

Question: 4. Yoga Meditation

You are developing a C# application for a **Meditation Center** to manage Yoga members, calculate their BMI, and determine their membership fee based on their BMI and goal.

Class: MeditationCenter

In class **MeditationCenter**, implement the following **properties**:

Data Type Property

int	MemberId
int	Age
double	Weight
double	Height
string	Goal
double	BMI

A static `ArrayList` is already provided in the code template:

```
public static ArrayList memberList;
```

Class: Program

In the `Program` class, implement the following methods:

Method 1: Add Yoga Member

```
public void AddYogaMember(int memberId, int age, double weight, double height, string goal)
```

Description:

This method is used to:

- Create an object of `MeditationCenter`
- Set the values of:
 - `memberId`
 - `age`
 - `weight`
 - `height`
 - `goal`
- Add the object to `memberList`

Method 2: Calculate BMI

```
public double CalculateBMI(int memberId)
```

Description:

This method calculates and returns the **BMI** of a Yoga member with reference to the `memberId`.

- If the `memberId` is present in `memberList`:
 - Calculate BMI using the formula

$$BMI = \frac{Weight \text{ (in Kgs)}}{Height \text{ (in m)} \times Height \text{ (in m)}}$$

- Set the calculated value to the `BMI` property of that member.
- Return the BMI (rounded down to **two decimal places** using `Math.Floor()`).
- If the `memberId` is **not present**, return 0 and in `Main()` print:
 - MemberId "<memberId>" is not present

Method 3: Calculate Yoga Fee

```
public int CalculateYogaFee(int memberId)
```

Description:

This method calculates and returns the **membership fee** for a Yoga member based on their **BMI and Goal**.

Goal	Condition	Membership Fee
Weight Loss	$BMI \geq 25 \text{ } \&\& \text{ } BMI < 30$	2000
Weight Loss	$BMI \geq 30 \text{ } \&\& \text{ } BMI \leq 35$	2500
Weight Loss	$BMI > 35$	3000
Weight Gain	Any BMI	2500

Note:

- If the `memberId` is not present, return 0 and print appropriate message in `Main()`.

In the Main Method:

1. Get member details from the user.
 2. Add the member using `AddYogaMember()`.
 3. Calculate BMI using `CalculateBMI()`.
 4. Calculate Yoga Fee using `CalculateYogaFee()`.
 5. Display BMI and Membership Fee.
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