

## **FACULTY OF ENGINEERING & TECHNOLOGY**

BCS-503: Object Oriented Techniques

Lecture-22

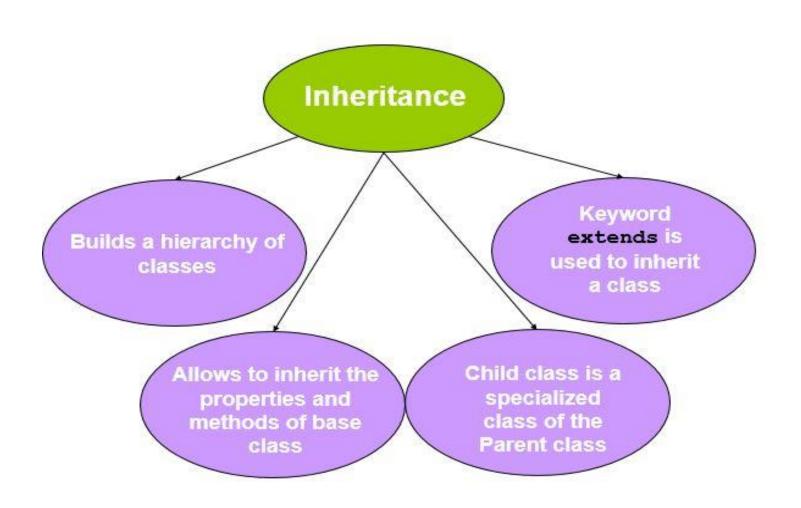
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### **OBJECTIVES**

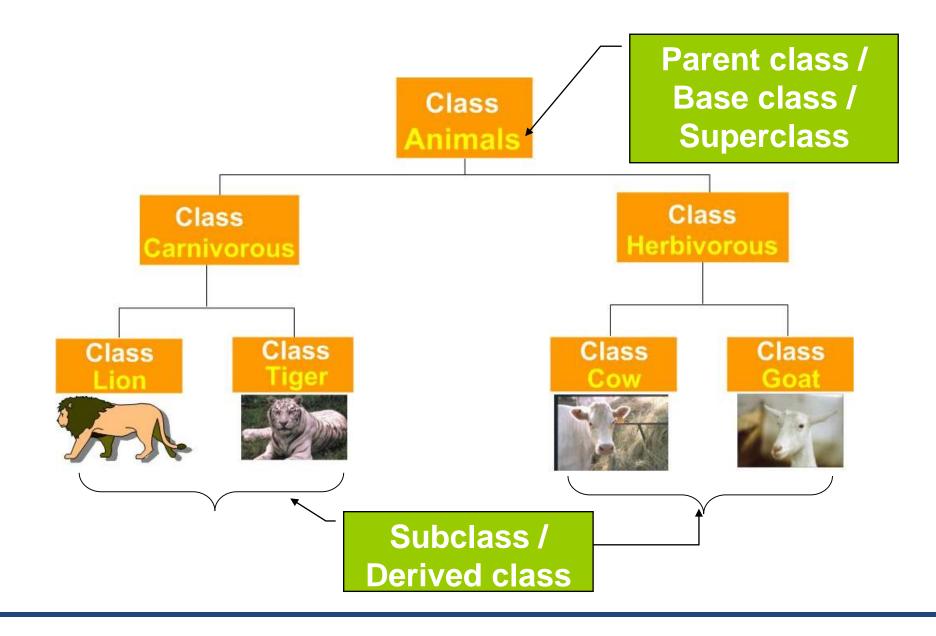
In this PPT, you will learn to:

- **❖**Explain Inheritance
- **❖**Design an example to implement Inheritance
- **❖List the features of Inheritance**

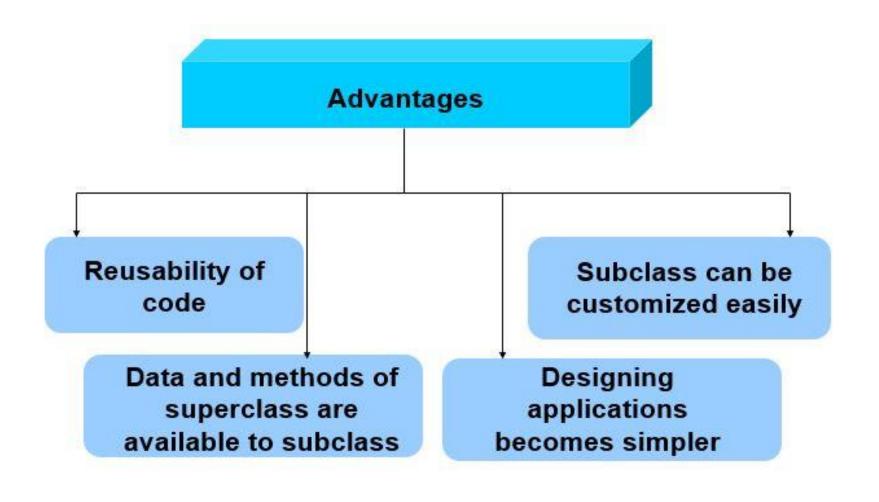
### **INHERITANCE**



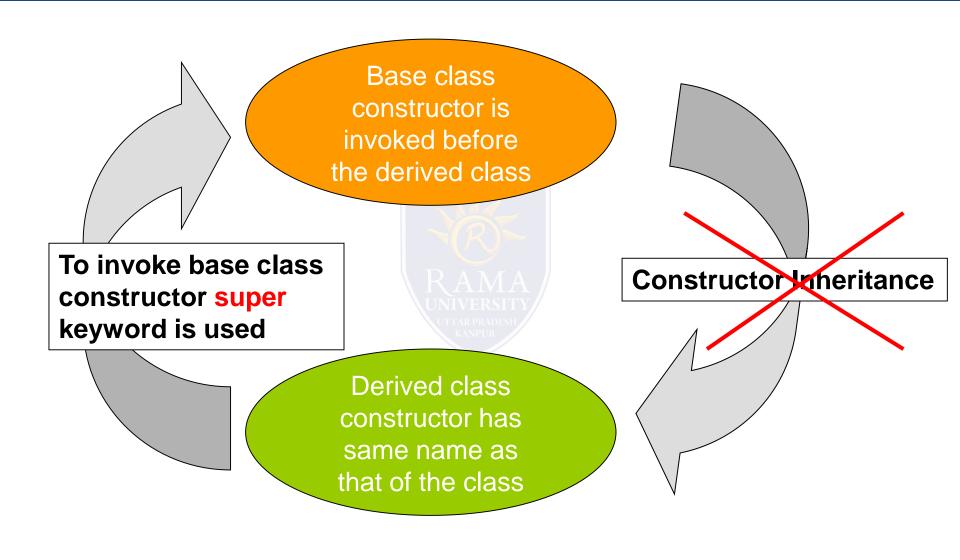
## INHERITANCE (Contd.)



#### **ADVANTAGES OF INHERITANCE**



### **DERIVED CLASS CONSTRUCTORS**



# DERIVED CLASS CONSTRUCTORS (Contd.)

The syntax to invoke the superclass consructor is:

super(parameter\_list) or super();

The parameters required by the constructor of the superclass are specified in the

parameter\_list

• The super() method always refers to the superclass immediately above the calling class.

#### **REFERENCES**

- 1. James Rumbaughet. al, "Object Oriented Modeling and Design", PHI
- 2. Grady Booch, James Rumbaugh, Ivar Jacobson, "The Unified Modeling Language User Guide", Pearson Education
- 3. Naughton, Schildt, "The Complete Reference JAVA2", TMH
- 4. Mark Priestley "Practical Object-Oriented Design with UML", TMH
- 5. Booch, Maksimchuk, Engle, Young, Conallen and Houstan, "Object Oriented Analysis and Design with Applications",

#### Pearson Education

- 6. Pandey, Tiwari, "Object Oriented Programming with JAVA", Acme Learning
- 7. <a href="https://www.javatpoint.com/java-tutorial">https://www.javatpoint.com/java-tutorial</a>
- 8. https://www.tutorialspoint.com/java/index.htm
- 9. <a href="https://www.tutorialspoint.com/object\_oriented\_analysis\_design/index.htm">https://www.tutorialspoint.com/object\_oriented\_analysis\_design/index.htm</a>
- 10. <a href="https://www.slideshare.net/niitstudentcare/">https://www.slideshare.net/niitstudentcare/</a>

### **Multiple Choice Question:**

#### Q1. Which of this keyword must be used to inherit a class?

- a) super
- b) this
- c) extent
- d) extends



### **Multiple Choice Question:**

#### Q2. Which of these is correct way of inheriting class A by class B?

- a) class B + class A {}
- b) class B inherits class A {}
- c) class B extends A {}
- d) class B extends class A {}



### **Multiple Choice Question:**

#### Q3. What is not type of inheritance?

- a) Single inheritance
- b) Double inheritance
- c) Hierarchical inheritance
- d) Multiple inheritance



### **Multiple Choice Question:**

#### Q4. All classes in Java are inherited from which class?

- a) java.lang.class
- b) java.class.inherited
- c) java.class.object
- d) java.lang.Object



### **Multiple Choice Question:**

Q5. Which of the following is used for implementing inheritance through class?

- a) inherited
- b) using
- c) extends
- d) implements



### Summary

### In this PPT, you learned that:

- > Inheritance allows the creation of hierarchical classifications.
- ➤ Inheritance allows the reusability of code.
- > All methods and properties of the base class are inherited by objects of the derived class except the constructors.