User Input

User input

We need to import a class called Scanner. This class will help with user input

Scanner is a class within the package java.util. A package is used to group code into a folder to make it easy to use.

import java.util.Scanner;

User input skeleton Scanner

```java
import java.util.Scanner;

public class myInput

{

    public static void main(String[] args)

    {

        Scanner input = new Scanner(System.in);

    }

}
```

Scanner syntax

This code initialize the scanner:

```
Scanner input = new Scanner(System.in)
```

Scanner: Data type defined in scanner class

input: Variable name

new Scanner: Creates a new Scanner object

System.in: - Argument, or Actual Parameter (input value)

- It is a value that corresponds to keyboard input

- It allow to input keyboard data into our programs

Getting the user input

Create a new variable that takes the assigned value of the scanner variable.nextvalue.

Each data type has a next command:

```
Scanner input = new Scanner(System.in);
```

String name = input.nextLine();

int age = input.nextInt();

double avg = input.nextDouble();

Note: You **always** need to include the scanner variable to get the next value. Otherwise, your program will return an error.

Getting user input

Variable type should match the input type.

```
Scanner input = new Scanner(System.in)
```

String name = input.nextInt(); - - - - - - - -> **ERROR - Incompatible types**

LET'S SEE HOW IT WORKS

```java
import java.util.Scanner;


public class MyScanner{
    public static void main(String[] args){
        Scanner input = new Scanner(System.in);

        System.out.println("Enter your name:");
        String name = input.nextLine();
        System.out.println("Enter your age:");
        int age = input.nextInt();
        System.out.println("Hi " + name + "!");
        System.out.println("You look older than " + age + "! :o)");
    }
}
```

nextInt(), nextDouble() Problem

There could be issues when you using nextInt() or nextDouble() before nextLine()

```
System.out.println("Enter your age:");
int age = input.nextInt();
System.out.println("Enter your name:");
String name = input.nextLine();
```

What is wrong with the code?

- nextInt() and nextDouble() read a portion of the line in the user input, **do not consume the newline character (\n)**
- When nextLine() is called, it will read the leftover newline from the same line as nextInt() or nextDouble() instead of waiting for the user to type the name. As a result, **name** becomes an **empty string.**

How do we solve the nextInt(), nextDouble() problem?

We need to add a buffer nextLine()

```
System.out.println("Enter your age:");

int age = input.nextInt();

input.nextLine();

System.out.println("Enter your name:");

String name = input.nextLine();
```

Gets the blank space after the int, so the next String input will work.