

Programming Assignment

Hi,

We would like to test your coding skills. You may use the internet, books, or whatever sources you need in order to complete this project. The primary focus of this assignment is to implement the patterns and not necessarily the functionality of the application. This is what you will be judged primarily on.

DIRECTIONS:

1. Please complete the programming assignment below and carefully follow the instructions. 2. When done with the application, pack it in a zip or rar and name it with this format <date submitted (month and year)> < first name><last name> . Send it to recruitment@you-source.com and use **SKILLS TEST** as your subject email. Our email server does not allow for executables (events in archives) in attachments, so make sure that you send the code only.

PROGRAMMING ASSIGNMENT:

Create a **PHP application** that has the following requirements.

The program's primary functionality is to sort a string with the input from a user.

Example input: befda

Expected output: abcdef

The user interface will contain the following four elements:

1. A textbox that allows the user to input a string
2. A control (for instance a combobox) that selects the strategy to use for sorting the string.
3. A button that will sort the string using the selected strategy.
4. A label where the output will be shown (the sorted string)

The **FOCUS** of the assignment is on **implementing** the **DESIGN PATTERNS**.

a) **Strategy pattern**: is a software design pattern that enables an algorithm's behavior to be selected at runtime. The strategy pattern will be used for sorting the strings in 2 different implementations. You can choose two of these sorting methods: BubbleSort, QuickSort, or MergeSort.

b) For the logic and view part of the application, it will be implemented in the **Model-View-Controller pattern** and **you are not allowed to use a framework for this**.

Make sure to follow proper development practices, and so ensure that all validations are in place.

Do unit tests of the individual components of your code to gain an advantage