

# ENCAPSULATION

ONE OF THE FOUR OOP FUNDAMENTAL

CONCEPT

CPIT 252

**Bushra Mohammed Shartoon**

**Elaf Omar Alhadrami**

**Elaf Yousef Aloufi**

**Manar mutlaq altaiary**

**Alanoud Bndar Aljohani**

**Rahaf Mutaz Dawuod**

**Shuruq Hassan Baabdullah**

# **TABLE OF CONTENT**

**1**

**INTRODUCTION**

**2**

**BENEFIT OF ENCAPSULATION**

**3**

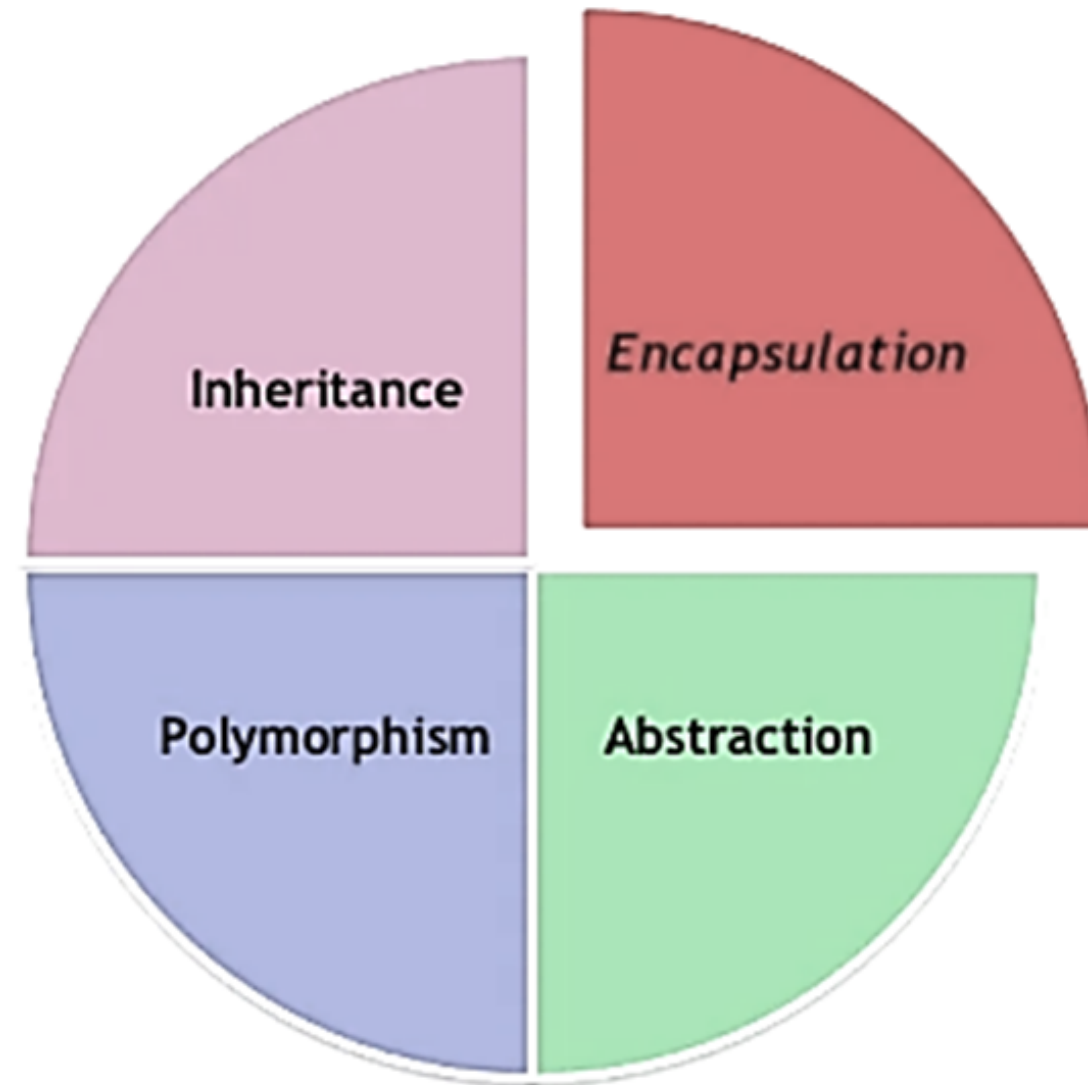
**EXAMPLE**

**4**

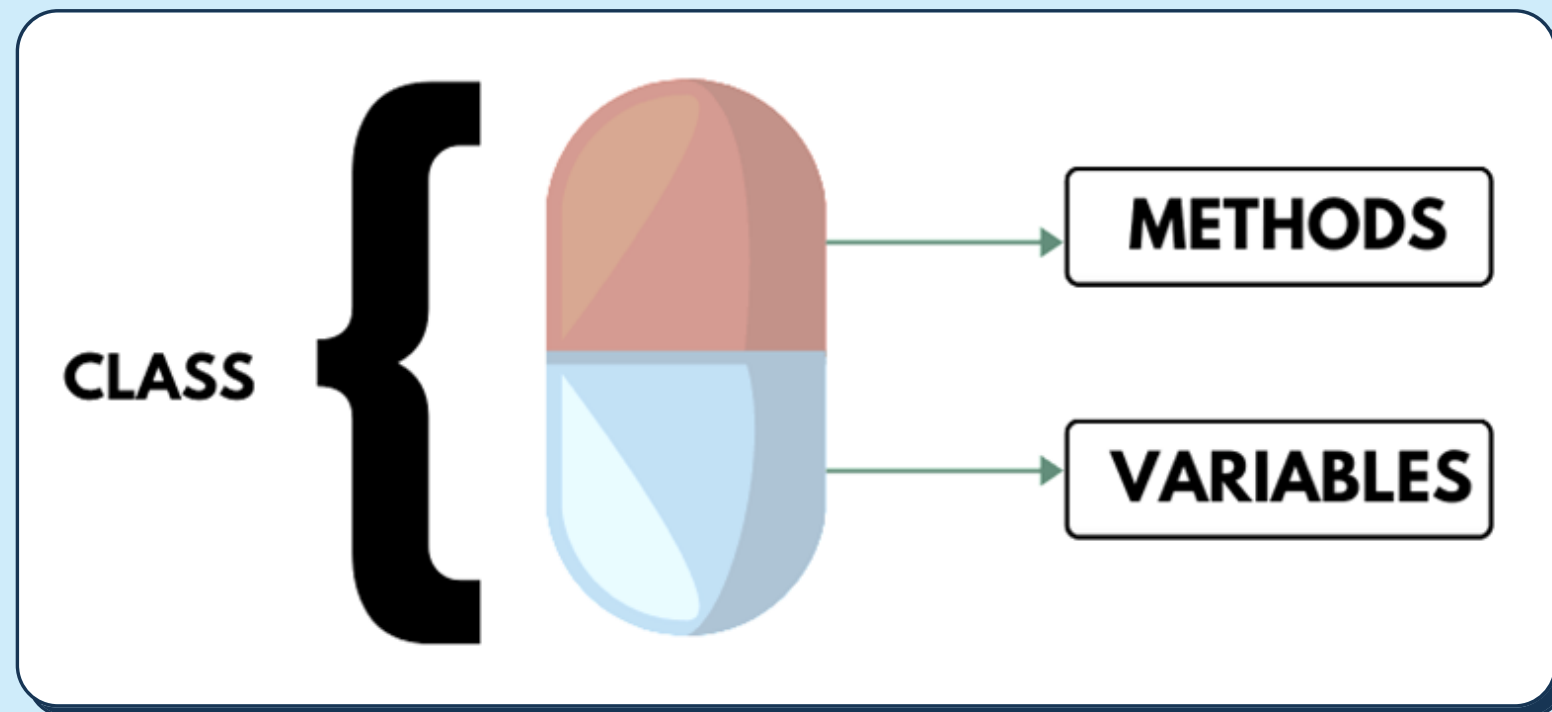
**CONCLUSION**

# INTRODUCTION

Object Oriented Programming (OOP)  
concepts



# INTRODUCTION



## Encapsulation

is a technique to hide the internal implementation details of the class.

## The main benefit of encapsulation

The main benefit of encapsulation is that it can facilitate modify the implementation safely, keeps the class tidy, easier to use and understand and it gives maintainability, flexibility and extensibility to the code

# BENEFIT OF ENCAPSULATION

Encapsulation in programming has a few key benefits. These include:

- Hiding Data
- More Flexibility
- Easy to Reuse



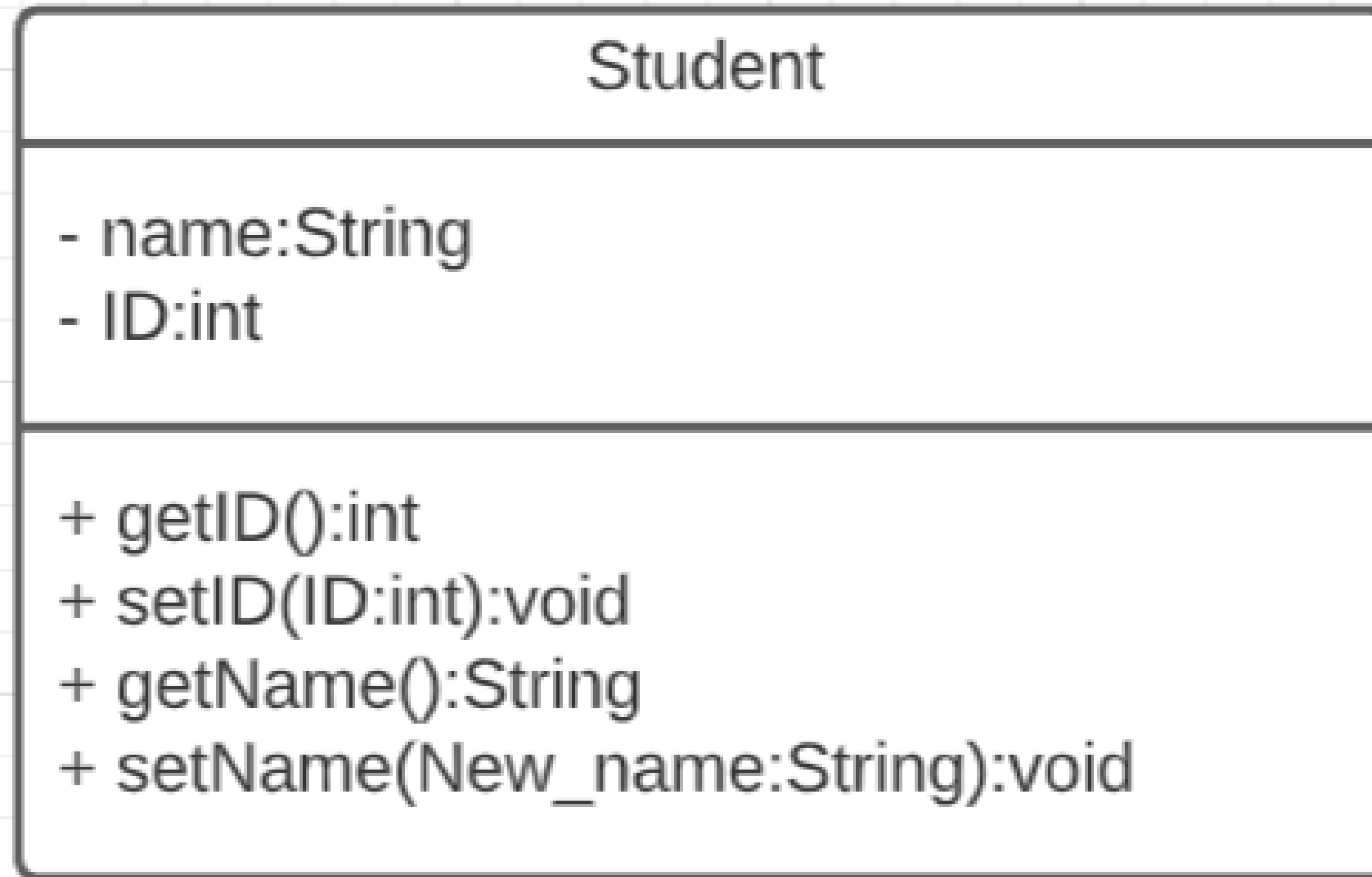
# TO ACHIEVE ENCAPSULATION IN JAVA

---

Declare the variables of a class as private.

Provide public setter and getter methods to modify and view the variables values.

# CLASS DIAGRAM



# EXAMPLE

```
public class Class {  
  
    public static void main(String[] args) {  
        Student info = new Student();  
        info.setID(1706784);  
        info.setName("Malik");  
        System.out.println(info.getID() + " " + info.getName());  
    }  
}
```



# EXAMPLE

```
* @author Bushra  
*/
```

```
public class Student {
```

```
    private String name;
```

```
    private int ID ;
```

```
    public int getID() {  
        return ID;  
    }
```

```
    public void setID(int ID) {  
        this.ID = ID;  
    }
```

# EXAMPLE

```
-      }  
  
[-    public void setID(int ID) {  
      |    this.ID = ID;  
      |  
      |    }  
  
[-    public String getName() {  
      |    return name;  
      |  
      |    }  
  
[-    public void setName(String New_name) {  
      |    name = New_name;  
      |  
      |    }
```

# CONCLUSION

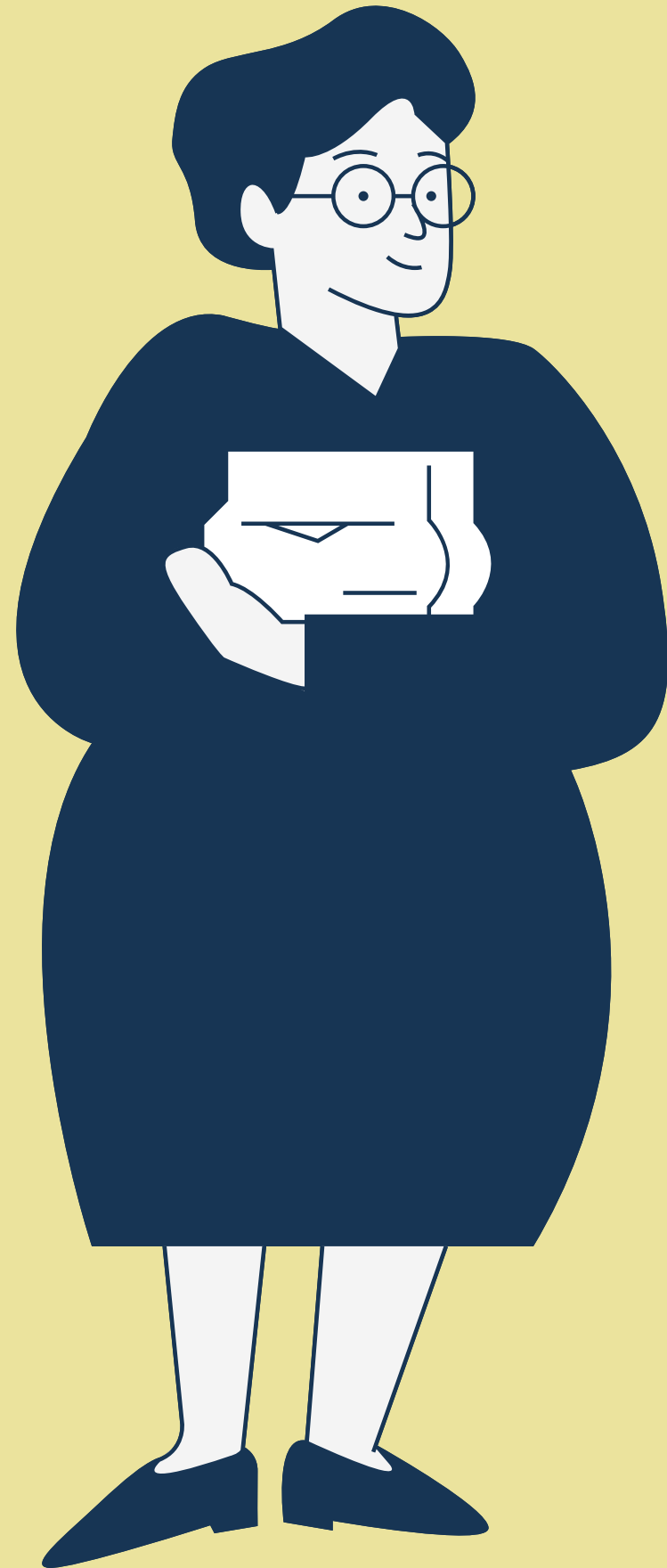
Encapsulation makes the programming code

**Flexible**

**Extensible**

**Maintainable**





**THANK YOU FOR  
LISTENING** 

Do you have any questions?