A+ Computer Science

INPUT

Scanner Import

```
import     java.util.Scanner;
```

Try to be as specific as possible when using an import.

Scanner Creation

reference variable

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

object instantiation

Scanner

frequently used methods

Name	Use
nextInt()	returns the next int value
nextDouble()	returns the next double value
nextFloat()	returns the next float value
nextLong()	returns the next long value
nextByte()	returns the next byte value
nextShort()	returns the next short value
next()	returns the next one word String
nextLine()	returns the next multi word String

```
import  java.util.Scanner;
```

Reading Integer Values

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

out.print("Enter an integer :: ");
int num = keyboard.nextInt();
```

Reading Integer Values

```
out.print("Enter an integer :: ");
int num = keyboard.nextInt();
out.println(num);
```

INPUT

```
2001
```

OUTPUT

```
Enter an integer :: 2001
2001
```

Reading Integer Values

reference variable

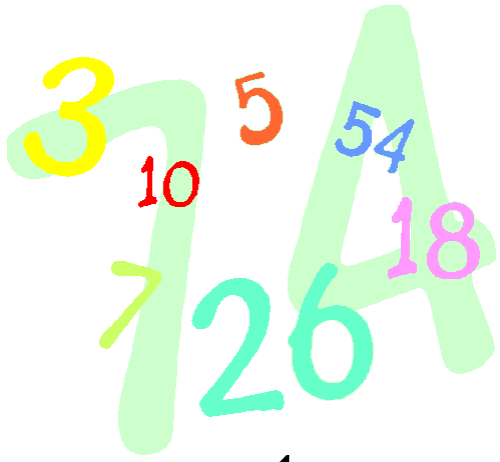
```
int num = keyboard.nextInt();
```

method call
non-void / return

Reading Integer Values

System.out.print("Enter an integer :: ");

Prompts are used to tell the user what you want.



Reading Decimal Values

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

out.print("Enter a double :: ");
double num = keyboard.nextDouble();
```

Reading Decimal Values

reference variable

```
double num = keyboard.nextDouble();
```

method call
non-void / return

input_examples.java

Reading Multiple Values

INPUT

```
7 5 3 1 8
```

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

out.println(keyboard.nextInt());
out.println(keyboard.nextInt());
out.println(keyboard.nextInt());
```

OUTPUT

```
7
5
3
```

Reading Multiple Values

INPUT

7 5 3 1 8

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

out.println( keyboard.nextInt()
                + keyboard.nextInt() );
```

OUTPUT

12

Reading Multiple Values

INPUT

3 4 1 9 2

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

int sum = keyboard.nextInt();
sum = sum + keyboard.nextInt();
sum = sum + keyboard.nextInt();
System.out.println( sum );
```

OUTPUT

8

Scanner Creation

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

System.in tells the Scanner to read from the keyboard.

Scanner Creation

```
Scanner in =
    new Scanner( new File("it.dat") );
```

Scanner can also read from a file.
The file can store a tiny bit of info or a large amount.

Reading Multiple Values

it.dat

```
3 9 1
```

```
Scanner in =
      new Scanner( new File( "it.dat" ) );

int sum = in.nextInt();
sum = sum + in.nextInt();
sum = sum + in.nextInt();
System.out.println( sum );
```

OUTPUT

```
13
```

multi_input.java
file_input.java

Reading String Values

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

out.print("Enter a string :: ");
String word = keyboard.next();
```

Reading String Values

reference variable

```
String word = keyboard.next();
```

method call
non-void / return

Reading String Values

```
out.print("Enter a string :: ");
String word = keyboard.next();
out.println(word);
```

INPUT

I love A+ compsci.

OUTPUT

```
Enter a string :: I love A+ compsci.
I
```

Reading String Values

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

out.print("Enter a sentence :: ");
String sentence = keyboard.nextLine();
```

Reading String Values

```
out.print("Enter a line :: ");
String line = keyboard.nextLine();
out.println(line);
```

INPUT

```
I love A+ compsci.
```

OUTPUT

```
Enter a line :: I love A+ compsci.
I love A+ compsci.
```

Input Issues

```
out.print("Enter an integer :: ");
int num = keyboard.nextInt();
out.print("Enter a sentence :: ");
String sentence = keyboard.nextLine();
out.println(num + " "+sentence);
```

OUTPUT

```
Enter an integer :: 34
Enter a sentence :: 34
```

INPUT

```
34
picks up \n
```

nextLine() picks up whitespace.

Input Issues

```
out.print("Enter an integer :: ");
int num = keyboard.nextInt();
keyboard.nextLine();        //pick up whitespace
out.print("Enter a sentence :: ");
String sentence = keyboard.nextLine();
out.println(num + " "+sentence);
```

OUTPUT

```
Enter an integer :: 34
Enter a sentence :: picks up \n
34 picks up \n
```

INPUT

```
34
picks up \n
```

nextLine() picks up whitespace.

string_input.java
input_issues.java

Work on Programs!

Crank Some Code!

A+ Computer Science

INPUT