

Class	1MCT02
First Name:	Lara
Name	Mestdagh
Project Name :	Daily Meds
Assembly Revision :	22/08/2023
Approval Date :	/
Part Count :	33
Total Cost :	€216

Part #	Part Name	Description	Revision	Qty
1	Raspberry Pi 3 Model B	Raspberry Pi to control the entire system	1	1
2	Micro SD 16GB	SD card to put in the PI	1	1
3	Raspberry PI T-cobbler	T-cobbler to bridge the PI and breadboard	1	1
4	Breadboard (830 points)	breadboard to put all the wiring into	1	1
5	Breadboard jumper cables (MTF, MTM, FTF)	Wiring to put everything together	1	1
6	Breadboard power supply (3.3 - 5 Volt)	A separate power supply for the breadboard	1	1
7	Resitors (470, 2k, 10k ohm)	Resistors to put in between certain components and PI	1	1
8	Push button	2 Pushbuttons to dispense and confirm medication	1	2
9	Power button	A power button with a led to turn the dispenser on and off	1	1
10	Passive buzzer	A buzzer to use for the alarm sound	1	1

11	RGB LED strip (1m)	A led strip to use for the visual alarm	1	1
12	Rotary encoder	Used to change the screen and select things on it	1	1
13	LCD screen (20x4)	A screen to display all the info	1	1
14	PCF8574	A I2C bus to control our screen	1	1
15	Potentiometer	Used to control the screen brightness	1	1
16	Distance sensor	Will check if a cup is in the dispenser	1	1
17	RFID reader	Using the badge, you scan to show you own the dispenser	1	1
18	Motor driver	Used to control the stepper motor	1	1
19	Stepper motor	To control the pill holder	1	1
20	Wooden plank (122x61 cm)	The wood to make the exterior out of	1	1
21	Black spray paint	To spray the interior and exterior	1	1
22	Varnish	To cover the box once completely painted for protection	1	1
23	Sticky foil	To cover the grooves for the LED strip	1	1
24	Smaller hinges	For the top lid	1	1
25	Bigger hinges	For the back lid	1	1

26	Wood filler	To fill in any gaps	1	1
27	Set of brushes	To apply the varnish	1	1
28	2 small locks	To close both top and back lids	1	1
29	Smaller handle	For the top lid	1	1
30	Bigger handle	For the back lid	1	1
31	Thin wooden pole (8mm)	To connect the motor and medication holder	1	1
32	Wood glue	To help hold the connection better	1	1
	Total			12

Supplier

<https://www.kiwi-electronics.com/en/raspberry-pi-3-model-b-1gb-2298?src=raspberrypi>

<https://www.sossolutions.nl/16gb-sandisk-ultra-micro-sdhc-80mb-s?srsIid=AfmBOoqMy>

<https://www.hobbyelectronica.nl/product/t-cobbler-plus-module/?srsIid=AfmBOooLzfngAMUL>

<https://www.amazon.com.be/-/en/Solderless-breadboard-connection-compatible-Raspbe>

<https://www.amazon.com.be/-/nl/GTIWUNG-Jumper-Breadboard-40-pins-stekker/dp/B08LD6Z>

<https://www.otronic.nl/nl/breadboard-voeding-converter-naar-33v-en-5v.html?source=go>

<https://www.bol.com/be/nl/p/arduino-weerstand-kit-70-stuks-metaal-film-1-4-watt-5-10-27>

<https://thepihut.com/products/16mm-panel-mount-momentary-pushbutton-black>

<https://thepihut.com/products/mini-illuminated-momentary-pushbutton-blue-power-symbol>

<https://thepihut.com/products/m5stack-passive-buzzer-unit>

<https://thepihut.com/products/flexible-rgb-led-strip-neopixel-ws2812-sk6812-compatible-t>

<https://www.christians-shop.de/Arduino-Rotary-Control-Rotary-Encoder-Push-button-KY->

<https://thepihut.com/products/standard-lcd-20x4-extras>

<https://www.benselectronics.nl/pcf8574-i-o-expander-131935800.html?source=googleba>

<https://www.christians-shop.de/Potentiometer-6mm-shaft-incl-button-0-100-kOhm-White>

<https://www.christians-shop.de/Ultrasonic-Distance-Sensor-HC-SR04-Distance-Meter-UI>

<https://www.christians-shop.de/RFID-RC-522-Card-Reader-Transponder-Module-for-Ard>

<https://www.bitsandparts.nl/Stappenmotor-driver-ULN2003-p1907207?srsIid=AfmBOool>

<https://www.otronic.nl/nl/5v-4-phase-stappenmotor-28byj-48.html?source=googlebase&s>

also available from	Units
https://www.alternate.be/html/product/1436133?utm_source=Google&utm_medium=cpc&utm_campaign=Google%20Shopping	1
https://www.bol.com/be/nl/p/kingston-16gb-micro-sdhc-klasse-10-geheugenkaart-sd-ada	1
https://www.kiwi-electronics.com/en/assembled-pi-t-cobbler-plus-gpio-breakout-10586?count=1	1
https://www.amazon.com.be/-/nl/Breadboard-experimenteerkaart-solderen-PCB-testplaat	1
https://www.amazon.com.be/-/en/dp/B06WV7XHJ9?psc=1&ref=ppx_yo2ov_dt_b_product_detail	1
https://garmade.com/products/5-pcs-hw-131-power-supply-module-3-3v-5v-bread-board	1
https://www.amazon.com.be/-/en/Electrical-Electronic-Resistors-Assortment-Compliant/dp/B073333333	1
https://www.kiwi-electronics.com/en/16mm-panel-mount-momentary-pushbutton-black-2	2
https://www.bitsandparts.nl/Microswitch-drukknop-(maakcontact)-met-verlicht-power-syn	1
https://www.distrelec.be/en/passive-buzzer-unit-m5stack-u132/p/30240497?srsId=AfmE	1

<https://www.hobbyelectronica.nl/product/led-strip-ws2812b-rgb/?srsltid=AfmBOornssXnE> 1

<https://www.benselectronics.nl/rotary-encoder.html?source=googlebase> 1

<https://www.benselectronics.nl/20-x-4-lcd2004-lcd-display-blauwe-verlichting.html?sourc> 1

<https://www.bitsandparts.nl/IC-PCF8574-I-O-Port-Expander-8-bit-I2C-p113667?srsltid=A> 1

<https://www.hobbyelectronica.nl/product/1k-potentiometer/?srsltid=AfmBOorWvQdBhOF> 1

<https://www.kiwi-electronics.com/en/ultrasonic-sensor-hc-sr04-2592?country=&srsltid=A/> 1

<https://www.amazon.com.be/-/en/AZDelivery-RC522-13-56MHz-Compatible-Raspberry/c> 1

<https://www.hobbyelectronica.nl/product/12v-stappenmotor-met-uln2003-driver/?srsltid=/> 1

<https://www.hobbyelectronica.nl/product/12v-stappenmotor-met-uln2003-driver/?srsltid=/> 1

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Unit Cost	Max Cost	Real Cost
€ 49.95	€ 49.95	€ 49.95
€ 10.99	€ 10.99	€ 10.99
€ 3.95	€ 3.95	€ 3.95
€ 6.99	€ 6.99	€ 6.99
€ 9.72	€ 9.72	€ 9.72
€ 2.50	€ 2.50	€ 2.50
€ 12.99	€ 12.99	€ 12.99
€ 1.46	€ 2.92	€ 1.46
€ 1.85	€ 1.85	€ 1.85
€ 4.10	€ 4.10	€ 4.10

€ 11.13	€ 11.13	€ 11.13
€ 0.95	€ 0.95	€ 0.95
€ 17.48	€ 17.48	€ 17.48
€ 2.95	€ 2.95	€ 2.95
€ 0.56	€ 0.56	€ 0.56
€ 1.31	€ 1.31	€ 1.31
€ 1.79	€ 1.79	€ 1.79
€ 1.50	€ 1.50	€ 1.50
€ 3.85	€ 3.85	€ 3.85
€ 13.00	€ 13.00	€ 13.00
€ 8.10	€ 8.10	€ 8.10
€ 15.40	€ 15.40	€ 15.40
€ 5.25	€ 5.25	€ 5.25
€ 2.80	€ 2.80	€ 2.80
€ 5.30	€ 5.30	€ 5.30

€ 2.95	€ 2.95	€ 2.95
€ 2.75	€ 2.75	€ 2.75
€ 5.00	€ 5.00	€ 5.00
€ 2.60	€ 2.60	€ 2.60
€ 3.10	€ 3.10	€ 3.10
€ 0.75	€ 0.75	€ 0.75
€ 3.10	€ 3.10	€ 3.10
	€ 117.09	€ 216.12