

EXPERIMENT NO. 5

AIM: WAP to demonstrate the concept of Method Overriding with Dynamic method dispatch.

ALGORITHM: SHOW_OVERRIDE

STEP 1: Start the program.

STEP 2: Create the Parent class having method named: show method.

STEP 2: Create the Child class inherited from Parent class having same show method with different body.

STEP 3: In the main (), declare the objects of child class.

STEP 4: Access the show method of child class using object of child class.

STEP 5: Now make reference of parent class and assign to child's class object to invoke show method using concept of upcasting.

STEP 6: Exit.

INPUT:

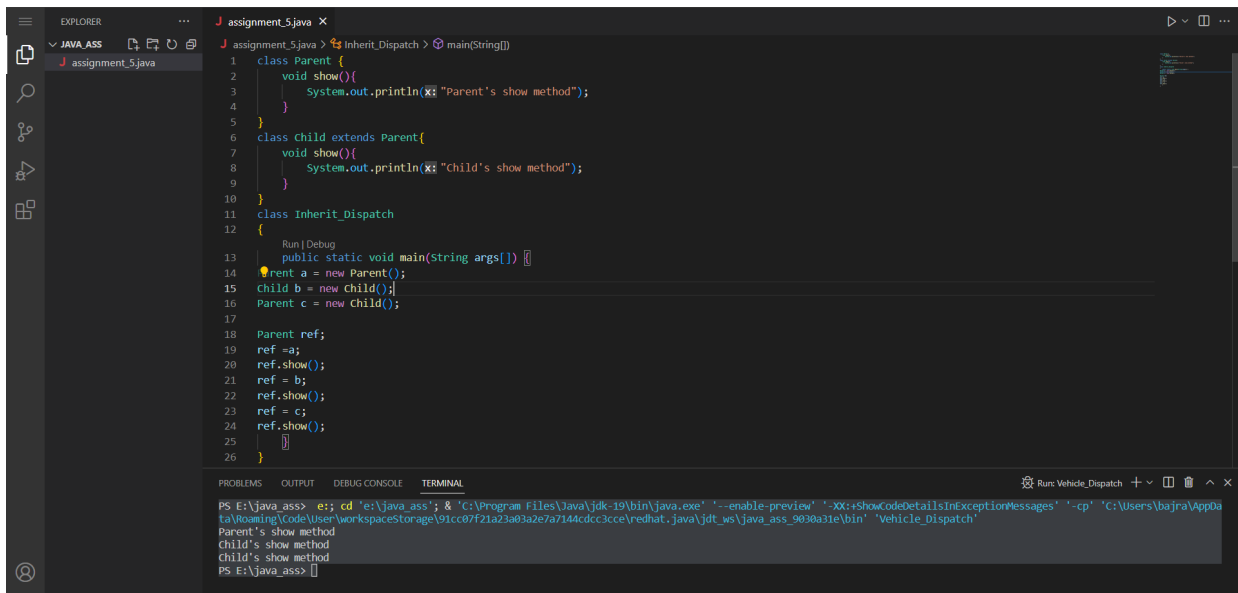
```
class Parent {
    void show(){
        System.out.println("Parent's show method");
    }
}
class Child extends Parent{
    void show(){
        System.out.println("Child's show method");
    }
}
class Inherit_Dispatch
{
    public static void main(String args[]) {
        Parent a = new Parent();
        Child b = new Child();
        Parent c = new Child();

        Parent ref;
        ref =a;
        ref.show();
        ref = b;
        ref.show();
        ref = c;
        ref.show();
    }
}
```

OUTPUT:

```
PS E:\java_ass> e:; cd 'e:\java_ass'; & 'C:\Program Files\Java\jdk-19\bin\java.exe' '-enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users'
'Vehicle_Dispatch'
Parent's show method
Child's show method
Child's show method
PS E:\java_ass>
```

Input & Output from IDE:

The screenshot shows an IDE with a dark theme. The Explorer panel on the left shows a project named 'JAVA_ASS' with a file 'assignment_5.java'. The main editor displays the code for 'assignment_5.java', which includes a 'Parent' class with a 'show()' method, a 'child' class extending 'Parent' with its own 'show()' method, and an 'Inherit_Dispatch' class with a 'main()' method. The 'main()' method creates instances of 'Parent' and 'child', and then calls 'show()' on them. The bottom panel shows the 'TERMINAL' output, which matches the output shown in the first block. The terminal output shows the command being run and the resulting output: 'Parent's show method', 'Child's show method', and 'Child's show method'.

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