

BCSE-506L (Performance Analysis of Programming Languages Lab)

EXPERIMENT NO. 6

AIM: WAP to implement the concept of Interface and Abstract class.

ALGORITHM: INTERFACE

STEP 1: Start the program.

STEP 2: Create the class Interface having all abstract methods.

STEP 2: Create another class Test that implements the interface and also define all abstract methods of interface class

STEP 3: In the main (), declare the objects of Test class implementing interface.

STEP 4: Access the abstract method of Interface class using object of Test class.

Step 5: Exit

INPUT :

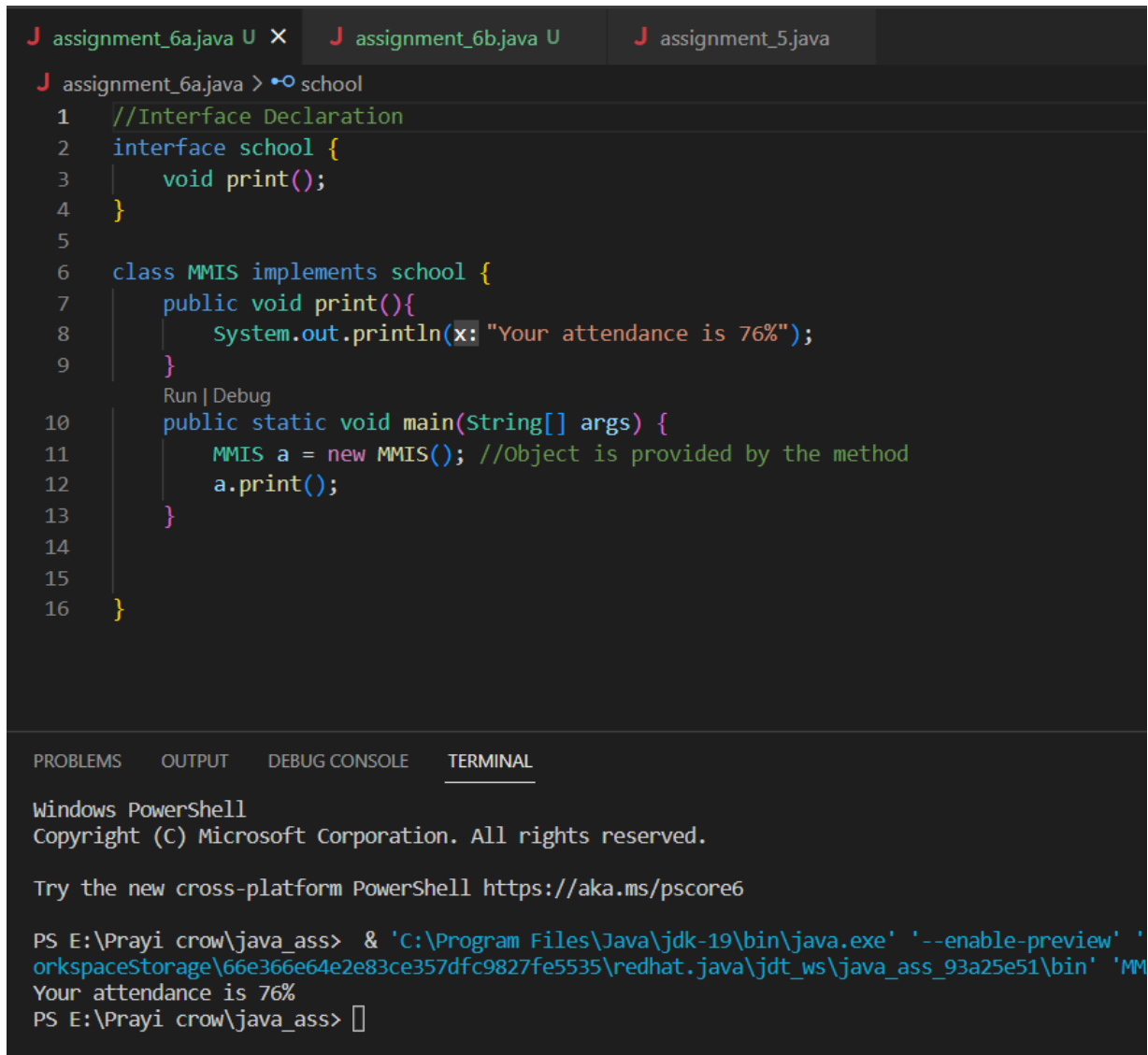
```
//Interface Declaration
interface school {
    void print();
}

class MMIS implements school {
    public void print(){
        System.out.println("Your attendance is 76%");
    }
    public static void main(String[] args) {
        MMIS a = new MMIS(); //Object is provided by the method
        a.print();
    }
}
```

Output :

```
PS E:\Prayi crow\java_ass> & 'C:\Program
Files\Java\jdk-19\bin\java.exe' '--enable-preview'
'-XX:+ShowCodeDetailsInExceptionMessages' '-cp'
'C:\Users\bajra\AppData\Roaming\Code\User\workspaceStorage\66e36
6e64e2e83ce357dfc9827fe5535\redhat.java\jdt_ws\java_ass_93a25e51
\bin' 'MMIS'
Your attendance is 76%.
```

IDE:



The screenshot shows an IDE with three tabs: `assignment_6a.java`, `assignment_6b.java`, and `assignment_5.java`. The active tab is `assignment_6a.java`, which contains the following Java code:

```
1 //Interface Declaration
2 interface school {
3     void print();
4 }
5
6 class MMIS implements school {
7     public void print(){
8         System.out.println(x: "Your attendance is 76%");
9     }
10     public static void main(String[] args) {
11         MMIS a = new MMIS(); //Object is provided by the method
12         a.print();
13     }
14 }
15
16 }
```

Below the code editor, there are four panels: **PROBLEMS**, **OUTPUT**, **DEBUG CONSOLE**, and **TERMINAL**. The **TERMINAL** panel is active and displays the following text:

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS E:\Prayi crow\java_ass> & 'C:\Program Files\Java\jdk-19\bin\java.exe' '--enable-preview' '
orkspaceStorage\66e366e64e2e83ce357dfc9827fe5535\redhat.java\jdt_ws\java_ass_93a25e51\bin' 'MM
Your attendance is 76%
PS E:\Prayi crow\java_ass> 
```

ALGORITHM: ABSTRACT CLASS

STEP 1: Start the program.

STEP 2: Create the abstract class Abstract having all abstract and non-abstract methods.

STEP 2: Create another class Test that inherit the abstract class and also define all abstract methods of Abstract class

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

STEP 4: Access the abstract and non-abstract method of Interface class using object of Test class.

Step 5: Exit

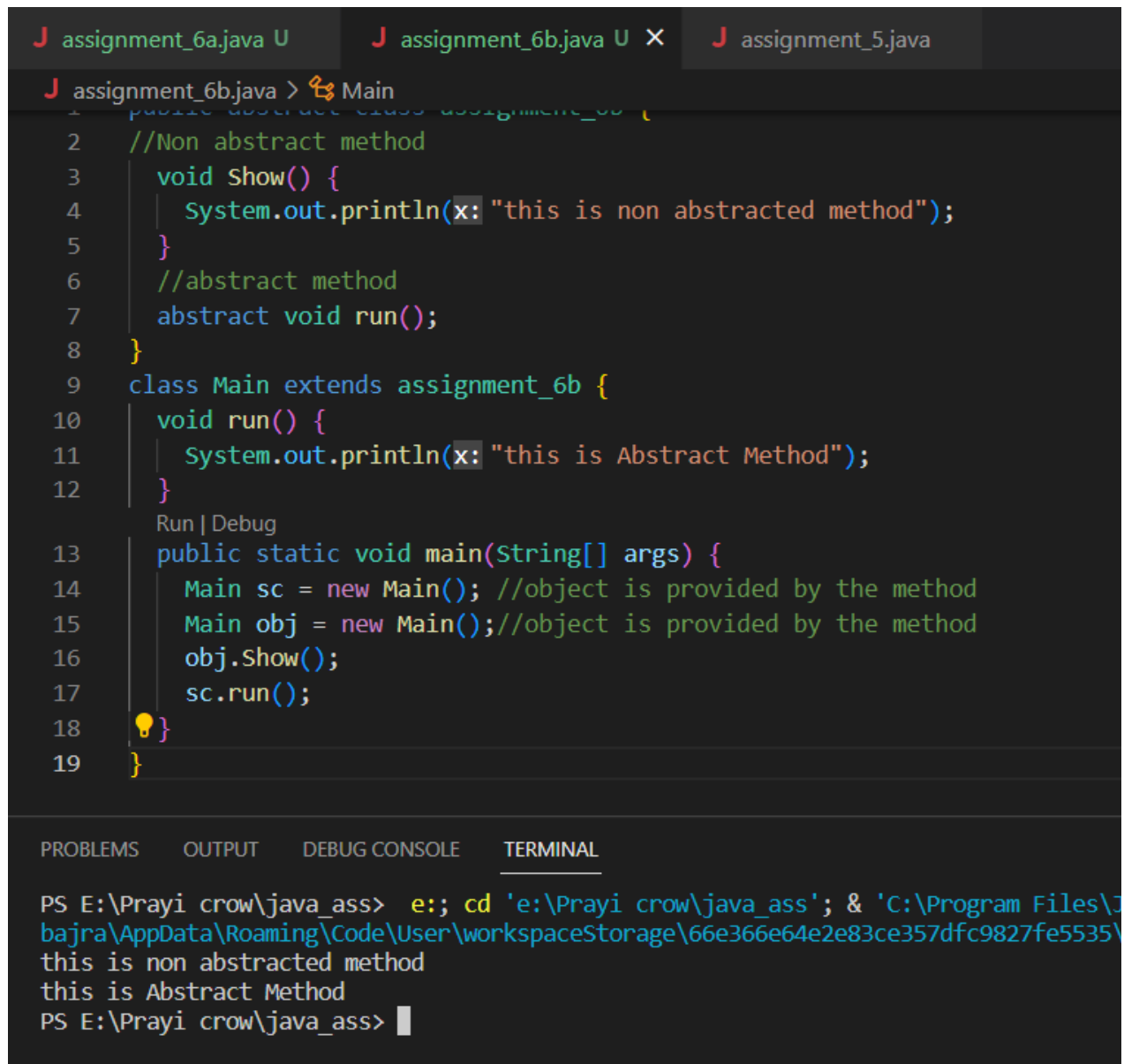
INPUT :

```
public abstract class assignment_6b {  
    //Non abstract method  
    void Show() {  
        System.out.println("this is non abstracted method");  
    }  
    //abstract method  
    abstract void run();  
}  
class Main extends assignment_6b {  
    void run() {  
        System.out.println("this is Abstract Method");  
    }  
    public static void main(String[] args) {  
        Main sc = new Main(); //object is provided by the method  
        Main obj = new Main();//object is provided by the method  
        obj.Show();  
        sc.run();  
    }  
}
```

Output :

```
PS E:\Prayi crow\java_ass> e:; cd 'e:\Prayi crow\java_ass'; &  
'C:\Program Files\Java\jdk-19\bin\java.exe' '--enable-preview'  
'-XX:+ShowCodeDetailsInExceptionMessages' '-cp'  
'C:\Users\bajra\AppData\Roaming\Code\User\workspaceStorage\66e36  
6e64e2e83ce357dfc9827fe5535\redhat.java\jdt_ws\java_ass_93a25e51  
\bin' 'Main'  
this is non abstracted method  
this is Abstract Method
```

IDE:



The screenshot shows an IDE with three tabs: assignment_6a.java, assignment_6b.java, and assignment_5.java. The active tab is assignment_6b.java, which contains the following code:

```
1 public abstract class assignment_6b {
2     //Non abstract method
3     void Show() {
4         System.out.println(x: "this is non abstracted method");
5     }
6     //abstract method
7     abstract void run();
8 }
9 class Main extends assignment_6b {
10     void run() {
11         System.out.println(x: "this is Abstract Method");
12     }
13     public static void main(String[] args) {
14         Main sc = new Main(); //object is provided by the method
15         Main obj = new Main();//object is provided by the method
16         obj.Show();
17         sc.run();
18     }
19 }
```

Below the code editor, the 'TERMINAL' tab is active, showing the command prompt output:

```
PS E:\Prayi crow\java_ass> e.;; cd 'e:\Prayi crow\java_ass'; & 'C:\Program Files\J
bajra\AppData\Roaming\Code\User\workspaceStorage\66e366e64e2e83ce357dfc9827fe5535\
this is non abstracted method
this is Abstract Method
PS E:\Prayi crow\java_ass> |
```

Bajrang
Roll No. 11212766
Section B3