Generics

Sr. No.	Assignment Question
1	Over the past 50 years, Lifeline Hospital has proved its multi-faceted response and services towards the patient satisfaction and quality. Now, the hospital management has initiated process-management strategies to get improved quality, cost-effectiveness and on-line tracking and booking of doctors and specialists. To achieve this goal, management has decided to use a process-management approach to coordinate all the doctors in the panel, around the organization, towards "patient-centered care." Consider you to be a part of the team that implements the solution for designing the application. Create an application in Java, which can be used to register new doctors with all details, maintain the existing doctors, tracking a specific doctor, and displaying all the doctors present in a panel along with all the details. The application internally creates a generic HashMap, known as DoctorHashMap that can store any generic key-value pair. When in the main class, an instance of the generic DoctorHashMap is created, the key is mapped to a String and the value is mapped to an object of another class that stores all the details of doctors. The application is tested in another class which initially displays a menu with the following options. 1. Register Doctor 2. Search and display the Doctor details 3. Publish the entire list 4. Exit When the user selects an option the corresponding function must be invoked. The application terminates by printing an appropriate message and showing the corresponding result, when the user chooses to exit the application. When a user enters the first choice to “Register Doctor”, the application invokes the add() method with the key-value pairs, which in turn invokes the put() method of HashMap and starts accepting all the details of the doctors as the key-value pairs to the DoctorHashMap. The key represents the doctor code of type String. The values represent the details of the doctor it accepts such as doctor code, doctor name, specialization, and availability in terms of hours. The second option searches for a doctor based on the doctor code as entered by the user. The application checks only if there

	is any key in the HashMap that matches with the doctor code entered by the user. If the application finds a match, then it retrieves all the corresponding details of the doctor existing in the DoctorHashMap else it prints a failure message. The third option displays the entire list of doctor code with their details, as entered by the user. It also prints the total number of doctors present in the panel. Finally, on selecting the fourth option, the application exits safely.