

homework : If-else +for

Exercise 1:

Write a program that asks a customer to enter the values of 20 consumed energy. The program then calculates and prints the electricity bills without VAT, and then prints the bills with VAT knowing that:

- *For the first 50 consumed units, the customer pays 0.50\$ per unit,*
- *for the units consumed beyond 50, the customer pays 0.75\$ per unit,*
- *the VAT is equal to 11%.*

For example, if the consumed energy =40, then bill without VAT =0.5*40=20\$, and bill without VAT=20+20*0.11=22.2\$.

Exercise 2:

Consider the following sequence given by the recurrence relation:

$$U_1 = -1, U_2 = 1, U_3 = 2, U_N = 2 * U_{N-1} - 5 * U_{N-2} + U_{N-3} + 2 \text{ if } (N > 3)$$

Write a program that enters an integer value N and then prints the values of N-th term U_N and the sum S_N

$$S_N = \sum_{n=1}^N U_n$$

Exercise 3:

Write a program that enters the values of two integers numbers X and N and then prints the value of the following sum:

$$\frac{1}{x} + \frac{1}{x+1} + \cdots + \frac{1}{N} \text{ if } N > x$$

$$\frac{1}{N} + \frac{1}{N+1} + \cdots + \frac{1}{x} \text{ if } x > N$$

$$\frac{1}{N} \text{ if } N \text{ is equal to } x$$

Exercise 4:

Write a program that reads N numbers and then prints the minimum value of these numbers. N is a positive integer number entered by the user.

