EXPERIMENT 1:

You are required to create a circuit with above elements and display current date, day of week and time on LCD. It will be initially in English format and when push button is pressed, it will be changed into Turkish format. When the button is pressed again, it will change to English again.

In parallel to this operation, the screen will show the clock screen for a fixed amount of time and show information screen for a fixed amount of time. If the button is not pressed, this loop will continue in the currently selected language indefinitely. When the button is pressed, it will change the language and start this loop of showing clock screen and then info screen until the button is pressed again.

The requested LCD screens of this assignment are given below with screen name given above the tables, character and cell coordinates given in first rows and columns:

ENGLISH CLOCK SCREEN:

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
00	0	2	:	3	4	:	5	6		P	M			E	N	G
01	0	1	.	0	5	.	2	0	2	0				S	A	T

ENGLISH INFO SCREEN:

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
00	H	H	:	M	M	:	S	S		1	2	H		L	N	G
01	D	D	.	M	M	.	Y	Y	Y	Y				D	O	W

TURKISH CLOCK SCREEN:

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
00	1	4	:	3	4	:	5	6						T	U	R
01	0	1	.	0	5	.	2	0	2	0				C	M	T

TURKISH INFO SCREEN:

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
00	S	A	:	D	A	:	S	N		2	4	H		D	İ	L
01	G	G	.	A	A	.	Y	Y	Y	Y				G	Ü	N

The abbreviations used in these screens are explained in the following table:

ENGLISH ABBREVIATION	ENGLISH EXPLANATION	TURKISH ABBREVIATION	TURKISH EXPLANATION
LNG	LANGUAGE	DİL	DİL
DOW	DAY OF WEEK	GÜN	HAFTANIN GÜNÜ
AM	ANTE MERIDIEM (BEFORE MIDDAY)		
PM	POST MERIDIEM (AFTER MIDDAY)		
MON	MONDAY	PZT	PAZARTESİ
TUE	TUESDAY	SAL	SALI
WED	WEDNESDAY	ÇAR	ÇARŞAMBA
THU	THURSDAY	PER	PERŞEMBE
FRI	FRIDAY	CUM	CUMA
SAT	SATURDAY	CMT	CUMARTESİ
SUN	SUNDAY	PAZ	PAZAR

int TIME_SCREEN_CLOCK = 2000;

A variable used to store display time for clock screen. It is same for both English and Turkish language screens. It should be 2000 milliseconds to denote 2 seconds.

int TIME_SCREEN_INFO = 1000;

A variable used to store display time for info screen. It is same for both English and Turkish language screens. It should be 1000 milliseconds to denote 1 second.

String TIME_STRING = "2021.05.01 - 14:34:56";

A variable used to store starting time of this program. You need to be able to split this string into different variables for time operations.

In reference to "TIME_STRING" variable above, you will need to deduce the weekday based on the calendar. Your program should only work for year 2021 (deducing weekday, calculating end of months or etc.), so don't try to make a perfect calendar, just make sure it works for different dates in year 2021, including year changing dates from 2020 to 2021 and 2021 to 2022.

You are advised not to use delay or a similar sleep function in this program. It is not necessary and it would make your program not responding correctly or on time. You should try to keep passed time (checking how much time has passed since previous operation or etc.) and do operations based on that information.