion**
 - I/O
 - Additional

JumpTo X 200 Y 0 Z 0

MoveTo X 200 Y 0 Z 0

MoveDistance ΔX 0 ΔY 0 ΔZ 0

SetR 0

Check Lost Step

SetJointAngle Joint1 0 Joint2 45 Joint3 45

GetCurrentCoordinate x

GetJointAngle Joint1

SuctionCup ON

Gripper Gripper

- Logic
- Loops
- Math
- Text
- Lists
- Colour
- Variables
- Functions
- ▼ DobotAPI
 - Basic
 - Config
 - Motion
 - I/O
 - Additional**

Laser ON Power 50

SetPhotoelectricSensor OFF Version V1 Port GP1

GetPhotoelectricSensor GP1

SetColorSensor OFF Version V1 Port GP1

IdentifyColor r

SetConveyor Motor STEPPER1 Speed 50 mm/s

SetLinearRail IsEnabled OFF Version V1

MoveLinearRailTo 0



DOBOT



- Logic
 - if
- Loops
 - do
- Math
- Text
- Lists
- Colour
- Variables
 - and
- Functions
- DobotAPI
 - not
 - true
 - null
 - test if true if false

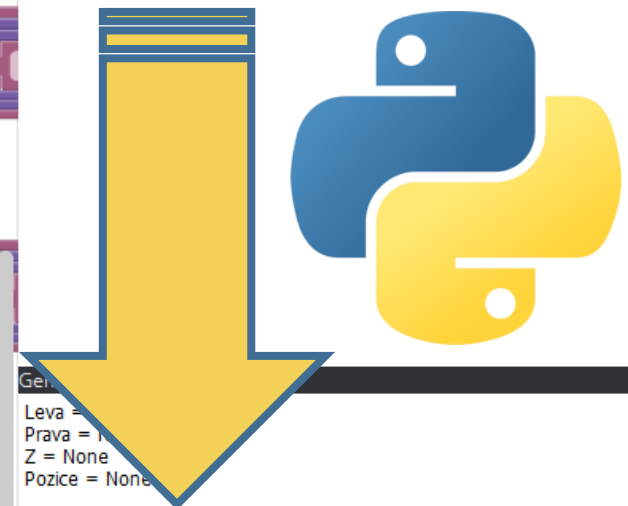
- Logic
- Loops
 - repeat 10 times
 - do
 - repeat while
 - do
 - count with i from 1 to 10 by 1
 - do
 - for each item i in list
 - do
 - break out of loop
- Math
- Text
- Lists
- Colour
- Variables
- Functions
- DobotAPI

- Logic
- Loops
- Math
 - 0
 - 1 + 1
- Text
- Lists
- Colour
 - square root 9
- Variables
 - sin 45
- Functions
 - π
 - 0 is even
 - change item by 1
 - round 3.1
 - sum of list
 - remainder of 64 ÷ 10
- DobotAPI

- Logic
- Loops
 - to do something
 - to do something
 - return
- Math
- Text
- Lists
- Colour
- Variables
 - if return
- Functions
- DobotAPI



```
Gripper Release
count with Pozice from 1 to 4 by 1
do
  JumpTo X in list in list Leva get # 1 get # Pozice Y in list in list
  Gripper Gripper
  Delaytime 1 s
  JumpTo X in list in list Prava get # 1 get # Pozice Y in list in list
  Gripper Release
  Delaytime 0.5 s
count with Pozice from 1 to 4 by 1
do
  JumpTo X in list in list Prava get # 1 get # Pozice Y in list in list
  Gripper Gripper
  Delaytime 1 s
  JumpTo X in list in list Leva get # 1 get # Pozice Y in list in list
  Gripper Release
  Delaytime 0.5 s
MoveTo X 180 Y 0 Z 25
```

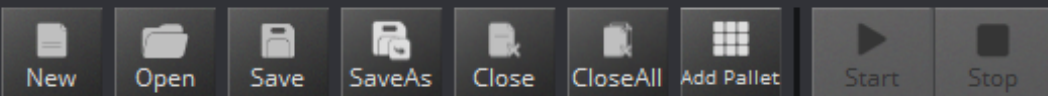


```
Leva = [[225.5, 235.6279, 245.4217, 255.5538, 265.4469, 274.8148], [43, 42.999, 42.5677, 42.2319, 42.28, 41.8972]]
Prava = [[223.6901, 233.7885, 243.7215, 253.4057, 263.3534, 273.2444], [-42.9919, -43.1828, -43.5424, -43.5426, -43.8326, -44.0512]]
dType.SetEndEffectorParamsEx(api, 59.7, 0, 0, 1)
dType.SetPTPJumpParamsEx(api,40,100,1)
dType.SetPTPLParamsEx(api,20,50,1)
dType.SetHOMECmdEx(api, 0, 1)
print('HOME FINISHED')
current_pose = dType.GetPose(api)
dType.SetPTPCmdEx(api, 2, 180, 0, 25, current_pose[3], 1)
current_pose = dType.GetPose(api)
dType.SetPTPCmdEx(api, 4, current_pose[4], current_pose[5], current_pose[6], 8.4, 1)
Z = -20.5
dType.SetEndEffectorGripperEx(api, 1, 0)
for Pozice in range(1, 5):
  dType.SetPTPCmdEx(api, 0, ((Leva[0])[int(Pozice - 1)]), ((Leva[1])[int(Pozice - 1)]), Z, 0, 1)
  dType.SetEndEffectorGripperEx(api, 1, 1)
  dType.SetWAITCmdEx(api, 1, 1)
  dType.SetPTPCmdEx(api, 0, ((Prava[0])[int(Pozice - 1)]), ((Prava[1])[int(Pozice - 1)]), Z, 0, 1)
  dType.SetEndEffectorGripperEx(api, 1, 0)
  dType.SetWAITCmdEx(api, 0.5, 1)
for Pozice in range(1, 5):
  dType.SetPTPCmdEx(api, 0, ((Prava[0])[int(Pozice - 1)]), ((Prava[1])[int(Pozice - 1)]), Z, 0, 1)
  dType.SetEndEffectorGripperEx(api, 1, 1)
  dType.SetWAITCmdEx(api, 1, 1)
  dType.SetPTPCmdEx(api, 0, ((Leva[0])[int(Pozice - 1)]), ((Leva[1])[int(Pozice - 1)]), Z, 0, 1)
  dType.SetEndEffectorGripperEx(api, 1, 0)
  dType.SetWAITCmdEx(api, 0.5, 1)
```

Returns the value of this variable.



DOBOT



Search:

Example_JOG Example_PTP

```
+ Other
+ QueueCmd
+ Pose
+ Alarms
+ HOME
+ HandTeach
+ EndEffector
+ LinearRail
+ JOG
+ PTP
+ CP
+ ARC
+ WAIT
+ TRIG
+ EIO
+ AngleSensor
+ ColorSensor
+ WIFI
- LostStep
? dType.SetLostStepParams(api, thr
? dType.SetLostStepCmd/api.isQueued
Params:
#Warning# Don't change the "api" Variable.
api : The object of Dobot Library.
#Warning# You must use queue mode for current firmware.
isQueued : The switch state of using queue mode
1 : use queue mode
0 : don't use queue mode
```

```
15 dType.SetWAITCmdEx(api, 0, 1)
16 current_pose = dType.GetPose(api)
17 dType.SetPTPCmdEx(api, 2, 200, 0, 0, current_pose[3], 1)
18 dType.SetIOD0Ex(api, 10, 1, 1)
19
20 if (dType.GetIODI(api, 1)[0]) == 0:
21     dType.SetEndEffectorGripperEx(api, 1, 0)
22
23 Osa_X = 200
24
25 for count in range(10):
26     current_pose = dType.GetPose(api)
27     dType.SetPTPCmdEx(api, 2, (Osa_X + 10), 75, 100, current_pose[3], 1)
28
29 dType.SetEndEffectorLaserEx(api, 1, 50, 1)
30 current_pose = dType.GetPose(api)
31 dType.SetPTPWithLCmdEx(api, 1, current_pose[0], current_pose[1], current_pose[2], current_pose[3], 0, 1)
32 STEP_PER_CRICLE = 360.0 / 1.8 * 10.0 * 16.0
33 MM_PER_CRICLE = 3.1415926535898 * 36.0
34 vel = float(50) * STEP_PER_CRICLE / MM_PER_CRICLE
35 dType.SetEMotorEx(api, 0, 1, int(vel), 1)
36 dType.SetInfraredSensor(api, 0, 0, 0)
```

#Warning# Don't change the "api" Variable.
api : The object of Dobot Library.
#Warning# You must use queue mode for current firmware.
isQueued : The switch state of using queue mode
1 : use queue mode
0 : don't use queue mode



DOBOT



python SOFTWARE
FOUNDATION

Open source

Podpora běžných platforem

Linux, Unix

Windows

macOS

Android



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python SOFTWARE FOUNDATION



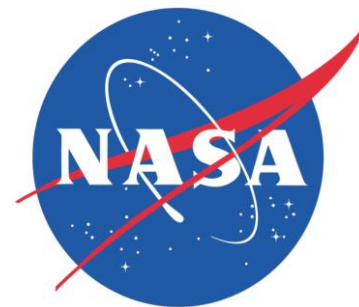
Instagram



Bitbucket



Dropbox



Spotify®



Pinterest

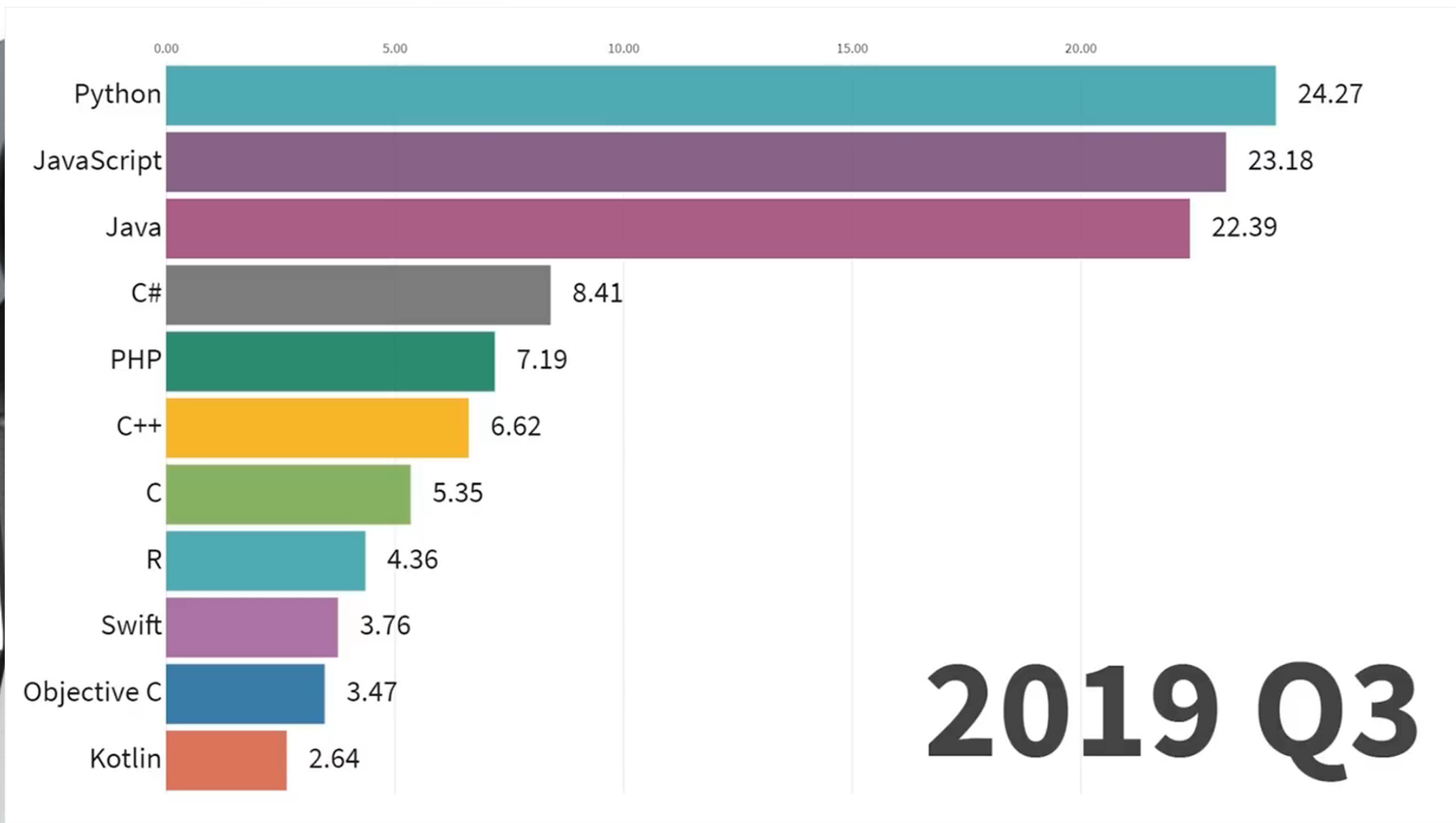


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2019 Q3



DOBOT



python

SOFTWARE
FOUNDATION



```
Java
1 import java.util.ArrayList;
2
3 public class Main {
4     public static void main(Str
5         ring[] args) {
6         ArrayList al = new Arr
7             ayList();
8         al.add("a");
9         al.add("b");
10        al.add("c");
11        System.out.println(al)
12    }
13 }
```

```
Python
1 alist = []
2
3 alist.append("a")
4 alist.append("b")
5 alist.append("c")
6
7 print(alist)
```



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DOBOT



```
when I receive Home
  Home
when I receive Teach
  add Get Current Coordinate X to X
  add Get Current Coordinate Y to Y
  add Get Current Coordinate Z to Z
```



SCRATCH



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Control panel for the Dobot arm, featuring a 3D coordinate system with X, Y, and Z axes. The X, Y, and Z axes are currently empty. A 'Loop' counter is set to 1, and the 'Speed' is set to 50. Below the coordinate system are several icons: a large orange 'T', a green sphere, a large orange 'C', and a blue house icon representing the home position.

Device and Sprite control interface. The 'Device' tab is active, showing a 'Magician' sprite. Below the sprite are controls for 'Coordinate' (with X, Y, Z, R inputs set to 0) and 'Velocity' (with a slider). A directional pad with Y+, Z+, X+, Y-, X-, Z- buttons and R- (rotate left), R+ (rotate right) buttons is present. At the bottom, there are 'ON' and 'OFF' radio buttons and a 'SuctionCup' icon.

Scratch block palette with categories: Control, Operators, Variables, Sensing, Events, Setting, Motion, Status, I/O, and My Blocks. The 'Motion' category is expanded, showing blocks like Home, Jump To X, Goto X, Relative Move, Move Joints, Set R, Gripper, and Suction Cup. The 'Status' category includes Check Last Step, Get Current Coordinate, Get Current Joint Angle, and Clear Alarm. The 'I/O' category includes Set Pin, Set PWM Output Port, and Set digital Output Port.

Scratch 'Code' area containing three scripts. The first script starts with 'when I receive Home' and includes a 'Home' block. The second script starts with 'when I receive Teach' and includes three 'add' blocks for 'Get Current Coordinate' X, Y, and Z. The third script starts with 'when I receive Clear' and includes three 'delete all of' blocks for X, Y, and Z. A large script on the right starts with 'when I receive Play', sets 'Stop' to 0 and 'Index' to 0, and uses a 'repeat' loop to iterate through an array of coordinates. It includes an 'if' condition 'not Stop = 1' and a 'broadcast Done and wait' block.



DOBOT

DobotScratch 1.3.1



File

Edit

Help

Scratch Project



Code

Choose a Device



Magician



Magician Lite



Magic Box



Mobile Platform



AIStarter



Arduino Kit



Arduino Uno



Arduino Mega2560

Device

Sprite



Magician



Coordinate



Velocity



DOBOT



Sliding Rail Kit

This is a Sliding Rail Kit for Controller & Magician



Photoelectric & Color Sensor

This is a Photoelectric & Color Sensor for Controller & Magician



Magic Box AI Extension

This is the extension of Magician Lite and Magic Box

```
when I receive Play
set Stop to 0
set Index to 0
Set Motion Ratio Velocity Speed % Acceleration
repeat Loop
  repeat length of X
    if not Stop = 1 then
      change Index by 1
      Goto X item Index of X Y
  set Index to 0
if not Stop = 1 then
  broadcast Done and wait
```



DOBOT

<https://youtu.be/O03D-oNUwbg?list=PLJuwb3xnlvckCf5nZE3UdFngSsVYELV4G>

Dobot Magician Accuracy Test April 12, 2017



Accuracy: 0.2mm
TESTED Accuracy:
0.018mm
Max Discrepancy:
1 Trial = 0.2mm
100 TRIALS TEST

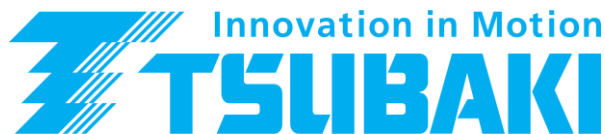
Udávaná přesnost – 0,2 mm
Testovaná přesnost – 0,018 mm
Maximální odchylka – 0,2 mm
100 pokusů





DOBOT

Technická Univerzita v Košiciach
Slovenská technická univerzita v Bratislave
Žilinská univerzita v Žiline
Vyšší odborná škola a Střední průmyslová škola Děčín
VOŠ, SPŠ a JŠ Kutná Hora
Středná odborná škola Dubnica nad Váhom
Středná odborná škola polytechnická
Střední průmyslová škola Ostrov
Střední průmyslová škola Otrokovice
Střední průmyslová škola, Klatovy
Střední průmyslová škola automobilní, České Budějovice
Smíchovská střední průmyslová škola, Praha
6. Základní škola Kolín
a další ...



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