

# Web Engineering Lab

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**Lab 04****Marks 100**

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**Instructions**

Work on this quiz/lab individually.

You are **NOT** allowed to use internet, mobile phone.

You are **NOT** allowed to borrow anything from your peer student.

**What you have to do**

Program the following tasks. The name of your files will be according to the task given in this lab.

**Task 1****[100]**

Write a code for class **Health** with data-members `name`, `weight`, `height` and BMI [Formula:  $\text{weight (kg)} / [\text{height (m)}^2]$ ] of a person. You need to make an **Array of N** people where **N** will be an input from the user. Your program must throw a **NegativeArraySizeException** if the user enters negative value of **N**.

Create a class `Driver` with following functionalities:

- `Save()` : This method should input the person's attributes and an index of array to save the data on respective index/location. It must throw back an **indexOccupiedException**, if the index is already occupied.

You must have to provide the exception handling code in your program.

- `Retrieve()` : This method should input the index number from user and print the respective values from the object in array. This method must throw back an **indexException** to its caller method, if the index is not valid.
- `main()` : Provide a switch-based menu to execute this program in the following way:
  1. Add value in the array
  2. Retrieve and print the information of specific user at index `n`.
  3. Exit

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