


National University of Computer and Emerging Sciences, Lahore Campus

	Course Name:	Software for Mobile Devices	Course Code:	CS-4039
	Degree Program:	BS(CS)	Semester:	Fall 2022
	Exam Duration:	60 Minutes	Total Marks:	25
	Paper Date:	27 - Sep - 2022	Weight:	12.5
	Section:	ALL	Page(s):	6
	Exam Type:	Midterm-I		

Student Name:_____ **Roll No.**_____ **Section:**_____

Instruction/Notes: This exam is open book and open notes. While writing code, make best effort to write correct and relevant code only. Minor syntactic errors are acceptable and will be ignored during marking but overall concept and approach must be correct.

Question 1

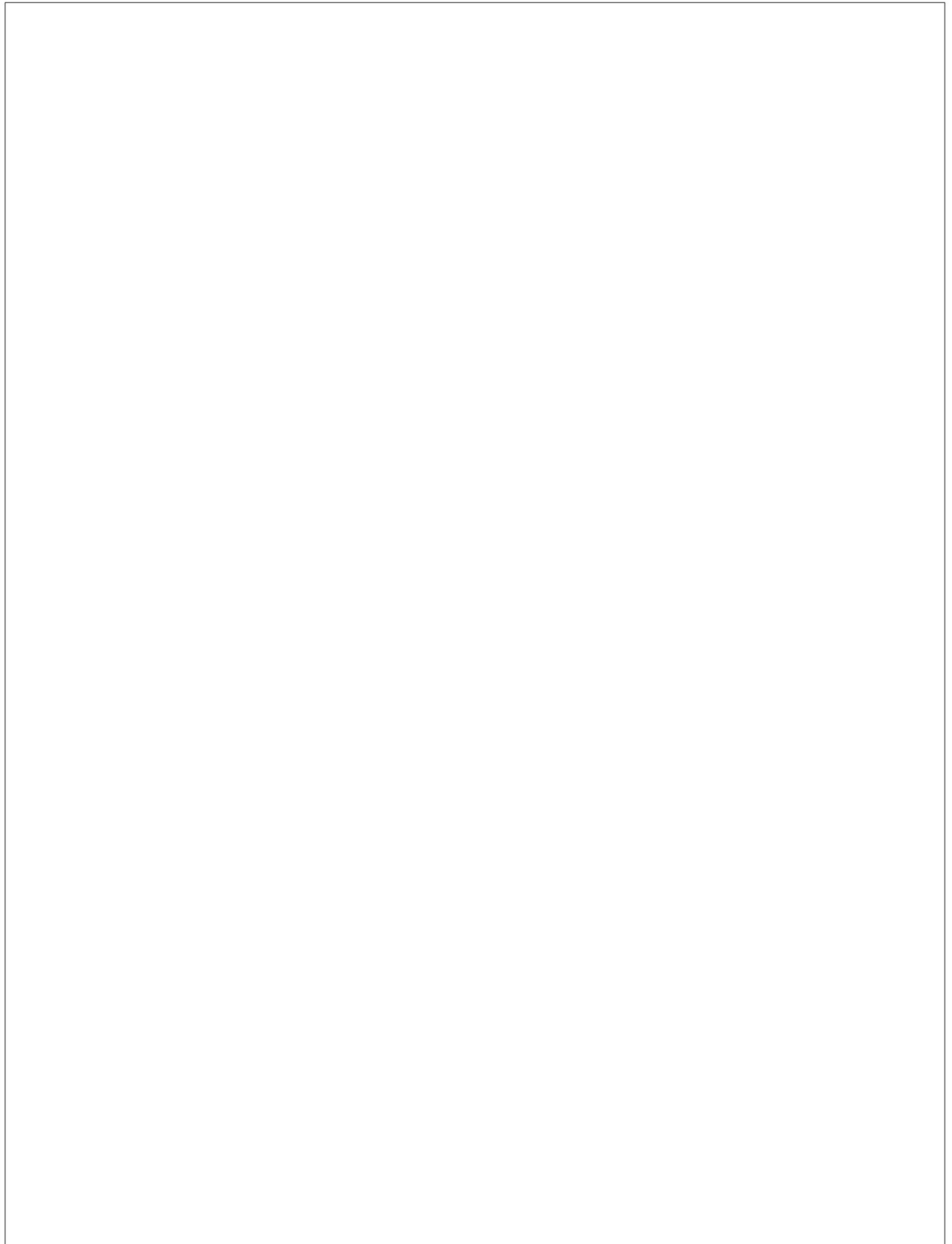
20 points

Sort:	Ascending	Descending
Player	Score	
Ali	503	
Ayesha	426	
Salman	417	
Ahmed	329	
Fatima	251	
Arfa	230	
Waleed	210	
Hassan	205	

Consider a game that wants to show the statistics of the players, as illustrated in the picture above. Implement the following requirements:

- Use a RecyclerView to show the list of players and their scores. You may assume that a class Player exists that holds the data for each player while the list is maintained in form of an ArrayList.
- Allow possibility to sort the list in ascending and descending order of scores by clicking on the relevant buttons. Provide necessary code for the Activity and event handlers. You may assume that the layout is already created in an XML file and there is no need to write XML code.
- Take care of necessary best practices in implementation issues

```
// write Activity and RecyclerView Adapter code here
```

Question 2

3 + 2 = 5 points

(a) What is more appropriate for storing UI state data: Bundle or ViewModel? Justify your choice with reasons.

(b) What is the role of DEX compiler in building an Android application? Why is it necessary?