

Имате свободен избор за използвания контролер при следните условия:

- можете да ползвате 8, 16 или 32 битов микроконтролер
- микроконтролера може да е: MSP430xx (като този от лабораторните), PICxxFxxx (Microchip) или контролери на Atmel (Microchip), STM32xxx (STMicroelectronics), LPC21/20/17/13xxx (NXP), ESP32 (Espressif) или вариантите му, RASPBERRY PI PICO (Raspberry Pi Foundation) или RASPBERRY PI PICO W
- може да се използва Arduino и Arduino IDE при условие, че кода е написан на ниво регистър или чрез използване на базови периферни библиотеки (SPI, I2C, UART, ADC и т.н.) за получаване на крайния резултат

### **!!! НЕ Е НЕОБХОДИМО ДА ПРЕДСТАВИТЕ ФИЗИЧЕСКИ РЕАЛИЗИРАН ПРОТОТИП НА ПРОЕКТА ВИ !!!**

#### **За Лабораторните упражнения по МСxТ:**

[https://github.com/LubomirBogdanov/MSHT/tree/main/03\\_lab\\_exercises](https://github.com/LubomirBogdanov/MSHT/tree/main/03_lab_exercises)  
[https://github.com/LubomirBogdanov/MSHT/blob/main/03\\_lab\\_exercises/01\\_documents/00\\_RUKOVODSTVO.pdf](https://github.com/LubomirBogdanov/MSHT/blob/main/03_lab_exercises/01_documents/00_RUKOVODSTVO.pdf)  
[https://github.com/LubomirBogdanov/MSHT/blob/main/03\\_lab\\_exercises/00\\_MSHT\\_Blanka\\_Protokol/MSHT\\_Blank.doc](https://github.com/LubomirBogdanov/MSHT/blob/main/03_lab_exercises/00_MSHT_Blanka_Protokol/MSHT_Blank.doc)

Помощна информация:

За Microchip:

<https://www.microchip.com/en-us/tools-resources/develop/mplab-x-ide>  
<https://www.microchip.com/en-us/tools-resources/develop/mplab-xc-compilers>

За STMicroelectronics:

<https://www.st.com/en/development-tools/stm32cubeide.html>

За NXP:

<https://www.nxp.com/design/design-center/software/development-software/mcuxpresso-software-and-tools-/mcuxpresso-integrated-development-environment-ide:MCUXpresso-IDE>

За Espressif:

<https://code.visualstudio.com/download>  
<https://github.com/espressif/vscode-esp-idf-extension/blob/master/docs/tutorial/install.md>  
<https://www.youtube.com/watch?v=XDDcS7HQNI>

За Raspberry Pi Foundation:

<https://shawnhymel.com/2096/how-to-set-up-raspberry-pi-pico-c-c-toolchain-on-windows-with-vs-code/>

<https://www.youtube.com/watch?v=B5rQSoOmR5w&list=PLEBQazB0HUyQO6rJxKr2umPCgmfAU-cqR&index=2>

[v=B5rQSoOmR5w&list=PLEBQazB0HUyQO6rJxKr2umPCgmfAU-cqR&index=2](https://www.youtube.com/watch?v=B5rQSoOmR5w&list=PLEBQazB0HUyQO6rJxKr2umPCgmfAU-cqR&index=2)

За Arduino IDE:

<https://www.arduino.cc/en/software>

За изчертаване на схеми:

<https://easyeda.com/>

Магазини от където бихте могли да закупите микроконтролер и сензори/модули/периферия:

<https://elimex.bg/>  
<https://elimex.bg/category/hobby-electronics-atmel>  
<https://store.comet.bg/Catalogue/>  
<https://www.olimex.com/Products/>  
<https://radev96.com/>  
<https://erelement.com/>  
<https://www.robotev.com/index.php>

Помощна литература:

<https://store.comet.bg/Catalogue/Product/6798/>  
<https://store.comet.bg/Catalogue/Product/25310/>  
<https://store.comet.bg/Catalogue/Product/16008/>  
<https://store.comet.bg/download-file.php?id=1596>  
<https://storage.compositivity.com/files/b47a2a73>  
<https://www.jameco.com/Jameco/workshop/Howitworks/how-servo-motors-work.html>  
<https://howtomechatronics.com/how-it-works/how-servo-motors-work-how-to-control-servos-using-arduino/>  
<https://howtomechatronics.com/tutorials/arduino/arduino-and-hc-05-bluetooth-module-tutorial/>  
<https://lastminuteengineers.com/433mhz-rf-wireless-arduino-tutorial/>  
[https://www.youtube.com/watch?v=cUNb\\_XtwIZU](https://www.youtube.com/watch?v=cUNb_XtwIZU)

<https://www.youtube.com/@greatscottlab/videos>  
<https://www.youtube.com/@HowToMechatronics/videos>  
<https://www.youtube.com/@ELECTRONOBS/videos>  
<https://www.youtube.com/@SineLab/videos>