Student Name and Surname:

Problem 1 (2 points)

Create a function that builds the data structure shown in Table 1. The function must be able to calculate:

- the number of unemployed men and women;
- the number of unemployed men and women with children
- the number of unemployed men with children receiving benefit and the number of unemployed men with children not receiving benefit
- the number of unemployed women with children receiving benefit and the number of unemployed women with children not receiving benefit

After calculating the above data, the function should update the data structure with the new information approved by the government:

- The government has decided that men and women with children who are aged over 35 are to receive extra benefit. The amount is 300 euros, which is to be added to the amount they received previously.
- Unemployed women with children are also to receive extra benefit from the government. The amount is 100 euros per child.

The function should show the data structure resulting from the updates that the government has made in the benefit services.

Table 1. Table with original data

Identification Number	Male (M)/ Female (F)	Age	Unemployed (Y/N)	Children (Y/N)	Number of Children	Benefit (Y/N)	Amount
44444444A	M	25	N	N	0	N	0
44444445A	F	32	Y	Y	1	Y	100
44444446A	F	22	Y	N	0	N	0
44444447A	F	36	N	Y	2	N	0
44444448A	M	41	Y	Y	2	Y	200
44444449A	F	37	Y	Y	2	N	0
44444450A	F	39	Y	Y	1	N	0
44444451A	F	24	Y	N	0	N	0
44444452A	H	45	S	S	2	S	200
44444452A	H	23	S	N	0	N	0

Results that the function should yield:
Number of unemployed men: 3
Number of unemployed women: 5
Number of unemployed men with children: 2
Number of unemployed women with children: 3
Number of unemployed men with children receiving benefit: 2
Number of unemployed women with children not receiving benefit: 0

Number of unemployed men with children receiving benefit: 2
Number of unemployed women with children not receiving benefit: 0

Table 2. Table resulting from the application of government measures.

Identification Number	Male(M)/ Female (F)	Age	Unemployed (Y/N)	Children (Y/N)	Number of Children	Benefit (Y/N)	Amount
44444444A	M	25	N	N	0	N	0
44444445A	F	32	Y	Y	1	Y	200
44444446A	F	22	Y	N	0	N	0
44444447A	F	36	N	Y	2	N	300
44444448A	M	41	Y	Y	2	Y	500
44444449A	F	37	Y	Y	2	N	500
44444450A	F	39	N	Y	1	N	300
44444451A	F	24	Y	N	0	N	0
44444452A	M	45	Y	Y	2	Y	500
44444452A	M	23	Y	N	0	N	0

Problem 2 (2 points)

Create a function called "Even-Odd". The function will be passed a numerical parameter, which will be an odd or even number. If the parameter is an odd number, the function should check if the odd position numbers are odd; if the parameter passed is even, it should check if the even position numbers are even. In both cases, a vector will be created including the numbers that meet the requirement. These vectors must not include any repeated numbers, but all numbers must be taken into account for the calculation of the mean. The function must display the vectors and their mean.

A. Perform the exercise with For loop (1 point)

B. Perform the exercise with While or Repeat, without using For loop (1 point)

Example:

EvenOdd(1) Vector: (2,2,3,4,3,2) Vector: (3) Mean:3	EvenOdd(4) Vector: (2,2,3,4,3,2) Vector: (2,4) Mean: 2.66