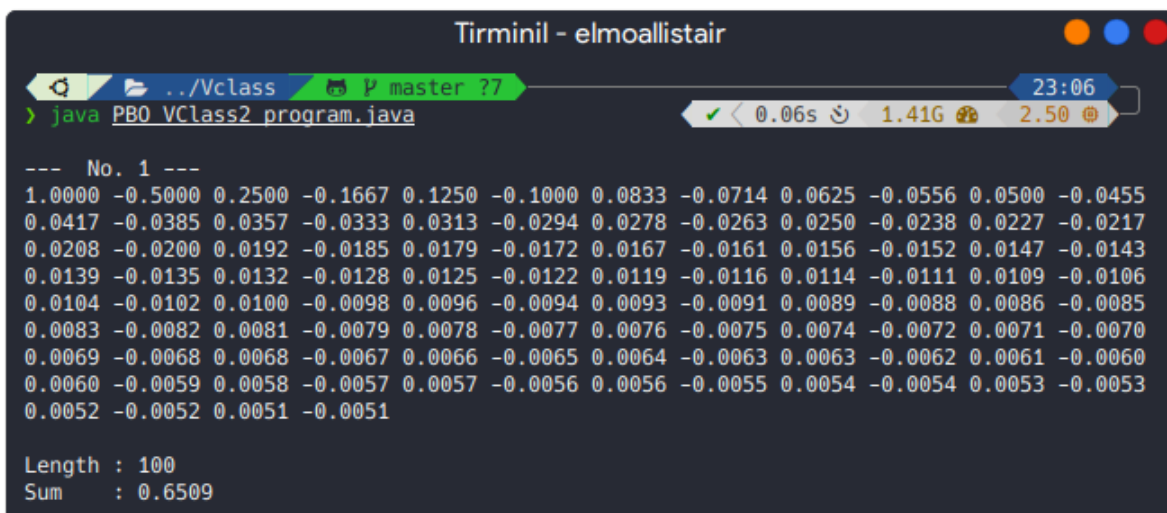


Nama : Elmo Allistair
Kelas : 3KA17
NPM : 12118220

1. Buat algoritma untuk menghitung jumlah dari deret berikut ini sampai 100 suku yang pertama: $1 - \frac{1}{2} + \frac{1}{4} - \frac{1}{6} + \frac{1}{8} - \frac{1}{10} + \frac{1}{12} - \dots$

```
1 // Elmo Allistair
2 // 12118220
3 // 3KA17
4
5 static void soal_1() {
6     double start=1, curr_num=start, sum=0, temp;
7
8     int counter = 0;
9     for (int i=1; i <= 100; i++) {
10        temp = (i % 2 == 1) ? curr_num : -curr_num;
11        System.out.printf("%.4f ", temp);
12        sum += temp;
13        counter += 1;
14        curr_num = start/(i*2);
15    }
16    System.out.println("\n\nLength : " + counter);
17    System.out.printf("Sum      : %.4f\n", sum);
18 }
```



Tirminil - elmoallistair

23:06

> java PB0 VClass2 program.java

--- No. 1 ---

1.0000	-0.5000	0.2500	-0.1667	0.1250	-0.1000	0.0833	-0.0714	0.0625	-0.0556	0.0500	-0.0455
0.0417	-0.0385	0.0357	-0.0333	0.0313	-0.0294	0.0278	-0.0263	0.0250	-0.0238	0.0227	-0.0217
0.0208	-0.0200	0.0192	-0.0185	0.0179	-0.0172	0.0167	-0.0161	0.0156	-0.0152	0.0147	-0.0143
0.0139	-0.0135	0.0132	-0.0128	0.0125	-0.0122	0.0119	-0.0116	0.0114	-0.0111	0.0109	-0.0106
0.0104	-0.0102	0.0100	-0.0098	0.0096	-0.0094	0.0093	-0.0091	0.0089	-0.0088	0.0086	-0.0085
0.0083	-0.0082	0.0081	-0.0079	0.0078	-0.0077	0.0076	-0.0075	0.0074	-0.0072	0.0071	-0.0070
0.0069	-0.0068	0.0068	-0.0067	0.0066	-0.0065	0.0064	-0.0063	0.0063	-0.0062	0.0061	-0.0060
0.0060	-0.0059	0.0058	-0.0057	0.0057	-0.0056	0.0056	-0.0055	0.0054	-0.0054	0.0053	-0.0053
0.0052	-0.0052	0.0051	-0.0051								

Length : 100
Sum : 0.6509

2. Buatlah program tabel konversi suhu, misal dari celcius ke reamur, fahrenheit ke celcius ?

```
1 // Elmo Allistair
2 // 12118220
3 // 3KA17
4
5 static void soal_2() {
6     Scanner input = new Scanner(System.in);
7     System.out.print("Input start temp in C : ");
8     int C_start = input.nextInt();
9     System.out.print("Input stop temp in C : ");
10    int C_stop = input.nextInt();
11    double C_curr = C_start, R_curr, F_curr, K_curr;
12
13    System.out.println("| C | R | F | K |");
14    System.out.println("|-----|");
15    for (int i=C_start; i <= C_stop; i++) {
16        R_curr = C_curr * 4/5;
17        F_curr = C_curr * 9/5 + 32;
18        K_curr = C_curr + 273.15;
19        System.out.print("|" + String.format("%6s ", String.valueOf(C_curr)));
20        System.out.print("|" + String.format("%6s ", String.valueOf(R_curr)));
21        System.out.print("|" + String.format("%6s ", String.valueOf(F_curr)));
22        System.out.print("|" + String.format("%6s ", String.valueOf(K_curr)) + "|");
23        System.out.print("\n");
24        C_curr++;
25    }
26 }
```

Tirminil - elmoallistair

23:11

> java PBO VClass2 program.java

--- No. 2 ---

Input start temp in C : 35

Input stop temp in C : 54

C	R	F	K
35.0	28.0	95.0	308.15
36.0	28.8	96.8	309.15
37.0	29.6	98.6	310.15
38.0	30.4	100.4	311.15
39.0	31.2	102.2	312.15
40.0	32.0	104.0	313.15
41.0	32.8	105.8	314.15
42.0	33.6	107.6	315.15
43.0	34.4	109.4	316.15
44.0	35.2	111.2	317.15
45.0	36.0	113.0	318.15
46.0	36.8	114.8	319.15
47.0	37.6	116.6	320.15
48.0	38.4	118.4	321.15
49.0	39.2	120.2	322.15
50.0	40.0	122.0	323.15
51.0	40.8	123.8	324.15
52.0	41.6	125.6	325.15
53.0	42.4	127.4	326.15
54.0	43.2	129.2	327.15

3. (Gunakan [array](#))

Pemilik tim basket ANB yang mempunyai 20 orang pemain, ingin memberikan kenaikan gaji bagi para pemainnya sesuai dengan tabel berikut ini:

<u>Gaji sekarang</u>	<u>Persentasi kenaikan</u>
Rp. 0 - Rp. 10.000.000	20 %
Rp. 10.000.001 – Rp. 15.000.000	10 %
Rp. 15.000.001 – Rp. 20.000.000	5 %
Lebih dari Rp. 20.000.001	0 %

Buatlah algoritma untuk membaca nama pemain dan gaji sekarang, lalu menghitung dan mencetak daftar nama pemain, gaji sekarang dan gaji baru. Diakhir daftar hitung pula total gaji sekarang dan total gaji baru.

```
1 // Elmo Allistair
2 // 12118220
3 // 3KA17
4
5 static void soal_3() {
6     Scanner input = new Scanner(System.in);
7     double bonus, currSal, totalSal = 0;
8     String[] playerName = new String[20];
9     double[] playerCurrSal = new double[20];
10    double[] playerTotSal = new double[20];
11
12    for (int i=0; i<5; i++) {
13        System.out.println("\n--- Player " + (i+1) + " ---");
14        System.out.print("Input player name : ");
15        playerName[i] = input.nextLine();
16
17        System.out.print("Input player salary : ");
18        playerCurrSal[i] = input.nextDouble();
19        currSal = playerCurrSal[i];
20        bonus = (currSal > 20000000) ? 0 : (
21                (currSal > 15000000) ? 0.5 : (
22                (currSal > 10000000) ? 0.1 : 0.2));
23        playerTotSal[i] = currSal + currSal * bonus;
24        System.out.println("Total player salary : " + playerTotSal[i]);
25        input.nextLine();
26    }
27
28    double sumCurrSal = Arrays.stream(playerCurrSal).sum();
29    double sumTotSal = Arrays.stream(playerTotSal).sum();
30    System.out.println("\nTotal player salary : " + sumCurrSal);
31    System.out.println("Total player salary + bonus : " + sumTotSal);
32}
```

```
Tirminil - elmoallistair
> java PBO VClass2 program.java
--- No. 3 ---

--- Player 1 ---
Input player name : Elmo
Input player salary : 123456
Total player salary : 148147.2

--- Player 2 ---
Input player name : Lemo
Input player salary : 1000000
Total player salary : 1200000.0

--- Player 3 ---
Input player name : Moel
Input player salary : 500040
Total player salary : 600048.0

--- Player 18 ---
Input player name : Tatang
Input player salary : 5000000
Total player salary : 6000000.0

--- Player 19 ---
Input player name : Bambang
Input player salary : 400000
Total player salary : 480000.0

--- Player 20 ---
Input player name : Samsul
Input player salary : 45000000
Total player salary : 4.5E7

Total player salary : 2.634E8
Total player salary + bonus : 2.6578E8
```

