Assignment for Front–end/ Mean Stack Developers

Note: - There are 4 questions in this assignment and candidates have to attempt all 4 questions.

Q1. Find the missing number in the series:

> 2,3,10,15,26,35,50,63,?

Implement the solution within Angular in which, a text box is given along with a button.
User can enter any index of the series and at the button click; the page should display the number at that entered index.

Q2. Create a dynamic component in Angular which has nested components in the following manner:

> **A**. Create a button at the top to add a Component X (like a panel). Every time the button is clicked, the component X is added at the bottom. The Component X has a Tab for which we can edit the name and save.

> **B**. Within component X, there is another button with text (+) which allows you to add a component Y dynamically. Every time the + button Is clicked, component Y is added within component X

> **C**. Component Y has a text box and a save button. When the text is added and save button is clicked, the data is saved in a JSON format to a file. You can write the backend for the same using node.js.

> **D**. At the end of the task, you should be able to see the data in the following format: { X1 { Y1, Y2 }, X2 { Y3, Y4 } } Where X1, X2 are names of panels of X components and Y1, Y2.. is the text saved within the Y component.
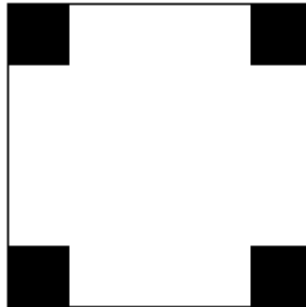
Q3. Make a form having

- A input for phone number,
- A button to add another number labelled "Add another phone number"
- A submit button

Upon clicking the "Add another phone number" Button, a new input field should be added to the form dynamically. The purpose of this form is to get all the phone numbers that a person holds. If the number of input fields for phone number is greater than 1 then, consider adding delete buttons to each input field.

The "Submit" button should log an array to the console having all the phone numbers in a format shown below :

```
[
{phoneNumber1: **value form 1st field**},
{phoneNumber2: **value form 2nd field**},
{phoneNumber3: **value form 3rd field**},
……
{phoneNumberN: **value form Nth field**},
]
```

Q4. In the home module make 4 components. Place the 4 components in 4 different corners of the screen like so...

Now make a 5th component in the center of the screen having an input field inside its HTML. Build a communication system among all 5 components such that the text in the input box is displayed in all other components like so....