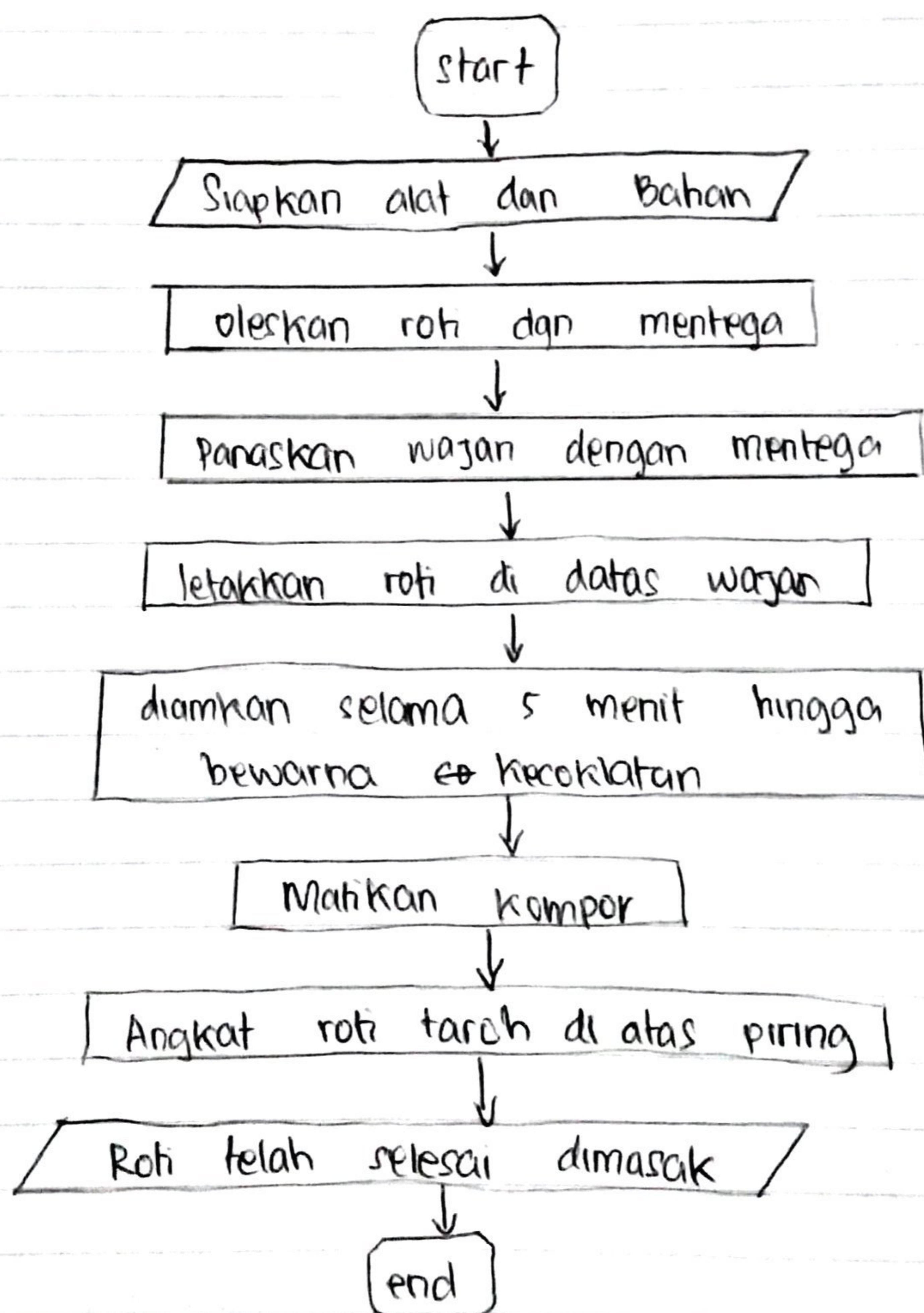


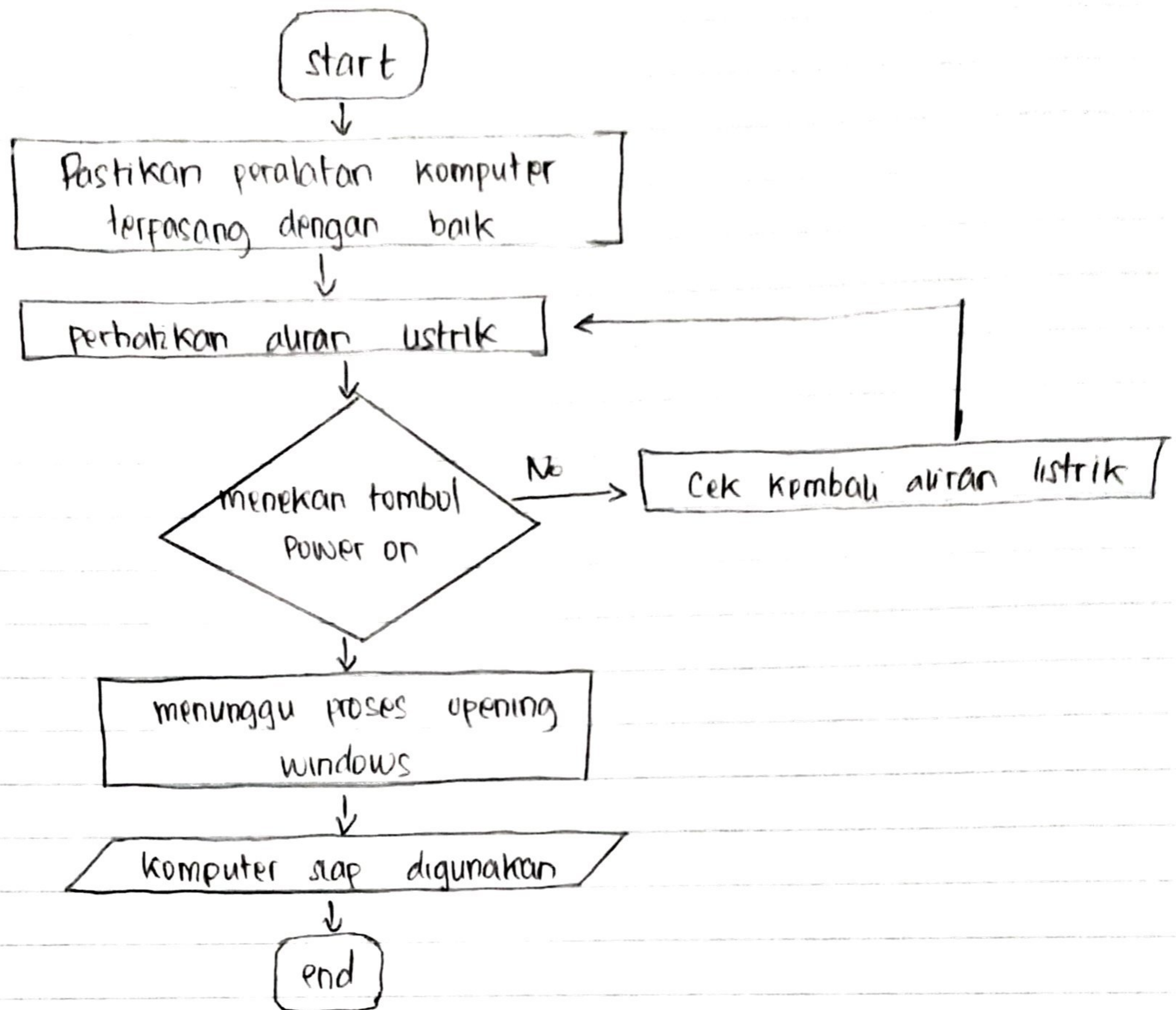
Nama : Widya Netriazal
NIM : 2201082019
Kelas : Teknik Komputer 1B
Matkul : Pemrograman Berbasis objek.

1.7 Latihan

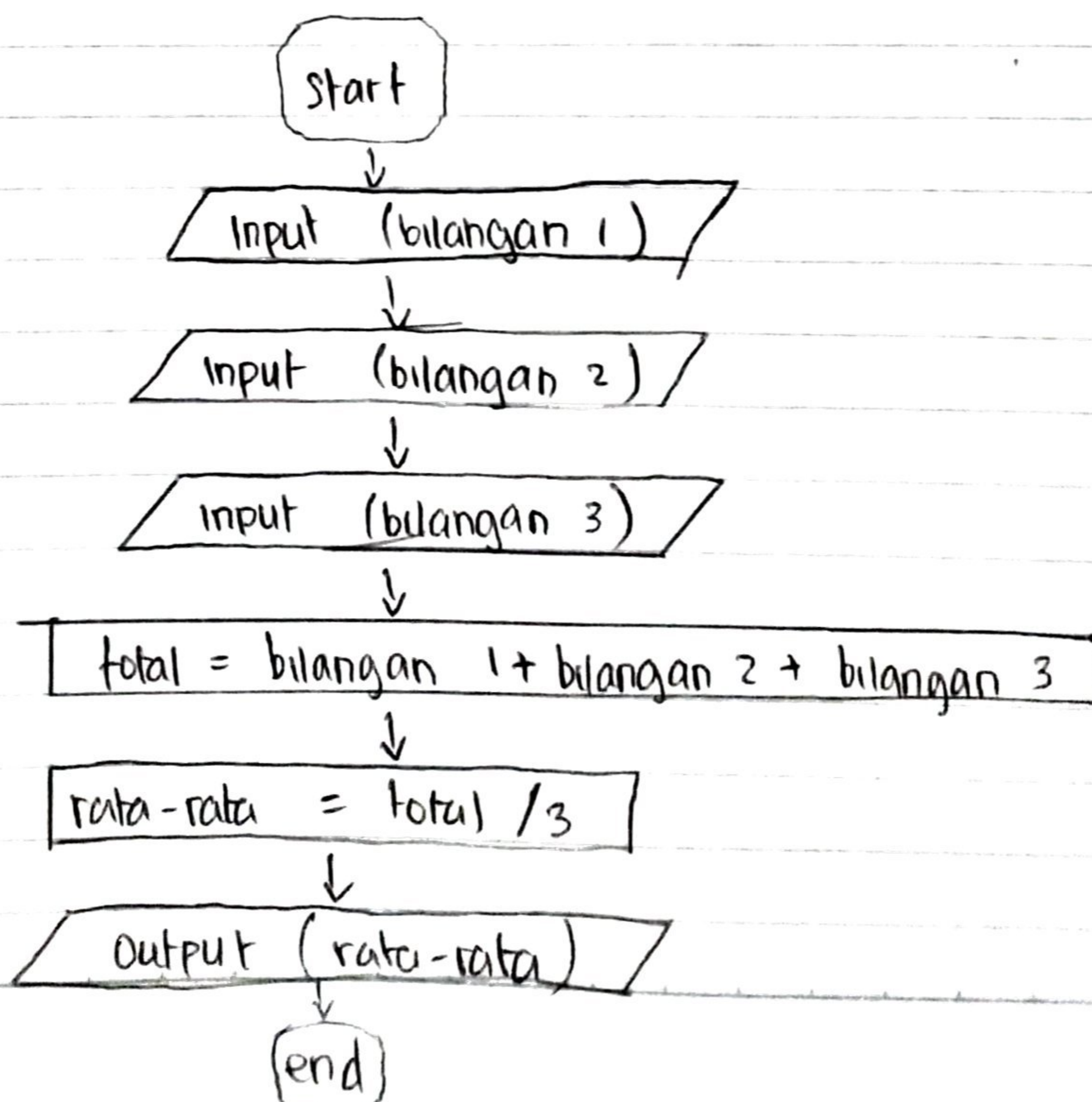
1.7.1 Menyusun algoritma
flowchart / Pseudocode
1. Memasak Roti



2. Menggunakan komputer di Laboratorium



3. Menghitung rata-rata dari 3 bilangan



1. 7 2 Konversi Sistem Bilangan

1. 1980_{10} ke sistem bilangan biner, Heksadesimal dan oktal

Biner	2	1980	0
	2	990	0
	2	495	1
	2	247	1
	2	123	1
	2	61	1
	2	30	0
	2	15	1
	2	7	1
	2	3	1
	2	1	1
		0	

oktal	8	1980	4
	8	247	7
	8	30	6
	8	3	3
		0	

$\Rightarrow 3674_8$

$\Rightarrow 11110111100$

Heksadesimal	16	1980	12
	16	123	11
	16	7	7
		0	

$\Rightarrow 7BC_{16}$

2. 1001001101_2 ke sistem bilangan Desimal, heksadesimal dan oktal

$$\begin{aligned}
 \text{Desimal} &= 0 \times 2 + 1 = 1 \\
 &1 \times 2 + 0 = 2 \\
 &2 \times 2 + 0 = 4 \\
 &4 \times 2 + 1 = 9 \\
 &9 \times 2 + 0 = 18 \\
 &18 \times 2 + 0 = 36 \\
 &36 \times 2 + 1 = 73 \\
 &73 \times 2 + 1 = 143 \\
 &143 \times 2 + 0 = 286 \\
 &286 \times 2 + 1 = 589
 \end{aligned}$$

$\Rightarrow 589_{10}$

$$\begin{aligned}
 \text{Heksadesimal} &= 10 \ 1000 \ 1101 \\
 &2 \ 4 \ 13 \\
 &2 \ 4 \ d \\
 &\Rightarrow 24D_{16}
 \end{aligned}$$

$$\begin{aligned}
 \text{Oktal} &= 1 \ 001 \ 001 \ 101 \\
 &1 \ 1 \ 1 \ 5 \\
 &\Rightarrow 1115_8
 \end{aligned}$$

3. 76_8 ke sistem bilangan biner, Heksadesimal dan desimal

$$\begin{array}{r} \text{Biner} = \quad 7 \quad 6 \\ \quad \quad 111 \mid 110 \\ \Rightarrow 11110_2 \end{array}$$

$$\begin{array}{r} \text{Desimal} = \quad 11 \mid 1110 \\ \quad \quad \quad 3 \quad \quad 4 \\ \Rightarrow 3E \end{array}$$

$$\begin{array}{r} \text{Heksadesimal} = \quad 7 \quad 6 \\ \quad \quad 6 \times 8^0 = 6 \\ \quad \quad 7 \times 8^1 = \frac{56}{62} + \\ \Rightarrow 62_{10} \end{array}$$

4. $43F_{16}$ ke sistem bilangan biner, desimal dan oktal

$$\begin{array}{r} \text{Biner} = \quad 4 \mid 3 \mid F \\ \quad \quad 100 \mid 0011 \mid 1111 \\ \Rightarrow 100001111_2 \end{array}$$

$$\begin{array}{r} \text{Oktal} = \quad 10 \mid 000 \mid 111 \mid 111 \\ \quad \quad 2 \quad 0 \quad 7 \quad 7 \\ \Rightarrow 2077_8 \end{array}$$

$$\begin{array}{r} \text{Desimal} = \quad 43F \\ \quad \quad f \times 16^0 = 15 \\ \quad \quad 3 \times 16^1 = 48 \\ \quad \quad 4 \times 16^2 = \frac{1024}{1087} + \\ \Rightarrow 1087_{10} \end{array}$$