

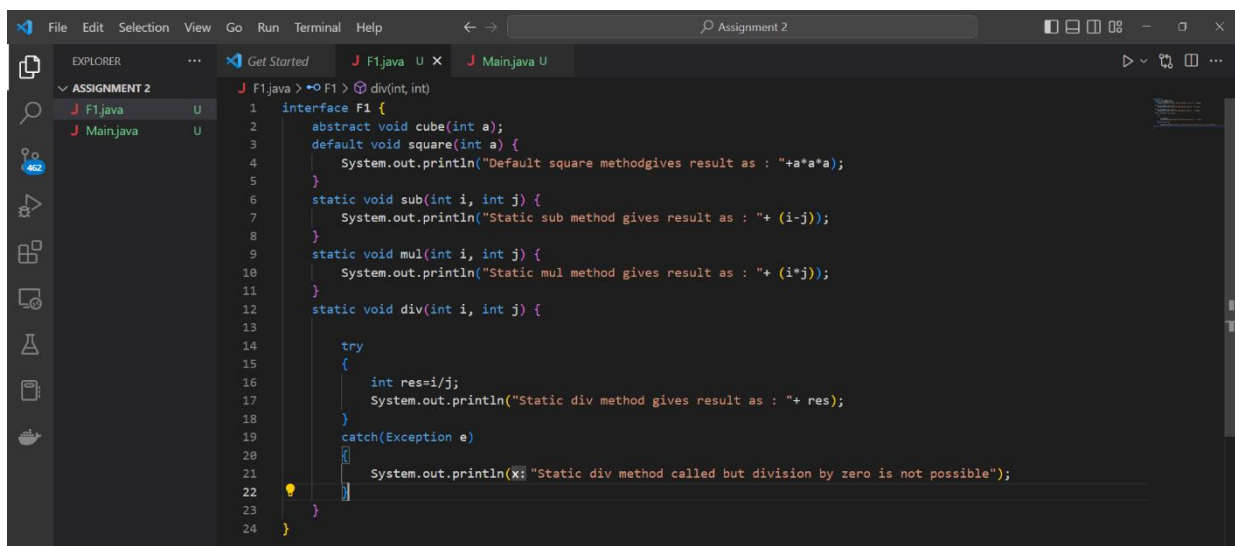
# Java 8 Functionality

## Assignment 3

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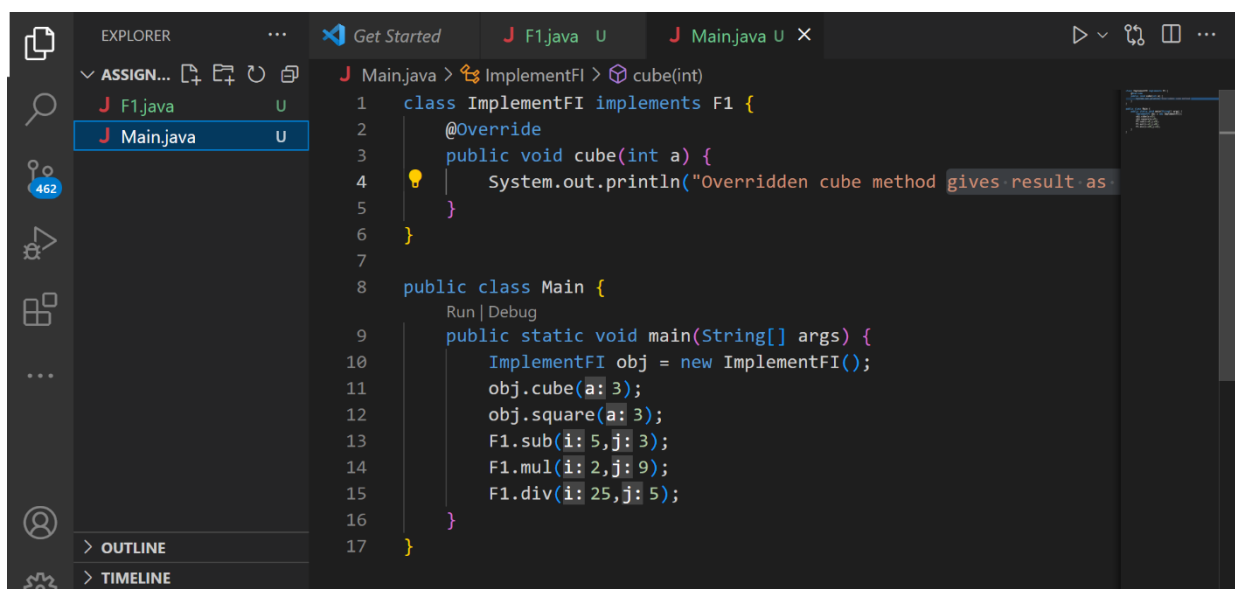
Q1. FI -> abstract-> cube()  
default -> square(), add()  
static -> sub() mul() div()  
implement interface-> override abstract-> obj

## Interface F1



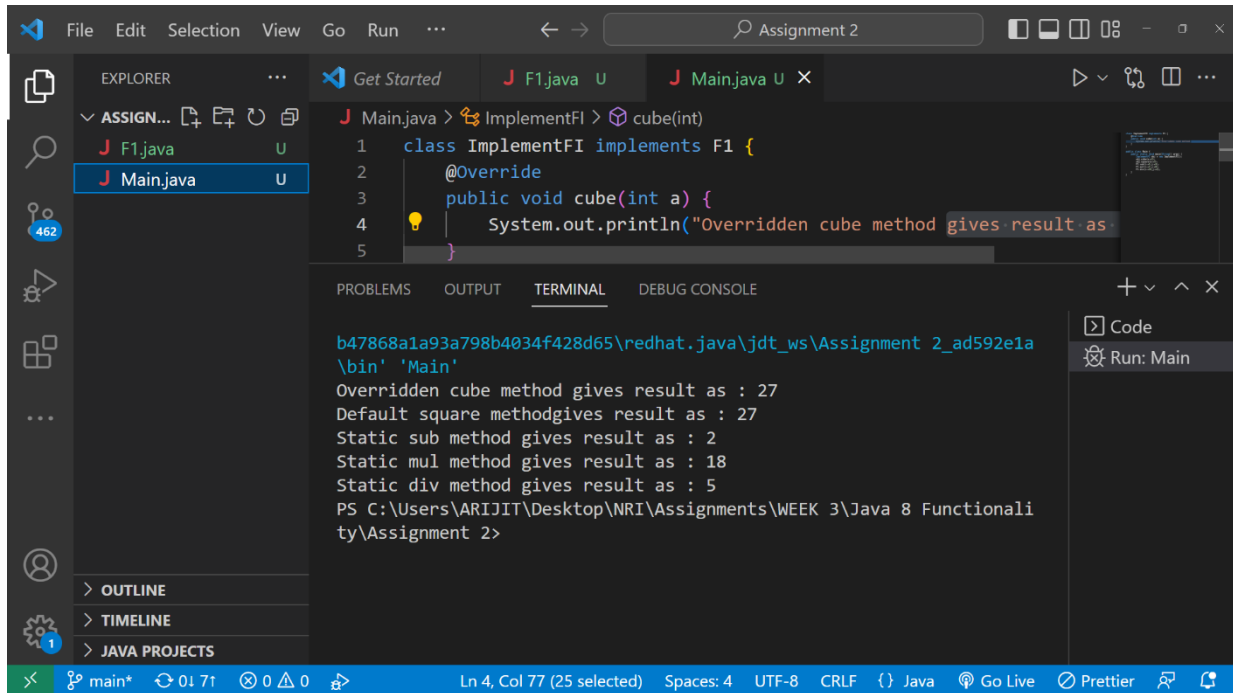
```
1 interface F1 {
2     abstract void cube(int a);
3     default void square(int a) {
4         System.out.println("Default square method gives result as : "+a*a);
5     }
6     static void sub(int i, int j) {
7         System.out.println("Static sub method gives result as : "+ (i-j));
8     }
9     static void mul(int i, int j) {
10        System.out.println("Static mul method gives result as : "+ (i*j));
11    }
12    static void div(int i, int j) {
13
14        try
15        {
16            int res=i/j;
17            System.out.println("Static div method gives result as : "+ res);
18        }
19        catch(Exception e)
20        {
21            System.out.println("Static div method called but division by zero is not possible");
22        }
23    }
24 }
```

## Main.java



```
1 class ImplementFI implements F1 {
2     @Override
3     public void cube(int a) {
4         System.out.println("Overridden cube method gives result as : "+a*a);
5     }
6 }
7
8 public class Main {
9     Run | Debug
10    public static void main(String[] args) {
11        ImplementFI obj = new ImplementFI();
12        obj.cube(a: 3);
13        obj.square(a: 3);
14        F1.sub(i: 5, j: 3);
15        F1.mul(i: 2, j: 9);
16        F1.div(i: 25, j: 5);
17    }
18 }
```

Output:



```
File Edit Selection View Go Run ...
Assignment 2

EXPLORER
  ASSIGN...
    F1.java
    Main.java

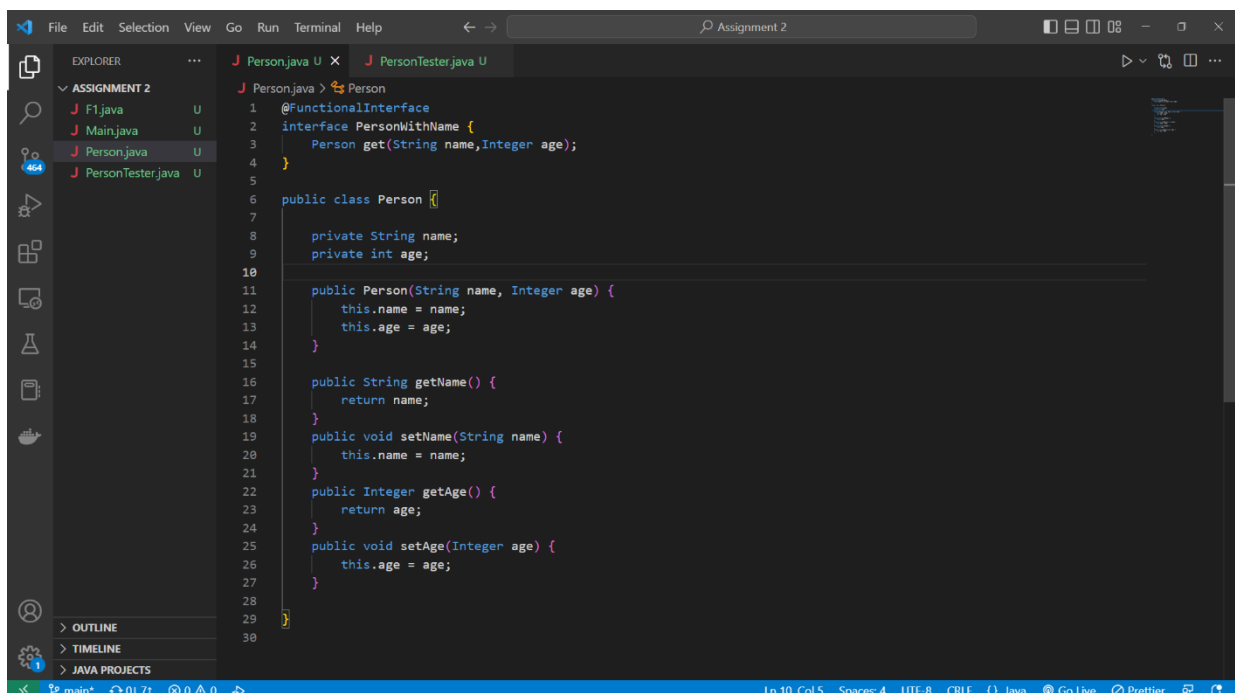
Main.java > ImplementFI > cube(int)
1 class ImplementFI implements F1 {
2     @Override
3     public void cube(int a) {
4         System.out.println("Overridden cube method gives result as : 27");
5     }
6 }

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
b47868a1a93a798b4034f428d65\redhat.java\jdt_ws\Assignment 2_ad592e1a
\bin' 'Main'
Overridden cube method gives result as : 27
Default square method gives result as : 27
Static sub method gives result as : 2
Static mul method gives result as : 18
Static div method gives result as : 5
PS C:\Users\ARIJIT\Desktop\NRI\Assignments\WEEK 3\Java 8 Functionali
ty\Assignment 2>

OUTLINE
TIMELINE
JAVA PROJECTS
```

Q2. Create constructor (2 parameters) method reference for Person Class

Person.java

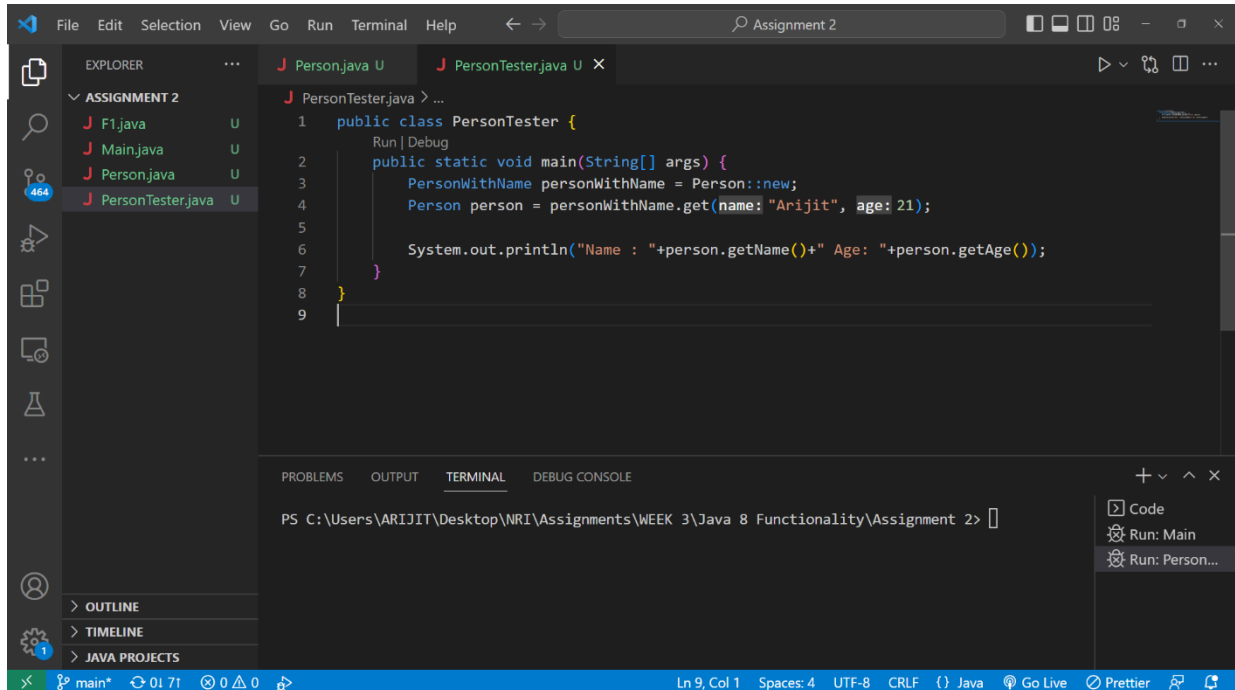


```
File Edit Selection View Go Run Terminal Help
Assignment 2

EXPLORER
  ASSIGNMENT 2
    F1.java
    Main.java
    Person.java
    PersonTester.java

Person.java > Person
1 @FunctionalInterface
2 interface PersonWithName {
3     Person get(String name,Integer age);
4 }
5
6 public class Person {
7
8     private String name;
9     private int age;
10
11     public Person(String name, Integer age) {
12         this.name = name;
13         this.age = age;
14     }
15
16     public String getName() {
17         return name;
18     }
19     public void setName(String name) {
20         this.name = name;
21     }
22     public Integer getAge() {
23         return age;
24     }
25     public void setAge(Integer age) {
26         this.age = age;
27     }
28
29 }
30
```

# PersonTester.java

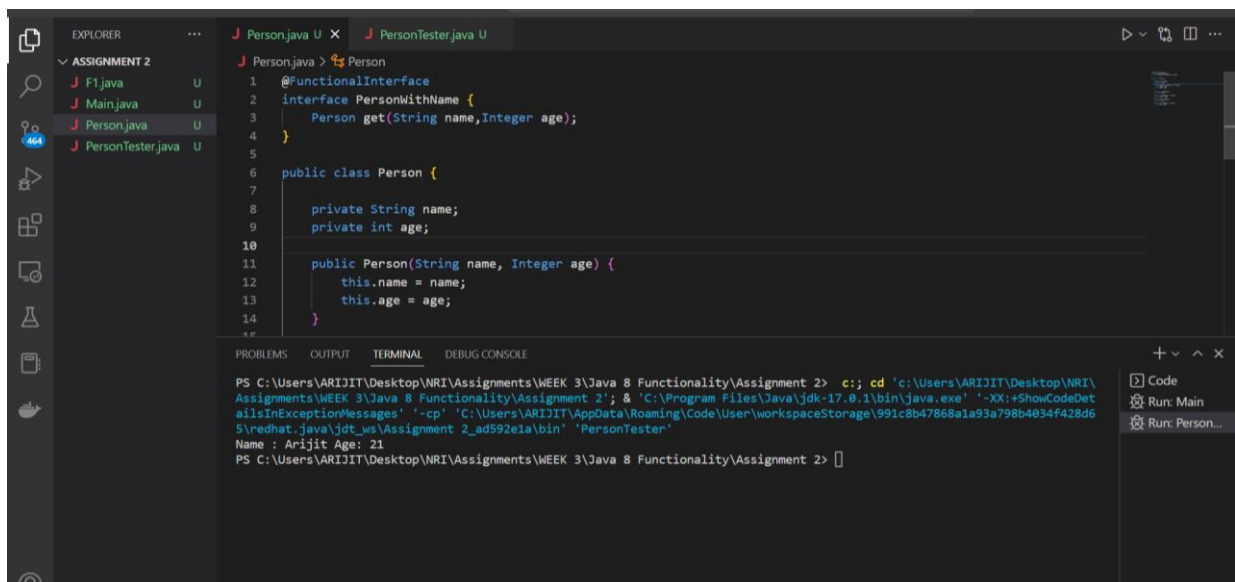


```
1 public class PersonTester {
2     public static void main(String[] args) {
3         PersonWithName personWithName = Person::new;
4         Person person = personWithName.get(name: "Arijit", age: 21);
5
6         System.out.println("Name : "+person.getName()+" Age: "+person.getAge());
7     }
8 }
9
```

Terminal output:

```
PS C:\Users\ARIJIT\Desktop\NRI\Assignments\WEEK 3\Java 8 Functionality\Assignment 2>
```

## Output:



```
1 @FunctionalInterface
2 interface PersonWithName {
3     Person get(String name,Integer age);
4 }
5
6 public class Person {
7
8     private String name;
9     private int age;
10
11     public Person(String name, Integer age) {
12         this.name = name;
13         this.age = age;
14     }
15 }
```

Terminal output:

```
PS C:\Users\ARIJIT\Desktop\NRI\Assignments\WEEK 3\Java 8 Functionality\Assignment 2> c:: cd 'c:\Users\ARIJIT\Desktop\NRI\Assignments\WEEK 3\Java 8 Functionality\Assignment 2'; & 'C:\Program Files\Java\jdk-17.0.1\bin\java.exe' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\ARIJIT\AppData\Roaming\Code\User\workspaceStorage\991c8b47868a1a93a798b4634f428d65\redhat_java\jdt_ws\Assignment_2_ad592e1a\bin' 'PersonTester'
Name : Arijit Age: 21
PS C:\Users\ARIJIT\Desktop\NRI\Assignments\WEEK 3\Java 8 Functionality\Assignment 2>
```