

LAB NO: 2

Question/Answer

1. What does static keyword mean?

In Java, the `static` keyword is used to declare members (variables and methods) that belong to the class rather than to instances of the class (objects). Static members are shared among all instances of the class. They can be accessed directly using the class name without needing to create an instance of the class.

2. What is an Armstrong number?

An Armstrong number is a number that is equal to the sum of its own digits each raised to the power of the number of digits. For example, 153 is an Armstrong number because $1^3 + 5^3 + 3^3 = 1 + 125 + 27 = 153$.

3. What is the use of import keyword?

In Java, the `import` keyword is used to import classes, interfaces, or entire packages into your Java program, allowing you to use the functionality provided by those classes, interfaces, or packages in your code. It helps to organize code and avoid naming conflicts.

4. How is Java different from C++?

Java and C++ are both object-oriented programming languages, but they have some differences:

- Java is platform-independent because it runs on the Java Virtual Machine (JVM), while C++ is platform-dependent.
- Java has automatic garbage collection, meaning it manages memory automatically, while C++ requires manual memory management.
- Java does not support multiple inheritance directly, whereas C++ does.
- Java uses a byte code-based execution model, whereas C++ compilers directly to machine code.
- Java has a built-in exception handling mechanism using try-catch blocks, while C++ uses exceptions but does not enforce their use.

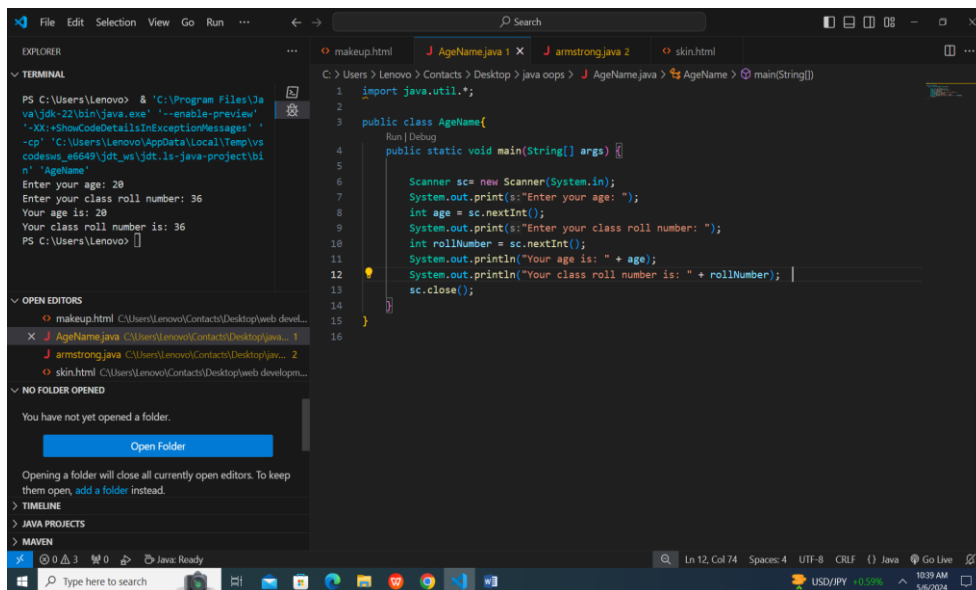
5. What is the use of scan keyword?

There is no `scan` keyword in Java. However, it's possible you're referring to the `Scanner` class, which is used for obtaining the input of the primitive data types like int, double, etc., and strings. It provides methods to parse data from various input sources such as the console, files, or strings.

Exercise:

1. Write a program in java which asks your age and class Roll Number by using the Scanner class. Also Display both age and class Roll Number.

Output:

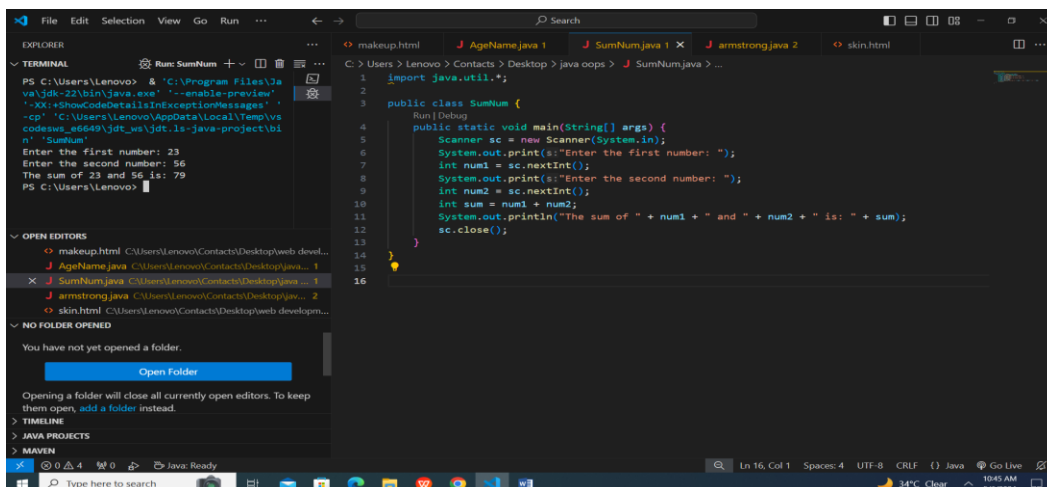


```
PS C:\Users\Lenovo> & 'C:\Program Files\Java\jdk-22\bin\java.exe' '-enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Lenovo\AppData\Local\Temp\vscodeesw_46649\jdt_ws\jdt.ls-java-project\bin' 'AgeName'
Enter your age: 20
Enter your class roll number: 36
Your age is: 20
Your class roll number is: 36
PS C:\Users\Lenovo>
```

```
1 import java.util.*;
2
3 public class AgeName{
4     public static void main(String[] args) {
5
6         Scanner sc= new Scanner(System.in);
7         System.out.print(s:"Enter your age: ");
8         int age = sc.nextInt();
9         System.out.print(s:"Enter your class roll number: ");
10        int rollNumber = sc.nextInt();
11        System.out.println("Your age is: " + age);
12        System.out.println("Your class roll number is: " + rollNumber);
13        sc.close();
14    }
15 }
16
```

2. Write a program in java using scanner class which gets two numbers as input and displays their sum.

Output:



```
PS C:\Users\Lenovo> & 'C:\Program Files\Java\jdk-22\bin\java.exe' '-enable-preview' '-XX:+ShowCodeDetailsInExceptionMessages' '-cp' 'C:\Users\Lenovo\AppData\Local\Temp\vscodeesw_46649\jdt_ws\jdt.ls-java-project\bin' 'SumNum'
Enter the first number: 23
Enter the second number: 56
The sum of 23 and 56 is: 79
PS C:\Users\Lenovo>
```

```
1 import java.util.*;
2
3 public class SumNum {
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         System.out.print(s:"Enter the first number: ");
7         int num1 = sc.nextInt();
8         System.out.print(s:"Enter the second number: ");
9         int num2 = sc.nextInt();
10        int sum = num1 + num2;
11        System.out.println("The sum of " + num1 + " and " + num2 + " is: " + sum);
12        sc.close();
13    }
14 }
15
16
```

Roll no: 23(Ai) 36

