

**Short Answer:**

Answer the following questions with complete sentences in your own words. You are encouraged to conduct your own research online or through other methods before answering the questions. If you research online, please consult multiple sources before you write down your answers. You are expected to be able to explain your answers in detail

1. What are entity states defined in Hibernate / JPA?
2. How can we transfer the entity between different states? (List methods)
3. What are differences between save, persist?
4. What are differences between update, merge and saveOrUpdate?
5. What is flush method? Why do we need it?
6. What is evict method? Can you provide an example where you used it?
7. What is Hibernate Session, what is Hibernate SessionFactory

**Coding Questions:**

Write code in Java to solve the following problems. Please write your own answers. You are highly encouraged to present more than one way to answer the questions. Please follow best practice when you write the code so that it would be easily readable, maintainable, and efficient. Clearly state your assumptions if you have any. You may discuss with others on the questions, but please write your own code.

1. Create a Java Hibernate program with the following requirements.
  - a. Create a text file with the following format
    - i. Each line should have space separated values with the first value being the address and the subsequent values being names of the residents who live at that address.
      1. For example, a line in this file might be  
"37,WashingtonSt,NewYork,NY Johnson,Carpenter  
Andrew,Goldstein Monica,Hanover"
      2. Each part of the address (number, street, city, state) will be comma separated. Assume no space in the address.
      3. The name will also be comma separated into first name and last name
  - b. Read and parse this text file and store the parsed information into Address and Resident objects, which should be Hibernate entities that have a one-to-many relationship.
  - c. Use Hibernate to save the Addresses and Residents into the database
  - d. The program should now display a console message that asks the user for an input, e.g. "Please enter a city name"
  - e. Using Hibernate, retrieve all addresses that are in that city and display in the console those addresses and for each address the residents at that address.