Q6> What is the benefit pf encapsulation in java?

Ans == the benefit of encapsulation in java are:

1>data hiding:encapsulation allows you to hide the implementation details and the internal state of an object from outside entities.this ensures that the objects data can only be modified through defined methods.

2>data protection: By making the data members of a class private and providing public methods to access and modify them,you can enforce constraints and validation rules.this prevents external code from directly manipulating the internal data in ways thet could lead to data corruption or inconsistencies.

3>code maintainability and flexibility: Ecapsulation makes it easier to maintain and update code because the internal representation of the object can be changed without affecting the external code that uses the object.

Q7> Is java a 100% object oriented programming language?if no why?

Ans== NO, java is not consider as 100% object oriented programin language.java is good object oriented programing language as compare to other programing language like c++,c and python.java is not 100% object oriented programming language because jave doesn't support multiple inheritance and java supports primitive data types sucha as int,double,char,etc. which are not objects.

Q8> What are the advantages of abstraction in java?

Ans = the advantages of abstraction in java are:

1>Simplification of complex Systems: Abstraction allows you to hide the implementation details of an object and only expose the relevant characterstics and behaviors.This simplifies the complexity of a system

by providing a high-level view,making it easier to understand and work with.

2>Modularity and reusability: By defining abstract classes and interfaces,you can create modular components that can be easily reused in various parts of your application.

3>Encapsulation support:abstraction complements encapsulation.it allows you to define the interface of an objects while keeping the internal implementation details hidden. This separation ensure thet changes to the internal implementation do not affect the external code that relies on the abstraction.

4>Polymorphism: Abstraction plays a significant role in achieving polymorphism in java.you can create multiple implementations for an abstract class or interface,and the code that uses these abstractions can interact with them in a uniform way,without needing to know the specific implementation details.

Q9>What is an abstraction explain with an examples?

Ans == Abstraction is a fundamental concept in object-oriented programing that involves creating abstract representations of real-world objects or concepts in code.It allows you to define the essential characteristics and behaviours of an object while hiding the implementation details.in java,abstraction is achieved through abstract classes and interfaces.

Q10>What is the final class in java?

Ans == In java, a final class is a class that cannot be subclassed or extended.once a class is declared as final,it cannot be inherited by any other class.This is achieved by using the ‘final’ keyword before the class declaration.