Structure related problems
(Total # questions)

No.	Problem statement	Difficulty level
1	Declare a structure of students with three member variables (name, id and cgpa), where name is a string and id are strings, and cgpa is a float value.	*
2	Declare a structure of students with three member variables (name, id and cgpa), where name is a string and id are strings, and cgpa is a float value with **default value**s.	*
3	Given a structure **student**, which has three member variables (name, id and cgpa), declare a variable of structure **student**.	*
4	Given a structure **student**, which has three member variables (name, id and cgpa), declare a variable of structure **student**. Display the value of the member variables.	*
5	Given a structure **student**, which has three member variables (name, id and cgpa), declare a variable of structure **student**. Assign values to the member variables.	*
6	Given a structure **student**, which has three member variables (name, id and cgpa), declare a variable of structure **student**. Populate the member variables from the keyboard.	*

<table>
<tr>
<td>7</td>
<td>Declare a structure of students with three variables (name, id and cgpa). Take information of two students as input and show the output.

<table>
<tr><th>Sample Input</th><th>Sample Output</th></tr>
<tr><td>Shakib Al Hasan
101
3.5
Tamim Iqbal
102
2.7</td><td>Shakib Al Hasan
101
3.5
Tamim Iqbal
102
2.7</td></tr>
</table>
</td>
<td>*</td>
</tr>
<tr>
<td>8</td>
<td>Declare a structure of students with three variables (name, id and cgpa). Now take the input of two students and print the information of that student who has the higher cgpa.
<table>
<tr><th>Sample Input</th><th>Sample Output</th></tr>
<tr><td>Shakib Al Hasan
101
3.5
Tamim Iqbal
102
2.7</td><td>Shakib Al Hasan
101
3.5</td></tr>
</table>
</td>
<td>*</td>
</tr>
</table>

<table>
<tr>
<td>9</td>
<td>Declare a structure of students with three variables (name, id and cgpa). Now take the input of two students and print the information of that student who has better cgpa with a function.
<table>
<tr><th>Sample Input</th><th>Sample Output</th></tr>
<tr><td>Shakib Al Hasan
101
3.5
Tamim Iqbal
102
2.7</td><td>Shakib Al Hasan
101
3.5</td></tr>
</table>
</td>
<td>**</td>
</tr>
<tr>
<td>10</td>
<td>You have to declare a structure named triangle. triangle_id, base and height are the members of this structure. Now you will have to take input of three triangles and find out the area of each triangle.

[Triangle Area = (base*height)/2]
<table>
<tr><th>Sample Input</th><th>Sample Output</th></tr>
</table>
</td>
<td>*</td>
</tr>
</table>

1 5 8 2 4 6 3 3 4	Area of 1 = 20 Area of 2 = 12 Area of 3 = 6

11	You have to declare a structure named triangle. triangle_id, base and height are the members of this structure. Now you will have to take input of three triangles and find out which triangle has the maximum area using a function. [Triangle Area = (base*height)/2] **Sample Input** 1 5 8 2 4 6 3 3 4 **Sample Output** Area of 1 = 20	**

12	The Tigers have clinched a stunning victory over their rivals recently. In that series of three matches, some players put up some amazing performances. Now you have to create a structure named player where you have to store the following information of each player: 1. Player's name 2. Player's country 3. Array(size 3) to store runs of 3 matches 4. Array(size 3) to store wickets of 3 matches 5. Array(size 3) to store points of 3 matches Count points using the following formula: 1. Each wicket = 12 points 2. Runs <=25 in a match = 5 points 3. 25< Runs<=50 in a match = 10 points 4. 50< Runs<=75 in a match = 15 points 5. 75< Runs in a match = 20 points Now, take input of two players and calculate the points for each player for all the three matches. Sample Input | Sample Output	**

Shakib Al Hasan Bangladesh 20 75 103 1 1 5 Tamim Iqbal Bangladesh 100 109 17 0 0 0	Match 1: Shakib Al Hasan points: 17 Tamim Iqbal points: 20 Match 2: Shakib Al Hasan points: 27 Tamim Iqbal points: 20 Match 3: Shakib Al Hasan points: 80 Tamim Iqbal points: 5

13	The Tigers have clinched a stunning victory over their rivals recently. In that series of three matches, some players put up some amazing performances. Now you have to create a structure named player where you have to store the following information of each player: 1. Player's name 2. Player's country 3. Array(size 3) to store runs of 3 matches 4. Array(size 3) to store wickets of 3 matches 5. Array(size 3) to store points of 3 matches Count points using the following formula: 1. Each wicket = 12 points 2. Runs <=25 in a match = 5 points 3. 25< Runs<=50 in a match = 10 points 4. 50< Runs<=75 in a match = 15 points 5. 75< Runs in a match = 20 points Now, take input of two players and calculate the points for each player for all the three matches. And also find man of the match(MOM) for each match based on their points and find out the man of the series on more points overall. Sample Input | Sample Output	***

Shakib Al Hasan Bangladesh 20 75 103 1 1 5 Tamim Iqbal Bangladesh 100 109 17 0 0 0	Match 1: Shakib Al Hasan points: 17 Tamim Iqbal points: 20 MOM : Tamim Iqbal Match 2: Shakib Al Hasan points: 27 Tamim Iqbal points: 20 MOM : Shakib Al Hasan Match 3: Shakib Al Hasan points: 80 Tamim Iqbal points: 5 MOM : Shakib Al Hasan Man of the Series: Shakib Al Hasan