DAFTAR PUSTAKA

[1] F. Y. Saputra, M. S. Al Amin, and Perawati, "Alat Pengukur Tinggi Badan, Berat Badan, dan Suhu Badan Digital Menggunakan Sensor Ultrasonik, Load Cell, dan Inframerah Mlx90614," *TEKNO*, vol. 19, pp. 60–67, 2022.

[2] A. Nurroqim and A. Musafa, "Rancang Bangun Timbangan Digital dengan Fasilitas Klasifikasi Indeks Massa Tubuh Menggunakan Algoritma Logika Fuzzy," *MAESTRO*, vol. 4, no. 2, pp. 231–239, 2021.

[3] T. J. Erinle, D. H. Oladebeye, and I. B. Ademiloye, "Parametric Design of Height and Weight Measuring System," *IJIREEICE*, vol. 8, no. 7, pp. 22–34, Jul. 2020, doi: 10.17148/ijireeice.2020.8705.

[4] A. Prayogie, A. Fauziah, and Syamsul, "Alat Pengukur Tinggi dan Berat Badan Otomatis Menggunakan Sensor Ultrasonic dan Load cell Berbasis Internet Of Things," *Jurnal TEKTRO*, vol. 06, no. 01, pp. 38–44, 2022.

[5] R. Kumar, P. K. Dubey, A. Zafer, A. Kumar, and S. Yadav, "Design and Development of a Temperature-Compensated Body Mass Index Measuring System," *Mapan - Journal of Metrology Society of India*, vol. 36, no. 2, pp. 287–294, Jun. 2021, doi: 10.1007/s12647-021-00448-y.

[6] World Health Organization, "Obesity and Health [Internet]," 2022. https://www.who.int/health-topics/obesity (accessed Jul. 12, 2023).

[7] D. P. Wahyuni, A. H. Endaryanto, D. P. Priasmoro, and A. Abdullah, "Pengaruh Pemberian Percutaneus Electrical Stimulation Terhadap Lingkar Pinggang pada Penderita Obesitas Sentral (di Lingkungan Akademi Akupunktur Surabaya)," *Jurnal Keperawatan Muhammadiyah*, vol. 7, no. 1, pp. 147–151, 2022.

[8] S. Nurohmi, N. Marfu'ah, M. D. Naufalina, S. A. H. Farhana, and M. El Riza, "Rasio Lingkar Pinggang-Pinggul dan Kaitannya dengan Kadar Kolesterol Total pada Wanita Dewasa," *Nutri-Sains: Jurnal Gizi, Pangan dan Aplikasinya*, vol. 4, no. 1, pp. 25–38, May 2021, doi: 10.21580/ns.2020.4.1.4706.

[9] U. Rahmalisa and Y. Yulisman, “Automatic Height and Weight Measurement Integrated Database System,” *Jurnal Teknologi dan Open Source*, vol. 4, no. 2, pp. 248–253, Dec. 2021, doi: 10.36378/jtos.v4i2.1792.

[10] M. N. Zakaria, Koesmarijanto, and M. El Qibthiyah, “Design of Monitoring System of Height, Weight and Body Mass Index Using Android-Based Nodemcu ESP8266,” *Jurnal Jaringan Telekomunikasi*, vol. 12, no. 1, pp. 20–25, 2022.

[11] Hidayat and O. Fajrianti, “Rancang Bangun Penghitung Indeks Massa Tubuh Elektronik Berbasis Mikrokontroler dan Android,” *Nusantara Journal of Computers and Its Application (NJCA)*, vol. 5, no. 1, pp. 16–20, 2020.

[12] P2PTM Kemenkes RI, “Bagaimana Cara Mengukur Indeks Massa Tubuh (IMT) / Berat Badan Normal,” p2ptm.kemkes, 2021. https://p2ptm.kemkes.go.id/infographic-p2ptm/obesitas/bagaimana-cara-mengukur-indeks-massa-tubuh-imt-berat-badan-normal (accessed Jan. 22, 2023).

[13] A. Yanie, Y. Ananda, and L. A. Siregar, “Rancang Bangun Peralatan Deteksi Panas Kabel pada Panel Listrik untuk Mengatasi Beban Lebih,” *Journal of Electrical Technology*, vol. 6, no. 2, pp. 51–57, 2021.

[14] Tokopedia, “Kabel Elemen Pemanas Lantai rumah Infrared Heating 12K 33Ohm 100m - Merah,” 2022. https://www.tokopedia.com/ (accessed Jul. 13, 2023).

[15] Y. S. Hakim, Setyoko, and Y. Tursinawati, “Relationship Between Body Mass Index and Waist Circumference with Isolated Systolic Hypertension in the Elderly,” *Journal of Biomedika and Healty*, vol. 5, no. 3, pp. 182–191, Dec. 2022, doi: 10.18051/jbiomedkes.2022.v5.182-191.

[16] T. Sulistyorini, N. Sofi, and E. Sova, “Pemanfaatan Nodemcu Esp8266 Berbasis Android (Blynk) Sebagai Alat Mematikan dan Menghidupkan Lampu,” *Jurnal Ilmiah Teknik (JUIT)*, vol. 1, no. 3, pp. 40–53, 2022.

[17] I. Gunawan, T. Akbar, and M. G. Ilham, “Prototipe Penerapan Internet of Things (IoT) pada Monitoring Level Air Tandon Menggunakan Nodemcu Esp8266 dan Blynk,” *Jurnal Informatika dan Teknologi*, vol. 3, no. 1, pp. 1–7, 2020.

[18] A. Budiman and Y. Ramdhani, “Pengontrolan Alat Elektronik Menggunakan Modul Nodemcu Esp8266 dengan Aplikasi Blynk Berbasis IoT,” *eProsiding Teknik Informatika (PROTEKTIF)*, vol. 2, no. 1, pp. 68–74, 2021.

[19] A. D. Pangestu, F. Ardianto, and B. Alfaresi, “Sistem Monitoring Beban Listrik Berbasis Arduino Nodemcu Esp8266,” *Jurnal Ampere*, vol. 4, no. 1, pp. 180–197, 2019.

[20] H. Purwanto, M. Riyadi, D. W. W. Astuti, and I. W. A. W. Kusuma, “Komparasi Sensor Ultrasonik HC-SR04 dan JSN-SR04T untuk Aplikasi Sistem Deteksi Ketinggian Air,” *Jurnal SIMETRIS*, vol. 10, no. 2, pp. 717–723, 2019.

[21] I. Junaed, Fauziah, and R. Nuraini, “Tempat Sampah Pintar Berbasis Sensor HC-SR04 Menggunakan Arduino Uno R3,” *Jurnal Sains Komputer dan Informatika (J-SAKTI)*, vol. 5, no. 2, pp. 666–676, 2021.

[22] S. Patwardhan, D. Karivadekar, P. Phadtare, K. More, and S. Rabade, “Smart Blind Stick Using Arduino UNO,” *International Journal of Scientific Research & Engineering Trends*, vol. 8, no. 3, pp. 1301–1303, 2022.

[23] A. Wibowo and L. A. Supriyono, “Analisis Pemakaian Sensor Load cell Dalam Perhitungan Berat Benda Padat dan Cair Berbasis Microcontroller,” *Elkom: Jurnal Elektronika dan Komputer* , vol. 12, no. 1, pp. 1–5, 2019.

[24] D. Y. Widagdo, Koesmarijanto, and F. Arinie, “Sistem Pencatatan Hasil Timbangan Menggunakan Sensor Load Cell Melalui Database Berbasis Arduino Uno,” *Jurnal JARTEL*, vol. 10, no. 1, pp. 13–19, 2020.

[25] M. E. M. Simbolon and K. D. A. Firdausi, “Prototipe Alat Ukur Indeks Massa Tubuh Menggunakan Infra Merah Prototype of Body Mass Index Measuring Instrument Using Infrared,” *Multilateral : Jurnal Pendidikan Jasmani dan Olaraga*, vol. 18, no. 2, pp. 76–86, 2019.

[26] D. I. Krisnadi and A. Ridwanto, “Rancang Bangun Alat pengukur Indeks Massa Tubuh (IMT) Berbasis Android,” *JOULE: Jurnal ilmiah Teknologi Energi, Teknologi Media Komunikasi dan Instrumentasi Kendali.* , vol. 1, no. 1, pp. 16–24, 2021.

[27] R. Agusli, R. Tullah, and N. Karisma, “Alat ukur tinggi dan Berat Badan Berbasis Arduion Uno,” *Academic Journal of Computer Science Research (AJCSR)*, vol. 3, no. 1, pp. 26–31, 2021.

[28] A. Saputra, Junaidi, A. Supriyanto, and A. Surtono, “Desain dan Realisasi Alat Ukur Massa (Neraca Digital) Menggunakan Sensor Load Cell Berbasis Arduino,” *Jurnal Teori dan Aplikasi Fisika*, vol. 10, no. 2, pp. 159–168, 2022.

[29] H. Marga, “Alat Ukur Berat Badan, Tinggi Badan dan Suhu Badan di Puskesmas dengan Output Print,” Skripsi, Program Studi S1 Sistem Komputer, Institut Informatika dan Bisnis Darmajaya, Bandar Lampung, 2021.

[30] D. A. Saputra, Amaruddin, N. Utami, and R. Setiawan, “Rancang Bangun Alat Pemberi Pakan Ikan Menggunakan Mikrokontroler,” *Jurnal ICTEE*, vol. 1, no. 1, pp. 15–19, 2020.

[31] M. Natsir, D. B. Rendra, and A. D. Y. Anggara, “Implementasi IoT untuk Sistem Kendali AC Otomatis pada Ruang Kelas di Universitas Serang Raya,” *Jurnal PROSISKO*, vol. 6, no. 1, pp. 69–72, 2019, [Online]. Available: https://www.arduino.cc/en/Products/Counterfeit

[32] S. Nirwan and M.S. Hafidz, “Rancang Bangun Aplikasi untuk Prototipe Sistem Monitoring Konsumsi Energi Listrik pada Peralatan Elektronik Berbasis PZEM-004T,” *Jurnal Teknik Informatika*, vol. 12, no. 2, pp. 22–28, 2020.

[33] Sutono and F. Al Anwar, “Perancangan dan Implementasi Smartlamp berbasis Arduino Uno dengan menggunakan Smartphone Android,” *Media Jurnal Informatika (MJI)*, vol. 11, no. 2, pp. 36–41, 2019, [Online]. Available: http://jurnal.unsur.ac.id/mjinformatika

[34] A. Hanafie and R. Ramadhan, “Perancangan Alat Pendeteksi Gerak Sebagai Sistem Keamanan Menggunakan ESP32 Cam Berbasis IoT,” *Jurnal Teknologi Komputer (JTEK)*, vol. 2, no. 2, pp. 142–148, 2022, [Online]. Available: http://jtek.ft-uim.ac.id/index.php/jtek

[35] C. G. I. Raditya, P. A. S. Dharma, I. K. A. A. Putra, I. B. K. Sugirianta, and I. B. I. Purnama, “Pendeteksi Kebocoran Gas dan Kebakaran Dini Menggunakan NodeMCU Berbasis Telegram,” *Majalah Ilmiah Teknologi Elektro*, vol. 21, no. 1, p. 13, Jul. 2022, doi: 10.24843/mite.2022.v21i01.p03.

LAMPIRAN

Lampiran 1 Tabel Data Pengujian Sensor HC-SR04

Jarak (cm)	**Nilai Sensor Jarak (cm)**	***Error* (%)**
0,00	6,00	0,00
10,00	10,00	0,00
20,00	20,00	0,00
30,00	30,00	0,00
40,00	40,00	0,00
50,00	50,00	0,00
60,00	60,00	0,00
70,00	70,00	0,00
80,00	79,80	0,25
90,00	89,70	0,33
100,00	99,50	0,50
110,00	110,00	0,00
120,00	119,40	0,50
130,00	129,80	0,15
140,00	139,80	0,14
150,00	149,80	0,13
160,00	159,70	0,19
170,00	169,80	0,12
180,00	179,60	0,22
190,00	190,60	0,32
200,00	200,50	0,25
Nilai Rata-Rata Error		**0,15**
Nilai Akurasi		**99,85**

Lampiran 2 Nilai Tegangan Sensor *Load cell* Terhadap Beban

Timbangan Digital (Kg)	HX711 (Volt)
0,00	0,04
10,00	0,13
20,00	0,21
30,00	0,30
40,00	0,38
50,00	0,46
60,00	0,55
70,00	0,63
80,00	0,70
90,00	0,80
100,00	0,88

Lampiran 3 Konversi Nilai Tegangan Sensor *Load cell* ke Digital

$$y = ax + b$$
$$y = 119{,}79x - 5{,}3196$$

1. Nilai x = 0,04
   y = 119,79 (0,04)-5,3196
   = -0,53
2. Nilai x = 0,13
   y = 119,79 (0,13)-5,3196
   = 10,25
3. Nilai x = 0,21
   y = 119,79 (0,21)-5,3196
   = 19,84
4. Nilai x = 0,30
   y = 119,79 (0,30)-5,3196
   = 30,62
5. Nilai x = 0,38
   y = 119,79 (0,38)-5,3196
   = 40,20
6. Nilai x = 0,46
   y = 119,79 (0,46)-5,3196
   = 49,78
7. Nilai x = 0,55
   y = 119,79(0,55)-5,3196
   = 60,56
8. Nilai x = 0,63
   y = 119,79(0,63)-5,3196
   = 70,15
9. Nilai x = 0,70
   y = 119,79(0,70)-5,3196
   = 78,53
10. Nilai x = 0,80
    y = 119,79(0,80)-5,3196
    = 90,51
11. Nilai x = 0,88
    y = 119,79 (0,88)-5,3196
    = 100,10

Lampiran 4 Tabel perbandingan Nilai *Load cell* dengan Alat Standar

Timbangan Digital (Kg)	Nilai Sensor (Kg)	*Error* (%)
0,00	-0,53	0,00
10,00	10,25	2,53
20,00	19,84	0,82
30,00	30,62	2,06
40,00	40,20	0,50
50,00	49,78	0,43
60,00	60,56	0,94
70,00	70,15	0,21
80,00	78,53	1,83
90,00	90,51	0,57
100,00	100,10	0,10
Rata-Rata Error		**0,999**
Nilai Akurasi		**99,001**

Lampiran 5 Tabel Data Hasil Pengukuran Sensor Lingkar Pinggang

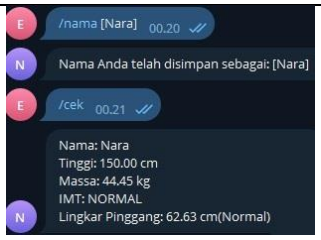
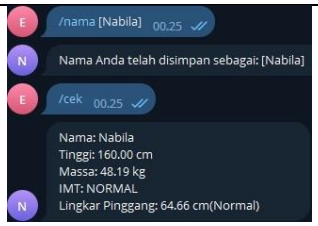
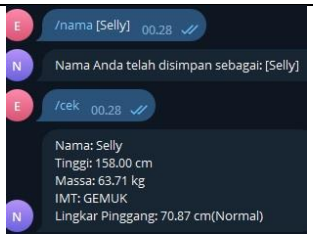
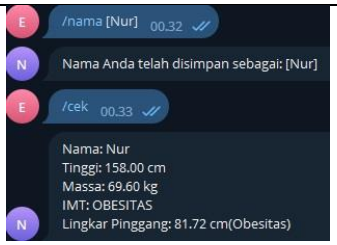
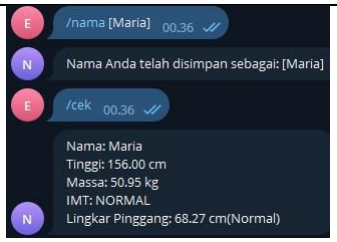
Alat Standart (cm)	Sensor		*Error* (%)
	Nilai ADC	Nilai Sensor (cm)	
2,00	950,00	1,61	19,50
3,00	945,00	2,33	22,23
4,00	940,00	3,06	23,60
5,00	928,00	4,79	4,18
6,00	925,00	5,22	12,92
7,00	912,00	7,10	1,50
8,00	904,00	8,26	3,27
9,00	902,00	8,55	4,99
10,00	896,00	9,42	5,82
11,00	879,00	11,88	7,97
12,00	876,00	12,31	2,59
13,00	873,00	12,74	1,97
14,00	854,00	15,49	10,65
15,00	844,00	16,94	12,92
16,00	833,00	18,53	15,80
17,00	826,00	19,54	14,94
18,00	824,00	19,83	10,16
19,00	822,00	20,12	5,89
20,00	819,00	20,55	2,76

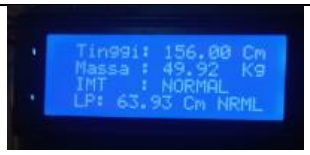
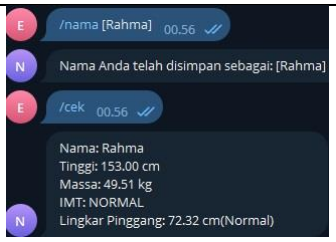
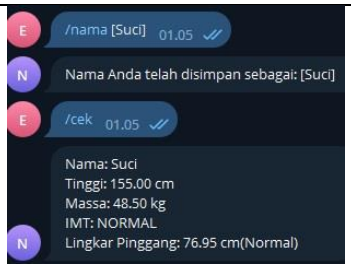
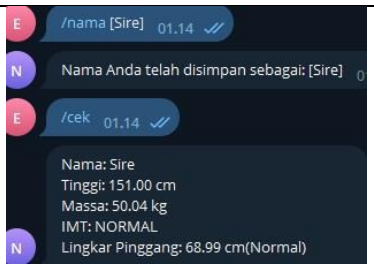
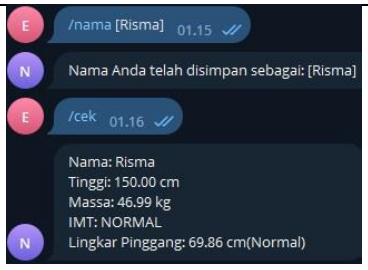
21,00	813,00	21,42	2,00
22,00	811,00	21,71	1,32
23,00	805,00	22,58	1,84
24,00	795,00	24,02	0,10
25,00	792,00	24,46	2,17
26,00	788,00	25,04	3,71
27,00	784,00	25,61	5,13
28,00	771,00	27,49	1,81
29,00	761,00	28,94	0,21
30,00	759,00	29,23	2,57
31,00	747,00	30,96	0,12
32,00	738,00	32,27	0,83
33,00	735,00	32,70	0,91
34,00	726,00	34,00	0,00
35,00	720,00	34,87	0,38
36,00	715,00	35,59	1,14
37,00	708,00	36,60	1,07
38,00	700,00	37,76	0,63
39,00	692,00	38,92	0,21
40,00	684,00	40,07	0,18
41,00	681,00	40,51	1,20
42,00	675,00	41,38	1,49
43,00	669,00	42,24	1,76
44,00	663,00	43,11	2,02
45,00	652,00	44,70	0,66
46,00	640,00	46,44	0,95
47,00	636,00	47,01	0,03
48,00	629,00	48,03	0,06
49,00	622,00	49,04	0,08
50,00	616,00	49,91	0,19
51,00	607,00	51,21	0,41
52,00	601,00	52,08	0,14
53,00	594,00	53,09	0,17
54,00	586,00	54,24	0,45
55,00	580,00	55,11	0,20
56,00	574,00	55,98	0,04
57,00	567,00	56,99	0,01
58,00	559,00	58,15	0,26
59,00	553,00	59,02	0,03

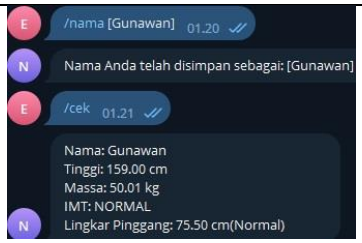
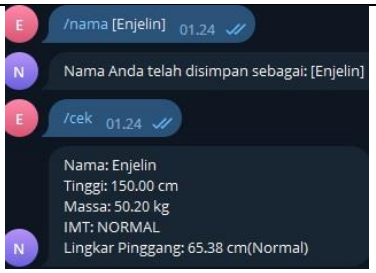
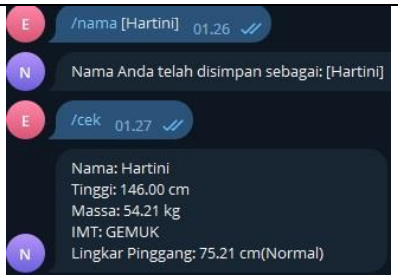
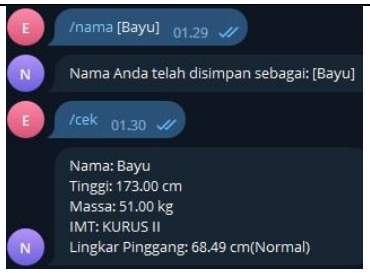
60,00	547,00	59,88	0,19
61,00	541,00	60,75	0,41
62,00	533,00	61,91	0,15
63,00	526,00	62,92	0,13
64,00	520,00	63,79	0,33
65,00	516,00	64,37	0,97
66,00	508,00	65,52	0,72
67,00	507,00	65,67	1,99
68,00	494,00	67,55	0,67
69,00	486,00	68,70	0,43
70,00	477,00	70,01	0,01
71,00	473,00	70,58	0,59
72,00	466,00	71,60	0,56
73,00	460,00	72,46	0,73
74,00	452,00	73,62	0,51
75,00	446,00	74,49	0,68
76,00	439,00	75,50	0,66
77,00	436,00	75,93	1,38
78,00	426,00	77,38	0,79
79,00	420,00	78,25	0,95
80,00	411,00	79,55	0,56
81,00	403,00	80,71	0,36
82,00	396,00	81,72	0,34
83,00	387,00	83,02	0,02
84,00	378,00	84,32	0,38
85,00	373,00	85,04	0,05
86,00	365,00	86,20	0,23
87,00	357,00	87,36	0,41
88,00	350,00	88,37	0,42
89,00	343,00	89,38	0,43
90,00	334,00	90,68	0,76
91,00	330,00	91,26	0,29
92,00	325,00	91,99	0,02
93,00	317,00	93,14	0,15
94,00	309,00	94,30	0,32
95,00	303,00	95,17	0,17
96,00	296,00	96,18	0,19
97,00	290,00	97,05	0,05
98,00	281,00	98,35	0,35

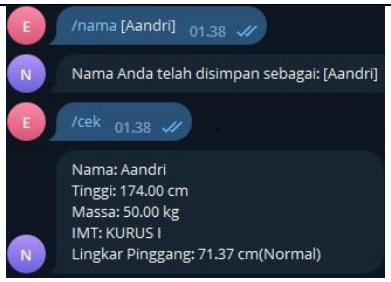
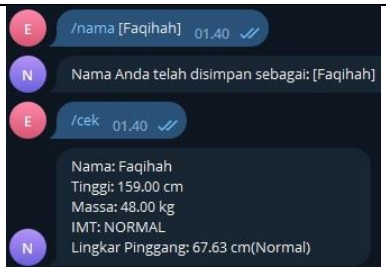
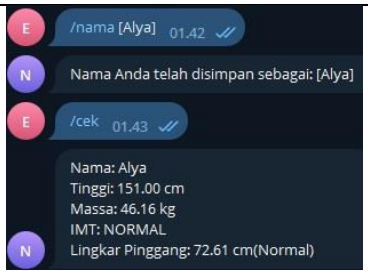
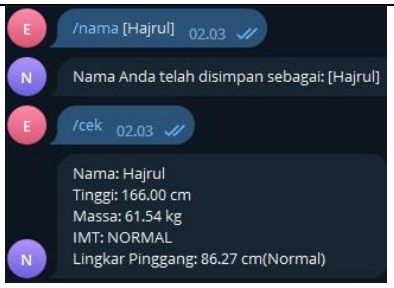
99,00	274,00	99,36	0,36
100,00	270,00	99,94	0,06
101,00	259,00	101,53	0,52
102,00	252,00	102,54	0,53
103,00	246,00	103,41	0,40
104,00	241,00	104,13	0,13
105,00	237,00	104,71	0,28
106,00	229,00	105,87	0,13
107,00	222,00	106,88	0,11
108,00	216,00	107,75	0,23
109,00	207,00	109,05	0,04
110,00	200,00	110,06	0,05
111,00	192,00	111,22	0,20
112,00	186,00	112,08	0,08
113,00	178,00	113,24	0,21
114,00	172,00	114,11	0,10
115,00	164,00	115,27	0,23
116,00	158,00	116,13	0,11
117,00	150,00	117,29	0,25
118,00	146,00	117,87	0,11
119,00	137,00	119,17	0,14
120,00	128,00	120,47	0,39
121,00	121,00	121,48	0,40
122,00	117,00	122,06	0,05
123,00	109,00	123,22	0,18
124,00	102,00	124,23	0,19
125,00	94,00	125,39	0,31
126,00	87,00	126,40	0,32
127,00	81,00	127,27	0,21
128,00	77,00	127,85	0,12
129,00	73,00	128,42	0,45
130,00	69,00	129,00	0,77
131,00	57,00	130,74	0,20
132,00	49,00	131,89	0,08
133,00	42,00	132,91	0,07
Rata -Rata Error			**1,87**
Nilai Akurasi			**98,13**

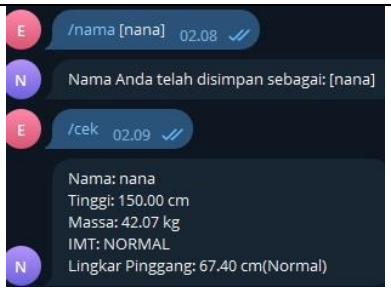
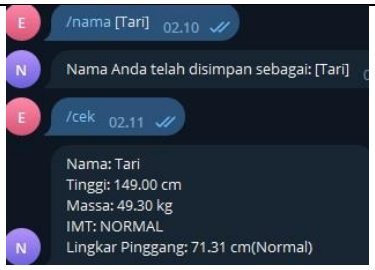
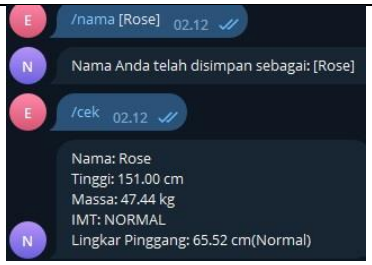
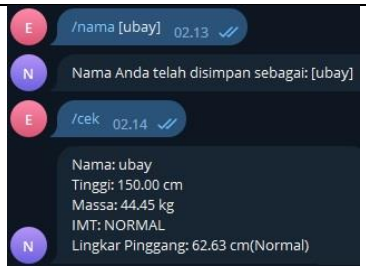
Lampiran 6 Tampilan IMT melalui LCD dan Aplikasi *Telegram*

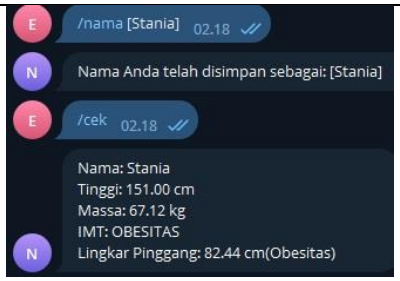
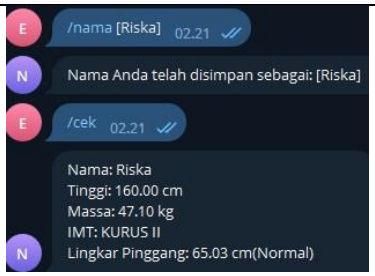
No	Nama	Tampilan LCD	Tampilan *Telegram*
1	Nara		
2	Nabila		
3	Selly		
4	Nur		
5	Maria		
6	Tiche		

7	Rati		
8	Daya		
9	Rahma		
10	Suci		
11	Sire		
12	Risma		

13	Hajar		
14	Gunawan		
15	Enjelin		
16	Hartini		
17	Bayu		

18	Aandri		
19	Faqihah		
20	Alya		
21	Hajrul		
22	Lela		

23	Rinan		
24	Nana		
25	Tari		
26	Rose		
27	Ubay		

28	Stania		
29	Riska		

Lampiran 7 Nilai Perhitungan Indeks Massa Tubuh

$$\text{IMT} = \frac{M_b}{(T_b)^2}$$

Keterangan:

M_b : Massa badan (kg)

T_b : Tinggi badan (m)

1. Nara

$$IMT = \frac{44{,}45}{(1{,}50)^2}$$

$$IMT = \frac{44{,}45}{2{,}25}$$

$$IMT = 19{,}76\ kg/m^2$$

2. Nabila

$$IMT = \frac{48{,}19}{(1{,}60)^2}$$

$$IMT = \frac{48{,}19}{2{,}56}$$

16 Enjelin

$$IMT = \frac{50{,}20}{(1{,}50)^2}$$

$$IMT = \frac{50{,}20}{2{,}25}$$

$$IMT = 22{,}31\ kg/m^2$$

17. Hartini

$$IMT = \frac{54{,}21}{(1{,}46)^2}$$

$$IMT = \frac{54{,}21}{2{,}13}$$

$$IMT = 25{,}45\ kg/m^2$$

$$IMT = 18{,}82\ kg/m^2$$

3. Selly

$$IMT = \frac{63{,}71}{(1{,}58)^2}$$

$$IMT = \frac{63{,}71}{2{,}50}$$

$$IMT = 25{,}48\ kg/m^2$$

4. Nur

$$IMT = \frac{69{,}60}{(1{,}58)^2}$$

$$IMT = \frac{69{,}60}{2{,}50}$$

$$IMT = 27{,}84\ kg/m^2$$

5. Maria

$$IMT = \frac{50{,}95}{(1{,}56)^2}$$

$$IMT = \frac{50{,}95}{2{,}43}$$

$$IMT = 20{,}97\ kg/m^2$$

6. Tiche

$$IMT = \frac{50{,}44}{(1{,}49)^2}$$

$$IMT = \frac{50{,}44}{2{,}22}$$

$$IMT = 22{,}72\ kg/m^2$$

7. Rati

18. Bayu

$$IMT = \frac{51{,}00}{(1{,}73)^2}$$

$$IMT = \frac{51{,}00}{2{,}99}$$

$$IMT = 17{,}06\ kg/m^2$$

19. Aandri

$$IMT = \frac{50{,}00}{(1{,}74)^2}$$

$$IMT = \frac{50{,}00}{3{,}03}$$

$$IMT = 16{,}50\ kg/m^2$$

20. Faqihah

$$IMT = \frac{48{,}00}{(1{,}59)^2}$$

$$IMT = \frac{48{,}00}{2{,}53}$$

$$IMT = 18{,}97\ kg/m^2$$

21. Alya

$$IMT = \frac{46{,}16}{(1{,}51)^2}$$

$$IMT = \frac{46{,}16}{2{,}28}$$

$$IMT = 20{,}25\ kg/m^2$$

22. Hajrul

$$IMT = \frac{61{,}54}{(1{,}66)^2}$$

$$IMT = \frac{38{,}89}{(1{,}55)^2}$$

$$IMT = \frac{38{,}89}{2{,}40}$$

$$IMT = 16{,}20\ kg/m^2$$

8. Daya

$$IMT = \frac{49{,}92}{(1{,}56)^2}$$

$$IMT = \frac{49{,}92}{2{,}43}$$

$$IMT = 20{,}54\ kg/m^2$$

9. Stania

$$IMT = \frac{67{,}12}{(1{,}51)^2}$$

$$IMT = \frac{67{,}12}{2{,}28}$$

$$IMT = 29{,}44\ kg/m^2$$

10. Rahma

$$IMT = \frac{49{,}51}{(1{,}53)^2}$$

$$IMT = \frac{49{,}51}{2{,}34}$$

$$IMT = 21{,}16\ kg/m^2$$

11. Suci

$$IMT = \frac{48{,}50}{(1{,}55)^2}$$

$$IMT = \frac{48{,}50}{2{,}40}$$

$$IMT = \frac{61{,}54}{2{,}76}$$

$$IMT = 22{,}30\ kg/m^2$$

23. Lela

$$IMT = \frac{45{,}06}{(1{,}47)^2}$$

$$IMT = \frac{45{,}06}{2{,}16}$$

$$IMT = 20{,}86\ kg/m^2$$

24. Rinan

$$IMT = \frac{53{,}46}{(1{,}50)^2}$$

$$IMT = \frac{53{,}46}{2{,}25}$$

$$IMT = 23{,}76\ kg/m^2$$

25. Tari

$$IMT = \frac{49{,}30}{(1{,}49)^2}$$

$$IMT = \frac{49{,}30}{2{,}22}$$

$$IMT = 22{,}21\ kg/m^2$$

26. Maria

$$IMT = \frac{47{,}44}{(1{,}51)^2}$$

$$IMT = \frac{47{,}44}{2{,}28}$$

$$IMT = 20{,}81\ kg/m^2$$

$IMT = 20{,}21\ kg/m^2$

12. Sire

$$IMT = \frac{50{,}04}{(1{,}51)^2}$$

$$IMT = \frac{50{,}04}{2{,}28}$$

$IMT = 21{,}95\ kg/m^2$

13. Risma

$$IMT = \frac{46{,}99}{(1{,}50)^2}$$

$$IMT = \frac{46{,}99}{2{,}25}$$

$IMT = 20{,}88\ kg/m^2$

14. Hajar

$$IMT = \frac{50{,}20}{(1{,}52)^2}$$

$$IMT = \frac{50{,}20}{2{,}31}$$

$IMT = 21{,}73\ kg/m^2$

15. Gunawan

$$IMT = \frac{50{,}01}{(1{,}59)^2}$$

$$IMT = \frac{50{,}01}{2{,}53}$$

$IMT = 19{,}77\ kg/m^2$

27 Ubay

$$IMT = \frac{44{,}45}{(1{,}50)^2}$$

$$IMT = \frac{44{,}45}{2{,}25}$$

$IMT = 19{,}76\ kg/m^2$

28 Riska

$$IMT = \frac{47{,}10}{(1{,}60)^2}$$

$$IMT = \frac{47{,}10}{2{,}56}$$

$IMT = 18{,}40\ kg/m^2$

29. Nana

$$IMT = \frac{42{,}07}{(1{,}50)^2}$$

$$IMT = \frac{42{,}07}{2{,}25}$$

$IMT = 18{,}70\ kg/m^2$

Lampiran 8 Dokumentasi Pengambilan Data