

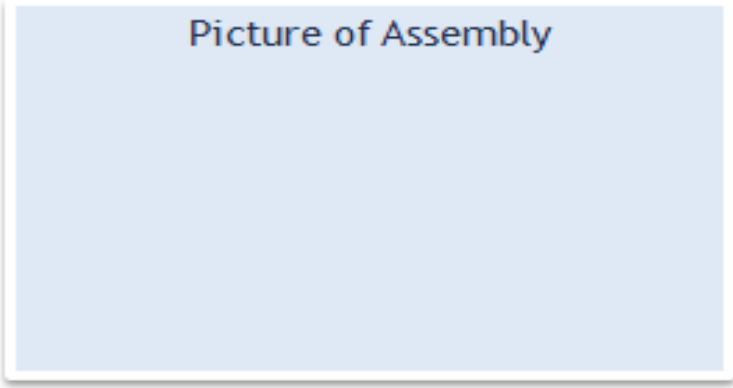
**CLASS:** 1NMCT6  
**NAME:** De Bakker  
**FIRSTNAME:** Luka  
**Assembly Name :** Digital Chessboard  
**Assembly Revision :**  
**Approval Date :**  
**Part Count :** 11  
**Total Cost :** €108

Part #	Part Name	Description	Revision	Qty
1	Raspberry Pi 3 model B	Raspberry Pi to control the entire system		1
2	Raspberry Pi T-cobbler	Breakout board for Raspberry Pi		1
3	Light Sensor Module	Light Sensor with Comparator to read piece location		4
4	Chess Board with pieces	Cheap chess board. Can put the light sensors on the bottom, enough space.		1
5	Touch Sensor	When turn is done, press this sensor and the opponent's time will tick down.		1
6	7 segment Display	One of these to display the time, this is a 7 seg with multiplexing backpack for easy use!		2
7	RFID Reader + Cards	To know who's playing, can make a database on players.		1
8	Micro SD Card	SD Card for in your raspberry pi		1
9	10K Resistors	This is 100 pieces so maybe a bit overkill, but you only need to order this once		1
10	Headers	Headers for bearboard connection, be sure to order male to male and female to male once! (So two orders in total)		2

**Total**

**11**

## Picture of Assembly



Supplier	also available from	Units	Unit Cost
<a href="https://www.amazon.com/dp/B073-CPU-1_2GHz-64-Bit-Quad-Core-1GB-RAM/ID=2788&amp;gclid=EAlaQobChM">3-CPU-1_2GHz-64-Bit-Quad-Core-1GB-RAM/ID=2788&amp;gclid=EAlaQobChM</a>		1	€ 40,08
<a href="https://www.adafruit.com/product/2028">https://www.adafruit.com/product/2028</a>	<a href="#">-Board-For-Raspberry-Pi-32-M</a>	1	€ 6,45
<a href="https://nl.aliexpress.com/item/32623615207.html?spm=a2g0o.cart.0.0.6c2c3c005qtpZV">https://nl.aliexpress.com/item/32623615207.html?spm=a2g0o.cart.0.0.6c2c3c005qtpZV</a>		1	€ 0,70
<a href="https://www.amazon.com/gp/product/B07MKLZM47/ref=ppx_yo_dt_b_asin_title_o0_0_s01?ie=UTF8&amp;psc=1">https://www.amazon.com/gp/product/B07MKLZM47/ref=ppx_yo_dt_b_asin_title_o0_0_s01?ie=UTF8&amp;psc=1</a>		1	€ 14,85
<a href="https://www.amazon.com/gp/product/B06XHJCG1Y/ref=ppx_yo_dt_b_asin_title_o0_1_s01?ie=UTF8&amp;psc=1">https://www.amazon.com/gp/product/B06XHJCG1Y/ref=ppx_yo_dt_b_asin_title_o0_1_s01?ie=UTF8&amp;psc=1</a>		2	€ 5,99
<a href="https://www.amazon.com/HiLetgo-Digital-Segment-Display-Arduino/dp/B01DKISMXX/ref=sr_1_1_ssp_o2?keywords=tm1637&amp;id=15603303018">https://www.amazon.com/HiLetgo-Digital-Segment-Display-Arduino/dp/B01DKISMXX/ref=sr_1_1_ssp_o2?keywords=tm1637&amp;id=15603303018</a>		2	€ 5,49
<a href="https://nl.aliexpress.com/item/MFRC-522-MFRC522-RC-522-RC522-Antenne-RFID-IC-Draadloze-Module-SPI-Schrijver-Reader-IC">https://nl.aliexpress.com/item/MFRC-522-MFRC522-RC-522-RC522-Antenne-RFID-IC-Draadloze-Module-SPI-Schrijver-Reader-IC</a>		1	€ 0,92
<a href="https://fr.aliexpress.com/item/100-D-origine-Sandisk-carte-micro-sd-Class10-TF-card16gb-32-gb-64-gb-128-gb/32672244686.html?spm=6860w.com">https://fr.aliexpress.com/item/100-D-origine-Sandisk-carte-micro-sd-Class10-TF-card16gb-32-gb-64-gb-128-gb/32672244686.html?spm=6860w.com</a>			€ 3,03
<a href="https://www.amazon.com/EDGELEC-Resistor-Tolerance-Resistance-Optional/dp/B07QJB31M7/ref=sr_1_1_ssp_o2?keywords=10k+resistor&amp;id=156034">https://www.amazon.com/EDGELEC-Resistor-Tolerance-Resistance-Optional/dp/B07QJB31M7/ref=sr_1_1_ssp_o2?keywords=10k+resistor&amp;id=156034</a>		1	€ 6,49
<a href="https://www.amazon.com/gp/product/B07GD3JVHD/ref=ppx_yo_dt_b_asin_title_o0_1_s01?ie=UTF8&amp;psc=1">https://www.amazon.com/gp/product/B07GD3JVHD/ref=ppx_yo_dt_b_asin_title_o0_1_s01?ie=UTF8&amp;psc=1</a>		2	€ 7,98



Max Cost	Real Cost
€ 40,08	
€ 6,45	
€ 2,80	
€ 14,85	
€ 5,99	
€ 10,98	
€ 0,92	
€ 3,03	
€ 6,49	
€ 15,96	

€ 107,55