

Java Encapsulation

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Encapsulation

- ★ What is mean by Encapsulation?
 - ★ Advantages of Encapsulation?
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★ What is mean by Encapsulation?

- ★ Encapsulation refers to combining data and associated functions(Method) as a single unit. In OOPs, data and functions operating on that data are combined together to form a single unit, which is referred to as a class.
- ★ Encapsulation is the technique whereby the object's state is hidden from the outer world and a set of public methods for accessing this state are exposed. When each object keeps its state private inside a class, we can say that encapsulation was achieved. This is why encapsulation is also referenced as the data-hiding mechanism.

★ Advantages of Encapsulation?

- ★ The main advantage of using encapsulation is to secure the data from other methods.
- ★ For example, when we make fields private then these fields are only used within the class, but these data are not accessible outside the class.

★ Encapsulation Program?

```
Cat.java ×
1 package codemind;
2
3 public class Cat {
4
5     private int energy = 50;
6     private int hungry = 60;
7     private int mood = 50;
8
9     void feed() {
10
11         energy++;
12         hungry--;
13         mood++;
14         meow();
15     }
16
17     void sleep() {
18
19         System.out.println("Cat sleep..");
20         hungry++;
21         energy++;
22     }
23
24     void play() {
25
26         energy--;
27         hungry++;
28         mood++;
29         meow();
30     }
31 }
32
```

```
32
33     private void meow() {
34         System.out.println("Meow");
35     }
36
37     public int getEnergy() {
38         return energy;
39     }
40
41     public int getHungry() {
42         return hungry;
43     }
44
45     public int getMood() {
46         return mood;
47     }
48
49
50 }
51
```

★ Encapsulation Program?

```
CatTest.java ×
1 package codemind;
2
3 public class CatTest {
4
5     public static void main(String[] args) {
6
7         Cat c = new Cat();
8
9         c.feed();
10        c.sleep();
11        c.play();
12
13        System.out.println("Energy " +c.getEnergy());
14        System.out.println("Hungry "+c.getHungry());
15        System.out.println("Mood "+c.getMood());
16
17
18    }
19 }
20
```

Thank you

