SECTION B: (17 Marks)

The questions in this section are based on the following figures which show various states of a SummerCamp GUI class

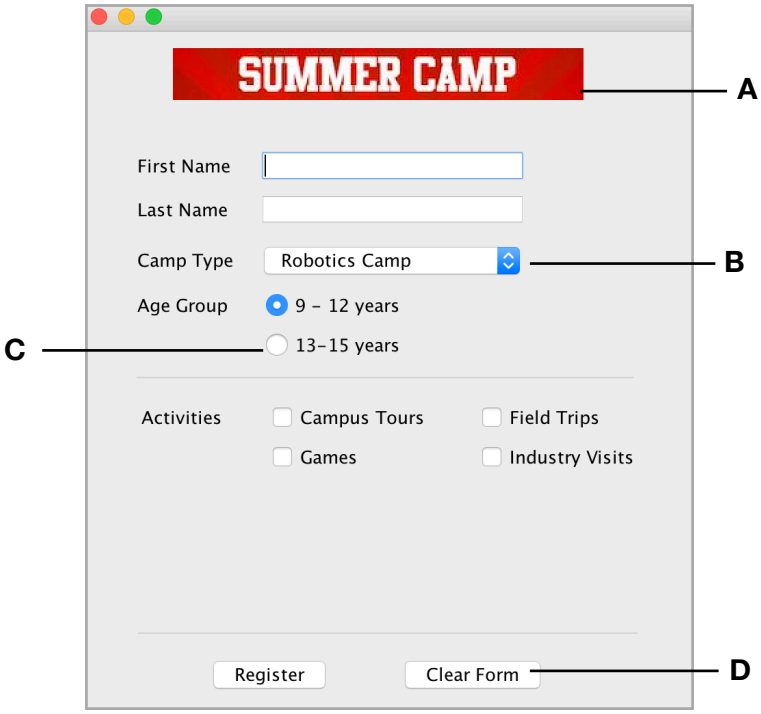

Figure 1. SummerCamp GUI

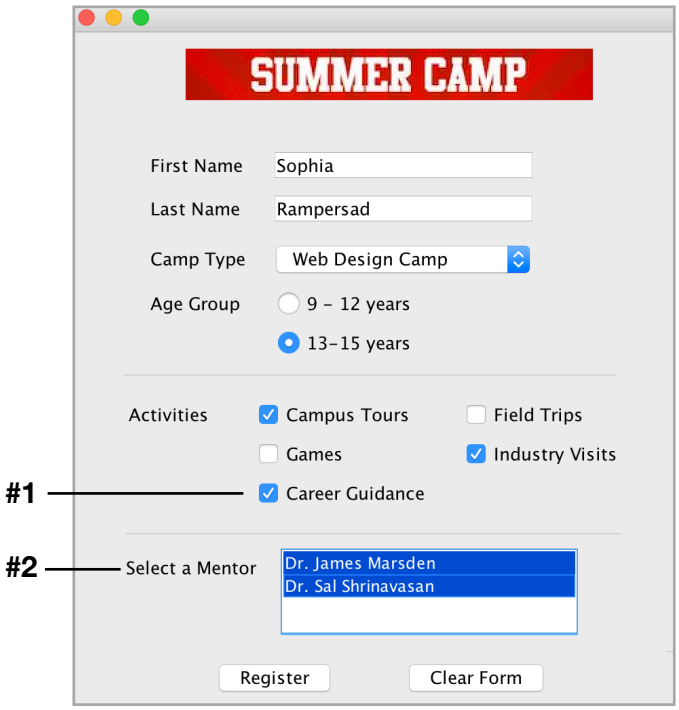

Figure 2. SummerCamp GUI with data

1. Identify the four GUI components highlighted in Figure 1 and their respective Swing classes [4 marks]

2. When Component C in Figure 1 is selected by the user, a new component (#1) is added to the GUI as shown in Figure 2. When that component (#1) is selected by the user, a new panel (#2) is becomes available with more components for data collection as shown in Figure 2.
   (a) Explain clearly how the first transition from Figure 1 to Figure 2 (which shows component #1) can be achieved using your knowledge of the MouseListener interface. State any assumptions made. Code examples may be used to support your answer. [5 marks]
   (b) Write a code snippet that achieves the second transition within Figure 2 (which shows component #2). State any assumptions made. [2 marks]

3. Suppose that all JCheckBox objects in the SummerCamp GUI class are stored in an ArrayList called *activities*.
   (a) Write code to declare and instantiate the *activities* ArrayList using Generics. [2 marks]
   (b) Component D in Figure 1 reverts the GUI state shown in Figure 2 to the state shown in Figure 1 when it is pressed by the user. Write a code snippet that resets the state of the JCheckBox objects in the *activities* ArrayList when component D is pressed and resets the state of component B to the first option in the list. [4 marks]