



## Microcontroller LAB

### Assignment 1

#### Lab Objectives

Application on digital output.

#### Morse Code:

A	.-	J	.-.-.-	S	...	1	.-.-.-.-
B	-...	K	-.-	T	-	2	..-.-
C	-.-.	L	.-...	U	..-	3	...--
D	-..	M	--	V	...-	4	....-
E	.	N	-.	W	.-.-	5	.....
F	..-.	O	---	X	-...-	6	-.....
G	---.	P	.-...	Y	-.--	7	-.....
H	....	Q	---.-	Z	--...	8	-.....
I	..	R	.-.	0	-----	9	-.....

International Morse code is composed of five elements:

- short mark, **dot** or "dit" (·) : "dot duration" is one time unit long
- longer mark, **dash** or "dah" (–) : three time units long
- **inter-element gap** between the dots and dashes within a character : one dot duration or one unit long

- **short gap** (between letters) : three time units long
- **medium gap** (between words) : seven time units long

You should use a LED for indication.

**SOS**

... — — — ...

### **Delivery Policy**

- Groups of maximum 2 members.
- Represent “SOS” in Morse Code using the Arduino UNO.
- Each group must send a short **video** showing the Arduino working correctly (LED operating correctly).
- Each group must submit a report summarizing the work that they have done along with a schematic diagram.
- You must use the **Arduino web editor** for development as mentioned in the lab session.
- The video should be in a readable format (.mp4 .wmv, etc..)
- Send the video to the form (will send it to MS team)
- If the video size exceeds the mail limit, first try to compress the video or use a lower resolution, then as last resort uploads it to any website (youtube – Mediafire – dropbox – drive, etc..) and include the link in the form.
- **Due Date:** Saturday 04/10/2025 @11.59 p.m.
- **Late delivery** = -25% for each day of delay.

**Good Luck**