

Total Marks: 100; Duration: 90 minutes

Create a NetBeans project with the name: "Midterm_yourId_secNo". Ex: "Midterm_1234567_sec5"

Now, consider the following **MidExamScene.FXML** scene:

Polulate ArrayList<int> valList:
Enter Element:

Post processing results:

Content of MyArray instance arr1 : 11 23 432 1 77
Size of arr1 = 5

Content of MyArray instance arr2 : 74 58 3 49 7 501 34
Size of arr2 = 7

Content of Merged MyArray instance arr3 : 11 23 432 1 77 74 58 3 49 7 501 34
Size of arr3 = 12

Select Traversal Order: ☐ Forward ☒ Backward
Select Odd/Even:
Select MyArray Instance: ☐ arr1 ☐ arr2 ☒ arr3

Even nos of arr3 in Backward order are: 34 58 74 432

Note:

- **ArrayList<int> valList** is a private field of Controller class
- MyArray instances: **arr1, arr2 & arr3** are also private fields of Controller class
- MyArray class:
 - o private field: **private ArrayList<int> vals**
 - o methods: **constructors, getters, setters, toString and merge**

P.T.O

Now, using above description, implement a NetBeans FXML project meeting following criterion:

Requirements	Marks
1) Fully implemented model class: MyArray Mark for declaring fields with scope & qualifier Mark for defining constructors, getters, setters, toString Mark for defining merge	5 5 5
2) Fully designed MidExamScene.FXML file with required fx:id s and event handler methods Mark for Design Mark for specifying required fx:id s and event handler methods	10 5
3) Fully implemented MidExamSceneController class as follows:	
3.1) Appropriate initialize method	10
3.2) Clicking " arr1 create... " button will trigger instantiateArr1AndClearValListButtonOnClick() handler method to do the following : <ul style="list-style-type: none"> It will instantiate MyArray handle arr1, and clear the valList. And Clicking " arr2 create... " button will trigger instantiateArr2AndClearValListButtonOnClick() handler method to do the following : <ul style="list-style-type: none"> It will instantiate MyArray handle arr2, and clear the valList. 	15
3.3) Clicking " Merge... " button will trigger mergeAndShowButtonOnClick() handler method to do the following : <ul style="list-style-type: none"> It will use the model class method merge to merge arr1 and arr2 into arr3 and show all of them into resultTextArea, as per the format shown in the screenshot. However, if any of arr1 & arr2 is empty, then you must not show arr3 in resultTextArea and (show only arr1 & arr2, and generate an appropriate error alert. 	15 10
3.4) Clicking " Traverse... " button will initiate traverseAndShowButtonOnClick() handler method to do the following : <ul style="list-style-type: none"> It will traverse the selected MyArray instance in the selected sequence and show only ODD/EVEN (as selected) numbers in the label as shown in the screenshot. 	20