

## Scanner: Input from console

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int a = sc.nextInt();
        System.out.println(a);
        sc.close();
    }
}
```

## Scanner: Input from file

```
import java.io.File;
import java.io.FileNotFoundException;
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        File file = new File("A.txt");

        try {
            Scanner sc = new Scanner(file);           // FileNotFoundException

            while(sc.hasNext()){
                int a = sc.nextInt();
                System.out.println(a);
            }

            sc.close();

        } catch (FileNotFoundException e) {
            e.printStackTrace();
        }
    }
}
```

## PrintWriter: Write to file

```
import java.io.*;
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        File file = new File("A.txt");
        try {
            PrintWriter out = new PrintWriter(file);    // FileNotFoundException
            Scanner sc = new Scanner(System.in);

            out.println(10);
            out.println("abcd");

            out.println(sc.next());
            out.println(sc.nextInt());

            out.close();
            sc.close();

        } catch (FileNotFoundException e) {
            e.printStackTrace();
        }
    }
}
```

## Buffered Reader (System.in)

```
import java.io.*;

public class Main {
    public static void main(String[] args) {
        try {
            BufferedReader reader =
                new BufferedReader(new InputStreamReader(System.in));

            String s;

            while((s = reader.readLine())!=null){           // IOException
                System.out.println(s);
            }

            reader.close();                                   // IOException

        } catch (IOException e) {
            e.printStackTrace();
        }
    }
}
```

## Buffered Reader/Writer (File)

```
import java.io.*;

public class Main {
    public static void main(String[] args) {

        try {
            BufferedReader reader =
                new BufferedReader(new FileReader("B.txt"));
                // FileNotFoundException

            BufferedWriter writer =
                new BufferedWriter(new FileWriter("A.txt")); // IOException

            String s;

            while((s = reader.readLine())!=null){
                writer.write(s);           // IOException
                writer.newLine();          // IOException
            }

            reader.close();                 // IOException
            writer.close();                 // IOException

        } catch (IOException e) {
            e.printStackTrace();
        }
    }
}
```