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Startdocument for 8. Contribution

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Problem Description

The following rules are operated to calculate the annual contribution to a sports club: Senior members pay € 150,-, junior members pay € 75,-. Senior members are people aged 18 or above. Playing members also pay a € 45,- association contribution. People who have been members for more than 7 years are given a 5% discount on the club contribution. A program must be developed in which the name, date of birth and date of joining the club (format ddmmyyy) of each member can be entered, and also whether the member is a playing or non-playing member. The contribution of each member must be calculated and shown. The cumulative total contribution, the average number of years of membership and the youngest member must also be shown.

Input & Output

In this section the in- and output of the application will be described.

Input

In the table below all the input are described.

Case	Type	Conditions

Case	Type	Conditions
Name	`string`	not empty
Date of Birth	`Date`	dd/mm/yyyy
Date of joining The Club	`Date`	dd/mm/yyyy
Playing or Non-Playing	`Boolean`	`True or False`

Output

Case	Type
Individual Contribution	`Member + float`
Total Contribution	`float`
Average Years of Membership	`Float`
Youngest Member	`Member`

Calculations

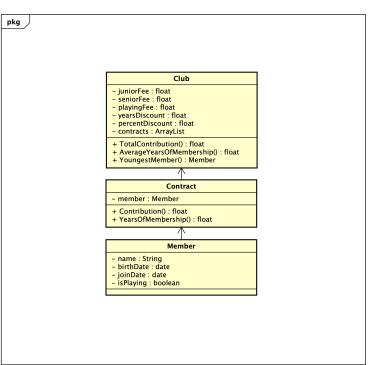| Case	Calculation
Individual Contribution	Calculate the contribution for an individual member.
Total Contribution	Calculate the total contribution for each member.
Average Years of Membership	Calculate the average number of years of membership.
Youngest Member	Calculate the youngest member.

Remarks

In the diagram I decided to display only the essential methods to the user.

Class Diagram

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Test Cases

In this section the testcases will be described.

Input				Output		
Name	birthDate	joinDate	isPlaying	Contribution	Total Contribution	Youngest Member
David1	21/09/2001	07/06/2020	true	195	195	David1
David2	21/09/2000	07/06/2020	false	150	345	David1
Lara1	21/07/2003	07/07/2014	true	185.25	530.35	Lara1
Lara2	21/08/2003	07/07/2014	false	142.5	672.85	Lara2
Albert1	22/09/2006	07/06/2019	true	120	792.85	Albert1
Albert2	22/10/2006	07/06/2019	false	75	867.85	Albert2
Marcel1	15/09/2006	07/06/2014	true	114	981.85	Albert2
Marcel2	15/10/2006	07/06/2014	false	71.25	1053.1	Albert2

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