SKILLS

Lecture - 20

Encapsulation

List of Concepts Involved:

- Need of Encapsulation
- What is Encapsulation?
- Private members
- Shadowing problem and this keyword
- Setters & Getters

Topics covered Yesterday's Session:

- Static variables, static methods, static block
- Differences with respect to Non static and static members of a class

Need of Encapsulation

- To the outside world, the data should not be exposed directly.
- In order to provide the controlled access, we need to use “Encapsulation”.

What is Encapsulation?

- Binding of data and corresponding methods into a single unit is called "Encapsulation".

- If any java class follows data hiding and abstraction then such class is referred as "Encapsulated class".

Encapsulation = Data Hiding + Data Abstraction.

Advantages of Encapsulation

- We can achieve security.
- Enhancement becomes easy.
- Maintainability and modularisation becomes easy.
- It provides flexibility to the user to use the system very easily.

Private members

- Our internal data should not go to the outside world directly, that is, outside people should not access our internal data directly.
- By using private modifiers we can implement "data hiding".

Shadowing Problem and this keyword

- If both local variable and instance variable have the same name inside the method then it would result in a name-clash and jvm will always give preference for local variable. This approach is called the **“Shadowing problem”.**

Setters

Setter methods are used to set the value to the instance variables of the class.

Syntax for setter method

a. compulsory the method name should start with set.

b. it should be public.

c. return type should be void.

d. compulsorily it should have some argument.

Getters

Getter methods are used to get the value from the instance variables of the class.

Syntax for getter method

a. compulsory the method name should start with get.
b. it should be public.
c. return type should not be void.
d. compulsorily it should not have any argument.

Next Lecture

- Constructor in Java

PW SKILLS

THANK YOU