

United International University
CSE 1116 - Final Exam - Set B

Write your name and ID on the question paper. Marks are on the right. Return question.

Q1. Implement a GUI using Java Swing that does the following tasks:

[15 Marks]

- a) **Components:** 2 text fields and 1 button labelled **CONCAT**
- b) User can write in both the text fields
- c) When the Concat button is clicked, the text of the second field is appended to the text in the first field.

Fig: Before Clicking Button

The diagram shows a rectangular frame containing two text input fields and a button. The top text field contains the text "HELLO". The bottom text field contains the text "JAVA!!!". Below the text fields is a button labeled "CONCAT".

Fig: After Clicking Button

The diagram shows the same rectangular frame as before, but the text in the top text field has changed to "HELLOJAVA!!!". The bottom text field still contains "JAVA!!!", and the button remains labeled "CONCAT".

Q2. Write a **Java** program that implements the following system:

[10 Marks]

- a) **Interface Playable** – Method void play(String instrument)
- b) **Abstract Class MusicSchool** that uses Playable
 - **Attributes:** String name, double fee
 - **Constructor:** accepts both parameters
 - **Implement** the play(String instrument) method in the following way:
 - If the instrument is "**Guitar**" or "**Piano**" or "**Violin**", print a message saying that the instrument is being played.
 - Otherwise, throw a **user-defined exception** named **InvalidInstrumentException** with the **message: "Instrument not taught here"**.
 - Declare an **abstract method** void perform(String instrument).
- c) **Class MusicAcademy** which extends **MusicSchool**
 - **Override** the perform(String instrument) method to print a message stating that the given instrument performance is taking place.
- d) **Class MusicProgram** (contains the **main** method)
 - Create an object of MusicAcademy.
 - Call the play() and perform() methods with valid and invalid instruments.
 - **Handle the thrown exception** for **invalid instruments** and **print** the exception message.