

Class 1MCT6
 First Name: Tuur
 Name Vanhoutte
 Project Name : Magic Mirror
 Assembly Revision : 1.3
 Approval Date :
 Part Count : 28
 Total Cost : €313



Part #	Part Name	Description	Revision	Qty	Supplier	also available from	Units	Unit Cost	Max Cost	Real Cost
1	LG LP156WH4 (TL)(N1)	Old laptop monitor	1.0	1	Old laptop	Amazon.co.uk	each	€ -	€ -	
2	Two-way acryl mirror (15% light transmission) 600mm x 450mm	A see-through mirror to show the display while also showing your reflection	1.0	1	Pyrasied.nl	Amazon	600mm x 450mm	€ 45.40	€ 45.40	
3	Wood	Wood for the frame of the mirror	1.3	1	From a friend	Brico	each	€ 10.50	€ 10.50	
4	Controller board kit for LG display LP156WH4 (TL)(N1)	The laptop monitor needs power and an HDMI port to connect to the Pi	1.0	1	AliExpress	Amazon.co.uk	each	€ 18.26	€ 18.26	
5	Speaker	To play timers and alarms	1.2	2	Amazon.co.uk	Adafruit	each	€ 21.94	€ 43.88	
6	HDMI to Micro-HDMI connector	To connect the display to the Raspberry Pi 4	1.0	1	Allekabels.nl	Amazon.co.uk	each	€ 8.99	€ 8.99	

7	Raspberry Pi 4 2GB RAM	The device everything will run on	1.0	1	Kiwi Electronics	Amazon.co.uk	each	€ 39.95	€ 39.95
8	Raspberry Pi power supply, 5V 3A	To power the raspberry pi	1.0	1	Kiwi Electronics	Amazon.co.uk	each	€ 9.95	€ 9.95
9	Raspberry Pi GPIO breakout	To connect the Pi to the breadboard for easier assembly	1.0	1	Kiwi Electronics	Amazon.co.uk	each	€ 8.95	€ 8.95
10	Breadboard	To easily connect all components	1.0	1	Kiwi Electronics	Amazon.co.uk	each	€ 6.95	€ 6.95
11	Infrared motion detector	To activate the LED strips when someone stands in front of the mirror	1.1	1	Kiwi Electronics	Amazon.co.uk	each	€ 12.58	€ 12.58
12	LED strip	When standing in front of the mirror, this LED strip will light up	1.2	1	Kiwi Electronics	Amazon.co.uk	each	€ 19.95	€ 19.95
13	Stereo 20W Digital to Audio Converter	To convert the digital audio signal from the Pi to an analog signal the speakers can use.	1.0	1	Amazon.co.uk	Adafruit.com	each	€ 21.78	€ 21.78
14	Micro SD Card (8GB or larger)	The Raspberry Pi doesn't come with an SD card, so we need to buy this seperately to store all files	1.0	1	Kiwi Electronics	Amazon.co.uk	each	€ 8.99	€ 8.99
15	LG Display Power Adapter 12V 2A	To power the display	1.2	1	TinyTronics	Amazon.co.uk	each	€ 14.99	€ 14.99
16	Rotary encoder with pushbutton	Turn to change volume, push to dismiss alarm & timer.	1.2	1	Kiwi Electronics	TinyTronics	each	€ 5.25	€ 5.25
17	5V 2A adapter	To power the ledstrip	1.2	1	TinyTronics	Amazon.com	each	€ 8.00	€ 8.00
18	12V 2A adapter	To power the amplifier	1.2	1	TinyTronics	Amazon.com	each	€ 10.00	€ 10.00

19	DC female jack 5.5mm to terminal block	To easily connect the ledstrip to the power adapter	1.2	1	TinyTronics	Adafruit	each	€ 1.00	€ 1.00
20	One wire temperature sensor (DS18B20)	To get the room's temperature	1.2	1	TinyTronics	Sparkfun	each	€ 2.00	€ 2.00
21	470Ω resistor	Resistor for the rotary encoder	1.3	1	From Arduino starter's kit	Kiwi Electronics	each	€ 1.00	€ 1.00
22	4.7kΩ resistor	Resistor for the one-wire temperature sensor	1.3	1	From Arduino starter's kit	Kiwi Electronics	each	€ 1.00	€ 1.00
22	1N4001 Diode	To lower the PIR's output voltage by 0.7V (for safety)	1.3	1	From Arduino starter's kit	Kiwi Electronics	each	€ 1.00	€ 1.00
23	Metal hooks + screws	Mirror frame: to fix the wooden planks together	1.3	4	From a friend	Brico	each	€ 3.22	€ 12.88
Total				28					€ 313.25