



## COMSATS University Islamabad, Lahore Campus

Block-C, Department of Computer Science

COMSATS University Islamabad, Lahore Campus 1.5KM Defence Road, Off Raiwind Road, Lahore

### Assignment#3 (30 marks)

We studied two interfaces Comparable and Comparator. The purpose of this assignment is to practice those. Create a class Salat which implements Comparable. The four attributes of Salat are name (String), time (modified class Time from our textbook), number of farz (int) and number of sunnah (int). The default/natural ordering of Salat is time. In the driver class (with main method) create an ArrayList and store five objects of Salat in it. Then sort these objects on different basis as shown in the output below. In case of tie in farz (Zuhar, Asar & Isha ) and sunnah (Fajar & Maghrib, Zuhar & Isha) use name as tie breaker.

Follow the submission guidelines as were provided for LabTask1, i.e the name of your source file should be your SID.java e.g SP22\_BCS\_000.java

Here is sample run with expected output.

```
C:\school\FA22\OOP\example_code\code>java SP22_BCS_000
```

```
AoA, welcome to SalatTest
```

```
Unsorted Salats data
```

```
[Fajar has 2 farz, 2 sunnah and is held at 5:30:00 AM
, Maghrib has 3 farz, 2 sunnah and is held at 5:15:15 PM
, Isha has 4 farz, 6 sunnah and is held at 6:30:12 PM
, Zuhar has 4 farz, 6 sunnah and is held at 12:45:30 PM
, Asar has 4 farz, 4 sunnah and is held at 3:50:25 PM
]
```

```
Salats sorted according to time(default order)
```

```
[Fajar has 2 farz, 2 sunnah and is held at 5:30:00 AM
, Zuhar has 4 farz, 6 sunnah and is held at 12:45:30 PM
, Asar has 4 farz, 4 sunnah and is held at 3:50:25 PM
, Maghrib has 3 farz, 2 sunnah and is held at 5:15:15 PM
, Isha has 4 farz, 6 sunnah and is held at 6:30:12 PM
]
```

Salats sorted according to number of farz

[Fajar has 2 farz, 2 sunnah and is held at 5:30:00 AM  
, Maghrib has 3 farz, 2 sunnah and is held at 5:15:15 PM  
, Asar has 4 farz, 4 sunnah and is held at 3:50:25 PM  
, Isha has 4 farz, 6 sunnah and is held at 6:30:12 PM  
, Zuhar has 4 farz, 6 sunnah and is held at 12:45:30 PM  
]

Salats sorted according to name

[Asar has 4 farz, 4 sunnah and is held at 3:50:25 PM  
, Fajar has 2 farz, 2 sunnah and is held at 5:30:00 AM  
, Isha has 4 farz, 6 sunnah and is held at 6:30:12 PM  
, Maghrib has 3 farz, 2 sunnah and is held at 5:15:15 PM  
, Zuhar has 4 farz, 6 sunnah and is held at 12:45:30 PM  
]

Salats sorted according to number of sunnah

[Fajar has 2 farz, 2 sunnah and is held at 5:30:00 AM  
, Maghrib has 3 farz, 2 sunnah and is held at 5:15:15 PM  
, Asar has 4 farz, 4 sunnah and is held at 3:50:25 PM  
, Isha has 4 farz, 6 sunnah and is held at 6:30:12 PM  
, Zuhar has 4 farz, 6 sunnah and is held at 12:45:30 PM  
]

C:\school\FA22\OOP\example\_code\code>

**Do not provide multiple submissions. If you must resubmit then delete the previous file.**

**Due Date: Sunday, December 11<sup>th</sup> 2022**