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Java Lab

Java Programming Day-21



Email id:
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Syllabus Day-20

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- **Brief**

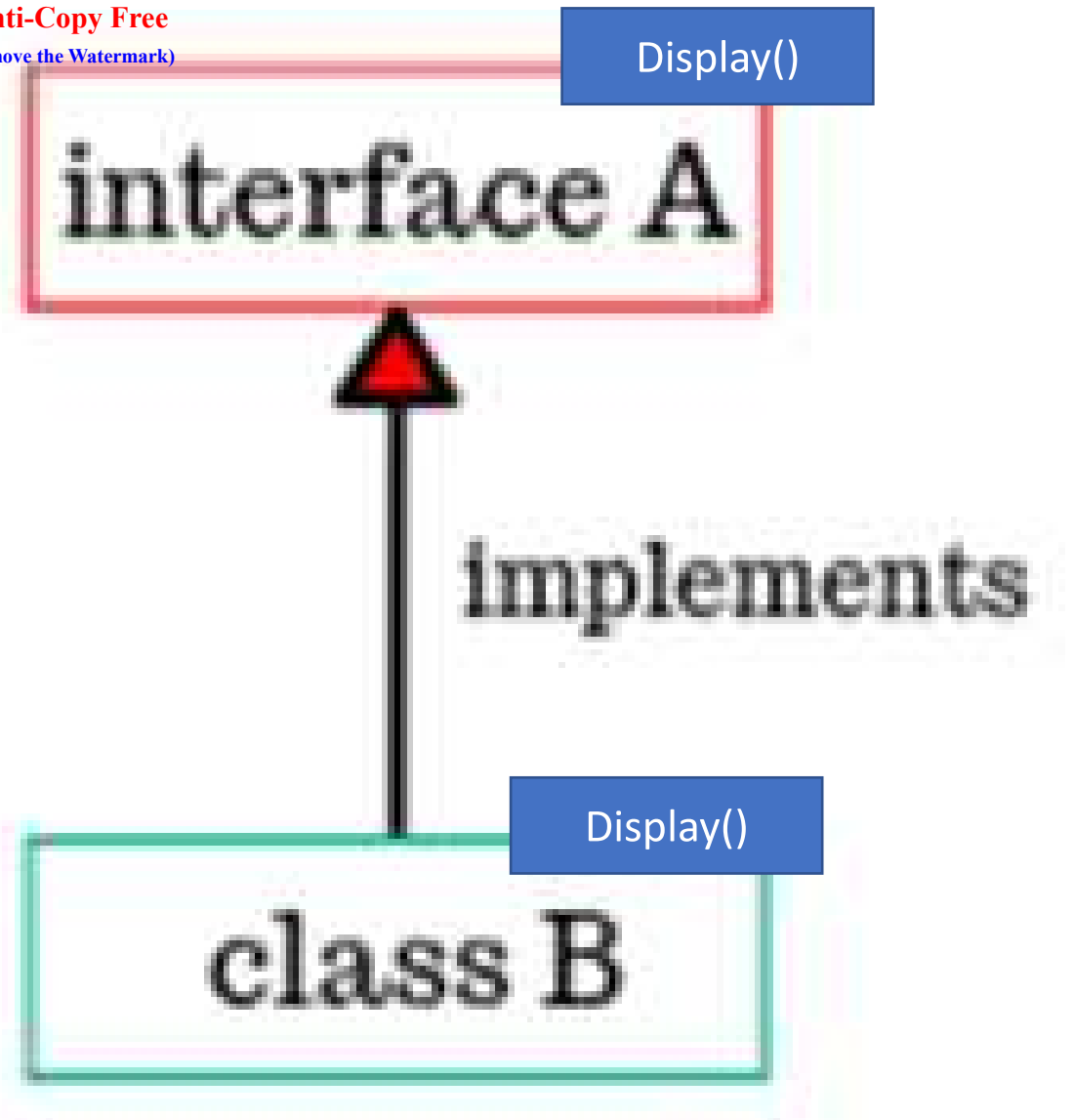
- ✓ Interface
- ✓ Exception Handling





Exp-1

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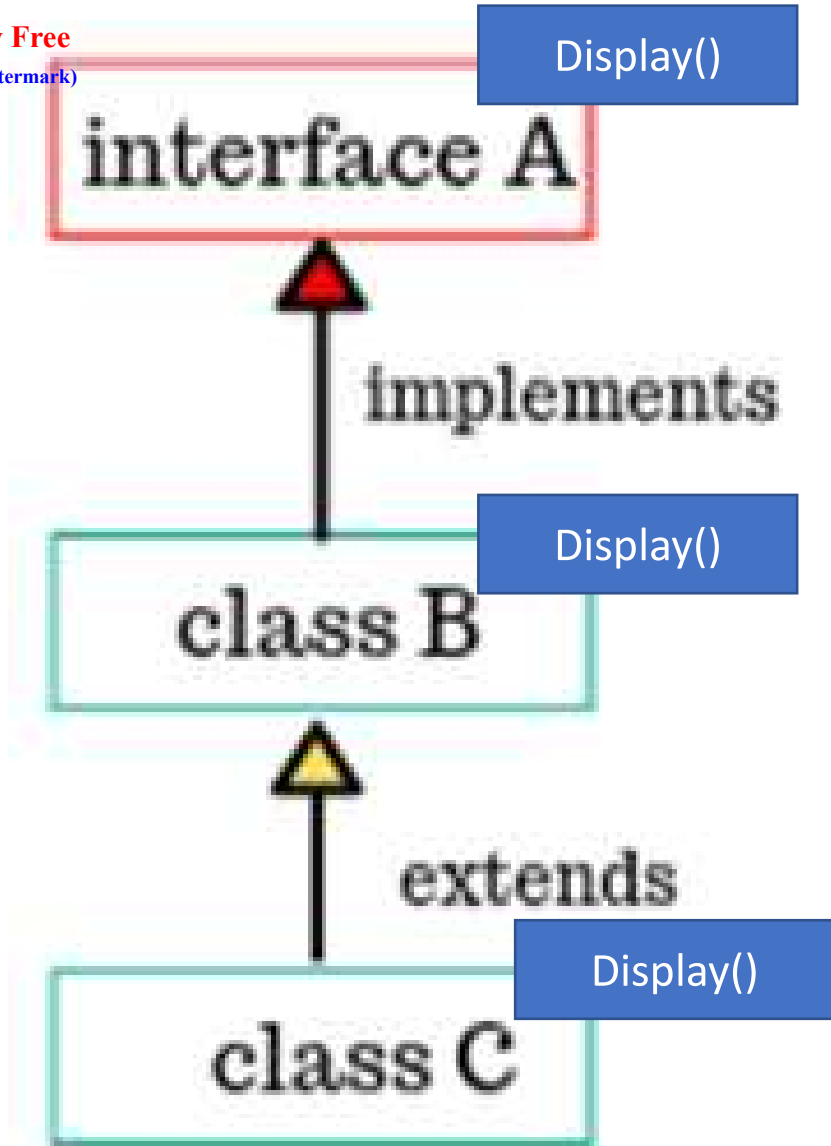
```
import java.io.*;
// A simple interface
interface In1 {
    // public and abstract
    void display();
}
// A class that implements the interface.
```

```
class Main implements In1 {
    // Implementing the capabilities of interface.
    public void display(){
        System.out.println("WelcomeJava");
    }
    // Driver Code
    public static void main(String[] args)
    {
        Main t = new Main();
        t.display();
    }
}
```



Exp-2

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```
import java.io.*;
// A simple interface
interface interfaceA {
    // public and abstract
    void display();
}
```

```
// A class that implements the interface.
class ClassB implements interfaceA {
    // Implementing the capabilities of interface.
    public void display(){
        System.out.println("Welcome");
    }
}
```

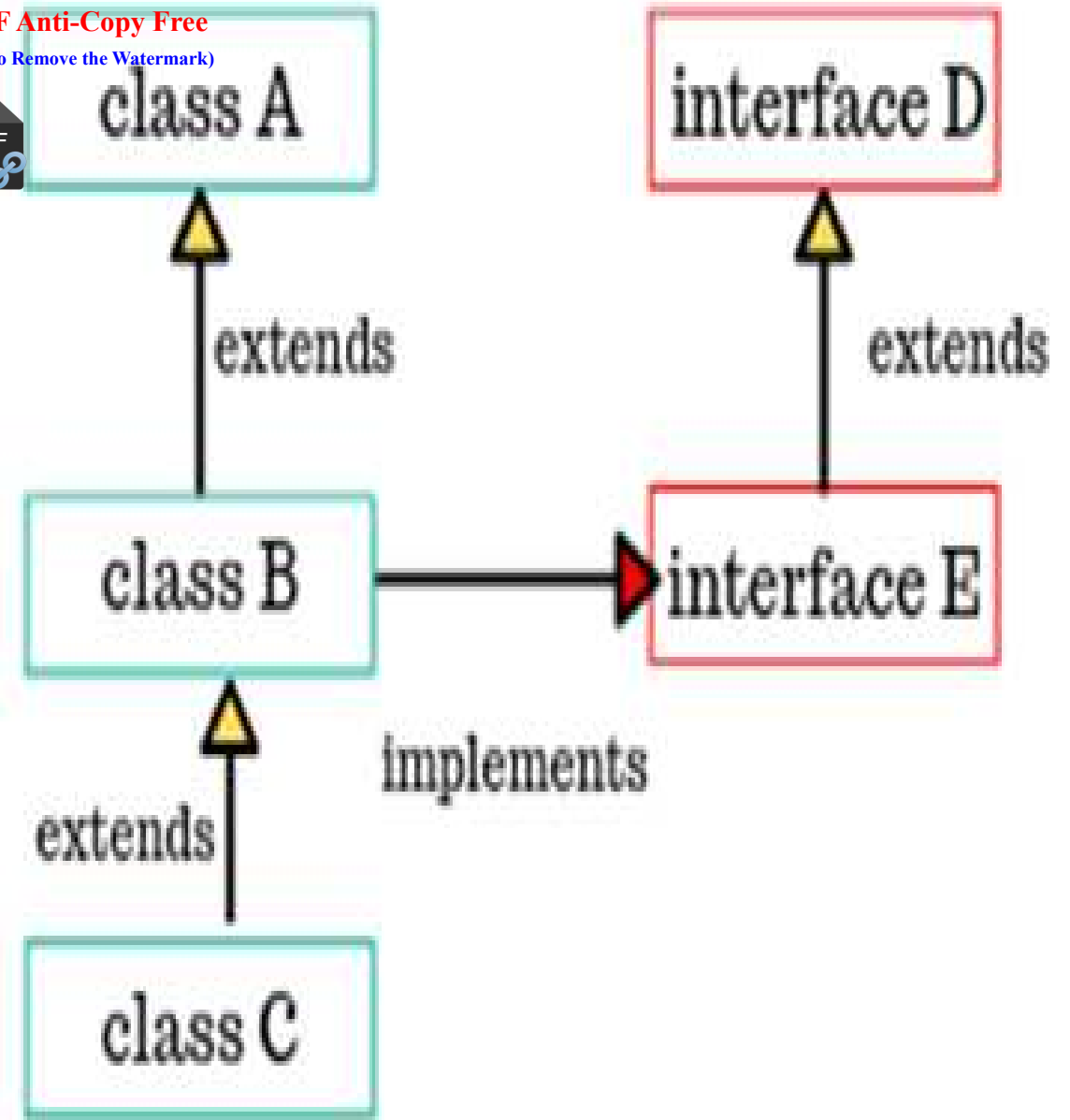
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// A class that extends the interface.

```
class Main extends ClassB {
    // Implementing the capabilities of interface.
    public void display(){
        System.out.println("Java");
    }
    // Driver Code
    public static void main(String[] args)
    {
        Main t = new Main();
        t.display();
    }
}
```



Exp-3

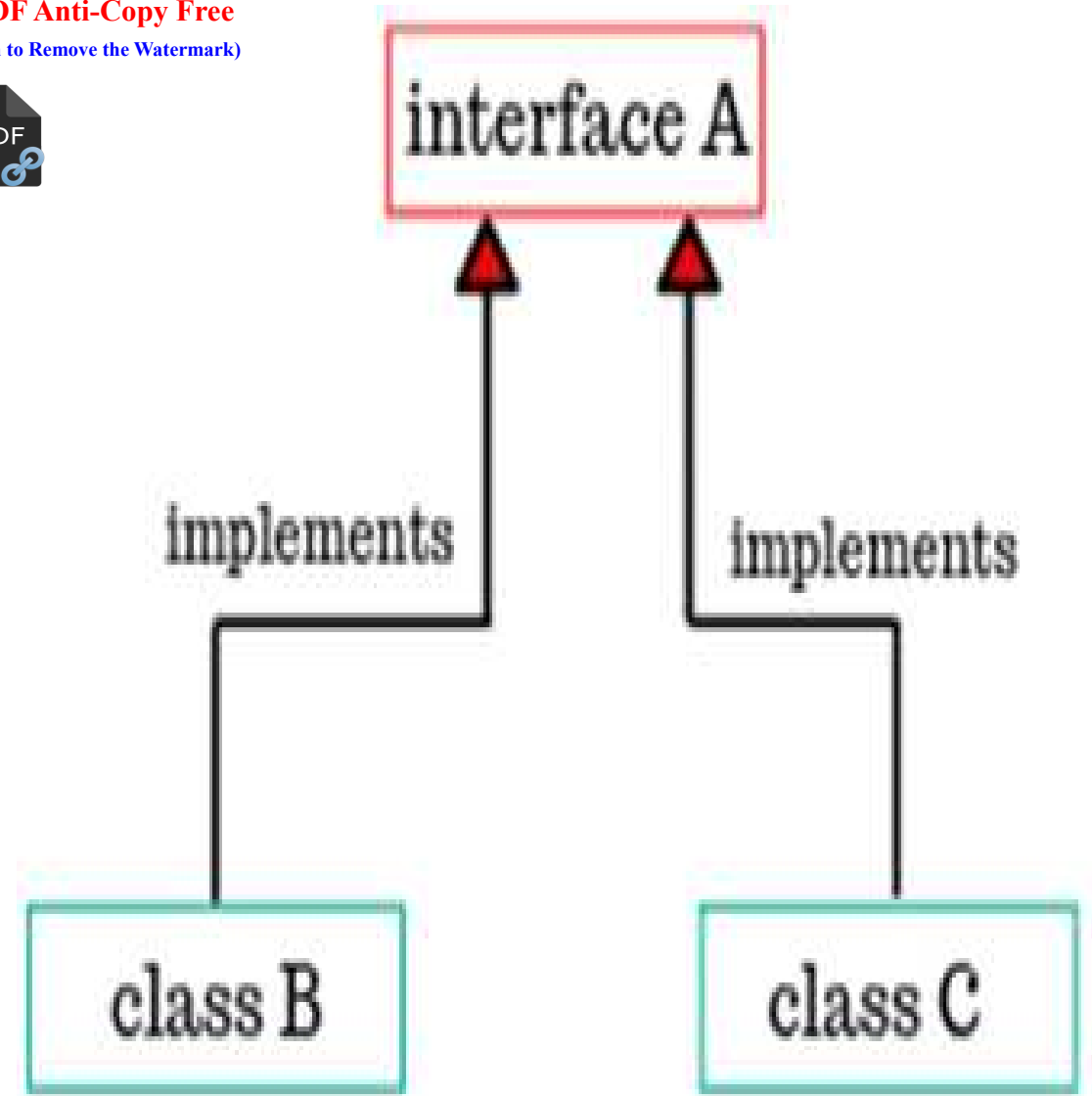




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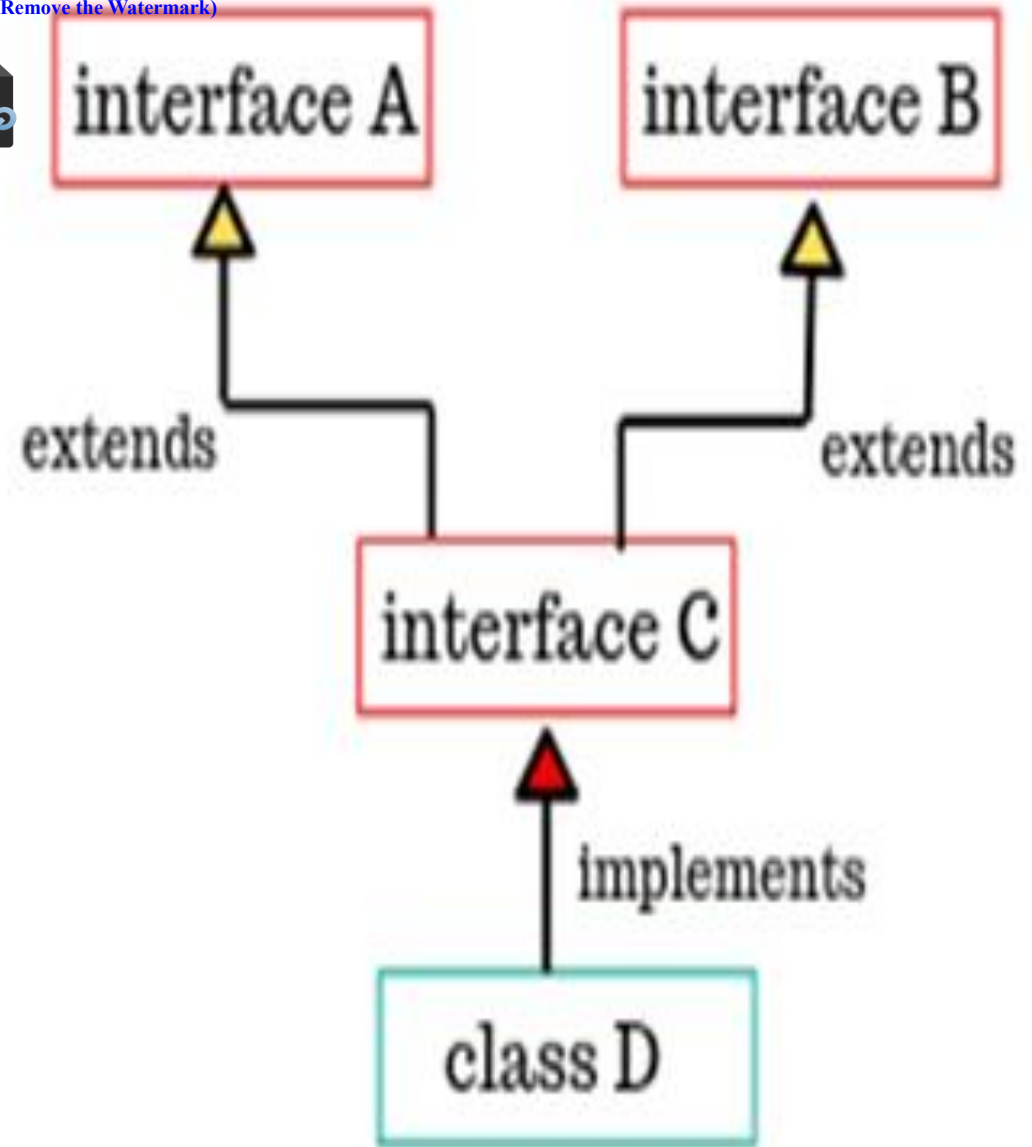


Exp-4





Exp-5





Exp-6

Use of simple try and catch statement



Syntax

```
.....  
.....  
try  
{  
    Statement  
}  
Catch (exception-type e)  
{  
    Statement  
}  
.....  
.....
```



Exp-7

Catching invalid command line arguments

• class Main

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```
• { public static void main(String args[])//10, 2.5, 30, D, 4.5, 60
•     int invalid = 0, valid=0, number;
•     for (int i = 0; i < args.length; i++)
•     { try{ number = Integer.parseInt(args[i]); }
•       catch(NumberFormatException e){
•         invalid = invalid + 1;
•         System.out.println("invalid number: "+ args[i]);
•         continue;
•       }
•       valid = valid + 1;
•     }
•     System.out.println("Total valid Number are:"+valid);//3
•     System.out.println("Total invalid Number are:"+invalid);//3
• }
• }
```



Exp-7

Multiple catch statement

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- try
- {
 - Statement
- }
- catch (Exception-type-1 e)
- {
 - Statement
- }
- catch (Exception-type-2 e)
- {
 - Statement
- }



Exp-8

Using finally Statement

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```
• try
  {
    • .....
    • .....
  }
• finally
  {
    • .....
    • .....
  }
```



Exp-9

Throwing our own exception

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```
import java.lang.Exception;
class MyException extends Exception
{
    MyException(String msg)
    {
        super(msg);
    }
}
```

```
class Main
{
    public static void main (String[] args) {
        int x=5, y=1000;
        try {
            float z = (float) x / (float) y;
            if (z < 0.01)
            {
                throw new MyException("Number is too small");
            }
        } catch(MyException e) {
            System.out.println("Caught my exception");
            System.out.println(e.getMessage());
        } finally {
            System.out.println("I am always here");
        }
    }
}
```