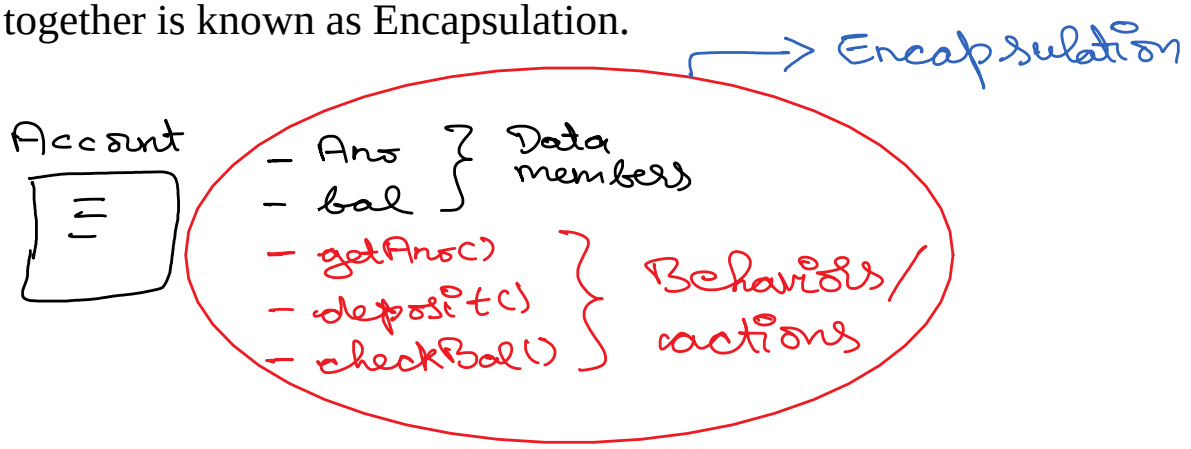
Tuesday, June 9, 2020 1:09 PM

Encapsulation:

The process binding both the data members and the behaviors of an object together is known as Encapsulation.



In java, we can achieve encapsulation with the help of a class.
example:

```
class Account
{
    // data members
    int acno  ;
    double balance  ;

    // behavior
    int getAcno()
    {
        return acno ;
    }
}
```

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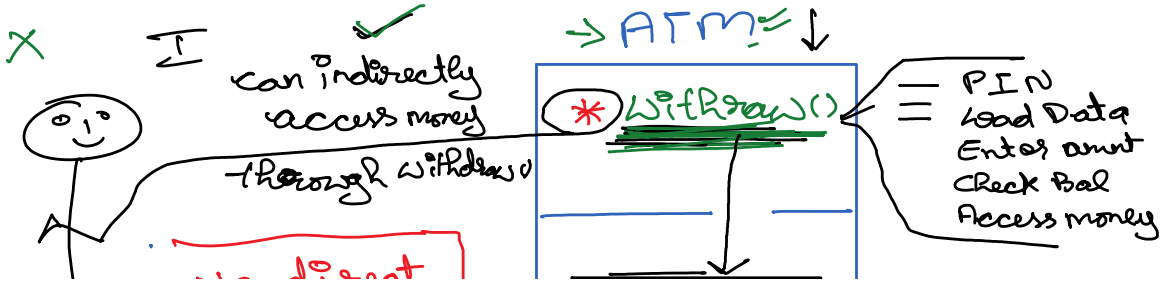

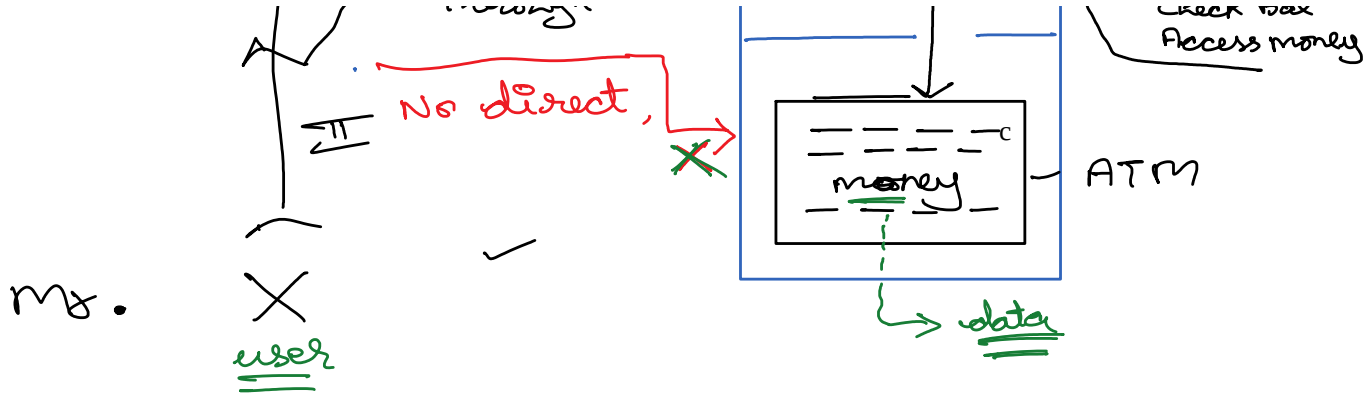

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Data Hiding :

> The process of restricting direct access to the data members of the object, and providing indirect and controlled access through the methods(behaviors) of the same class is known as data hiding.

Steps to Achieve data hiding :

step1 : make the data members private.

private :	it is an access modifier, a member with private access can be used only within the same class, we cannot use it outside a class.

```
class Employee
{
    private double salary  ;
}
```

step2 : create behaviors (methods) for reading as well as modifying as per the requirement.

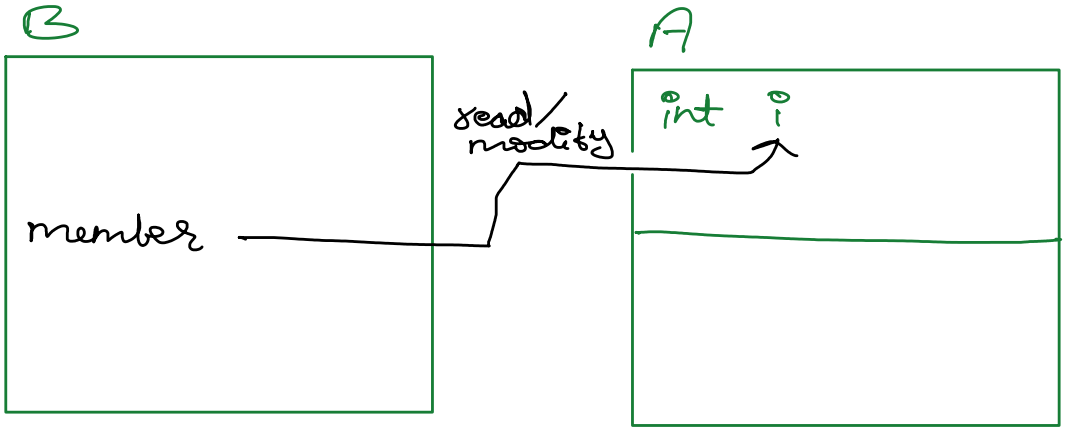
> to read the private data, create getter method

```
double getSalary()
{
    return salary ;
}
```

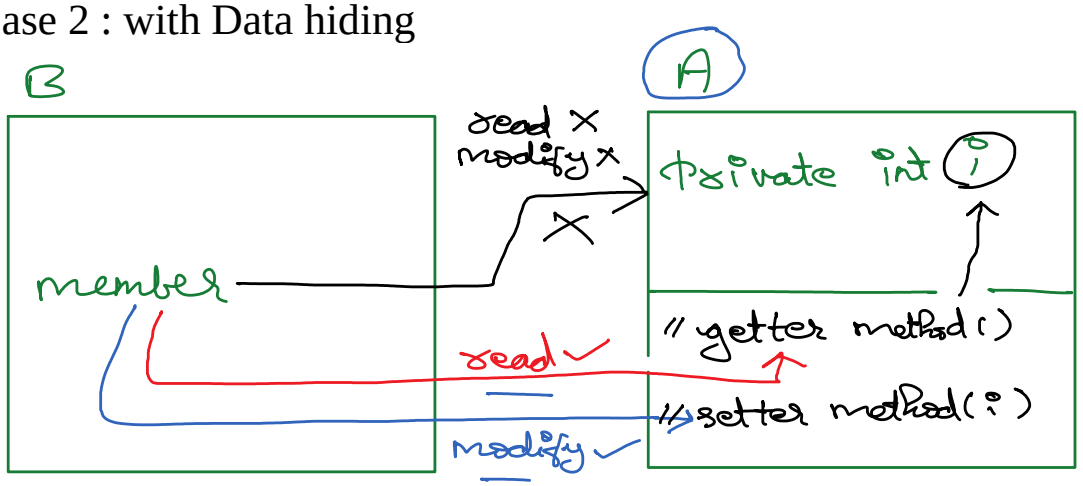
> to modify the private data, create a setter method

```
void setSalary(double salary )
{
    this.salary = salary ;
}
```

Case 1 : without data hiding



Case 2 : with Data hiding



Assignment 1 :

1. Can we make a data only readable ?
2. Can we make a data only modifiable ?
3. Can we make data neither readable nor modifiable ?

Assignment 2 :

1. min_temp = 15

Assignment 2 :

1. min_temp = 16
2. masc_temp = 28
3. cur_temp = 24

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1. on()
2. off()
3. increaseTemp()
4. decreaseTemp()
5. checkCurTemp()