# 十九、IO流

**主要内容：**

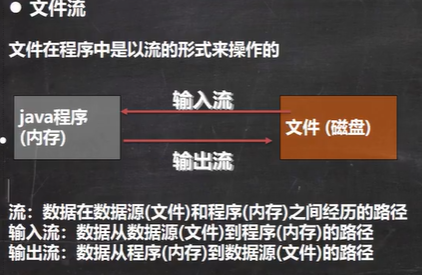


## 文件

**概念**

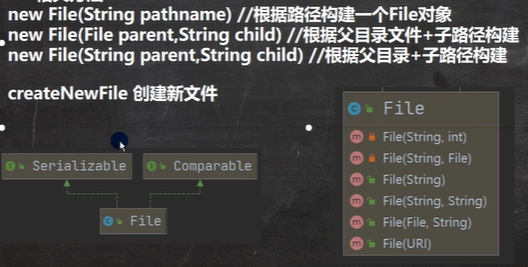


**文件流**



**文件常用操作（先创建文件对象，再调用文件方法）**

创建文件



获取文件信息



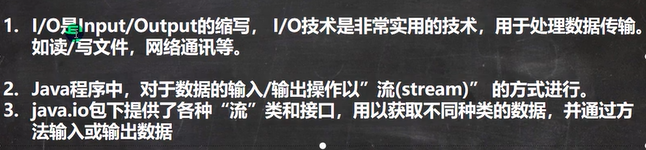
Length()按照字节计算大小

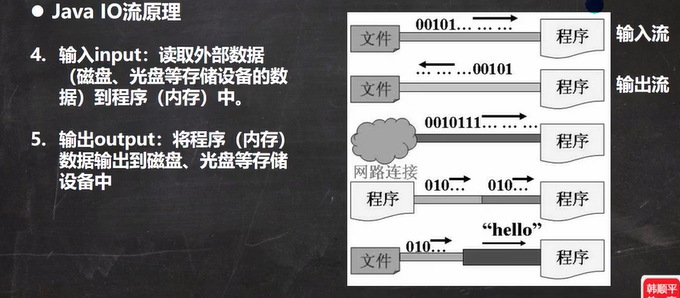
创建目录、删除（空）目录或文件（目录也被视作文件）



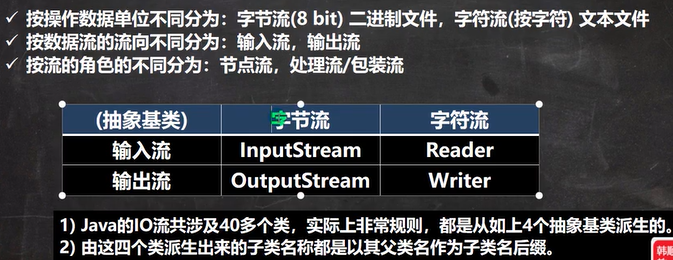
## IO流原理及流的分类

**IO流原理**

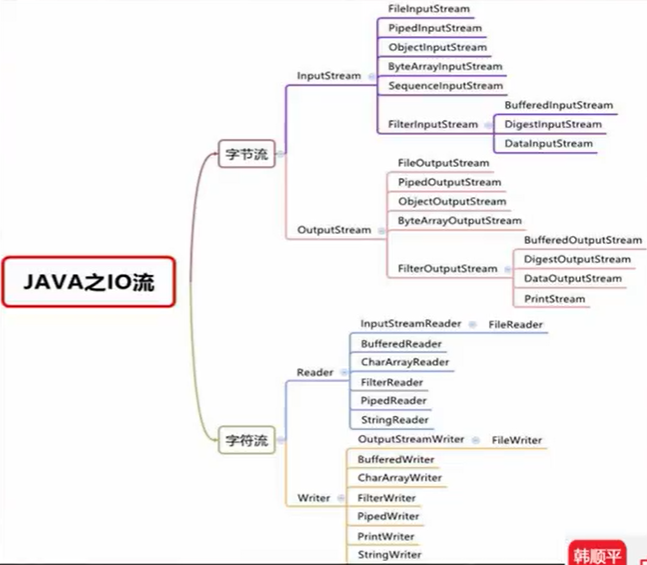




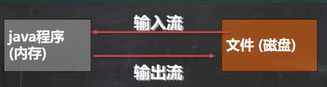
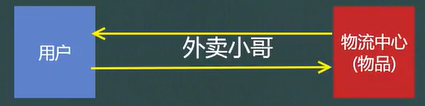
**流的分类**



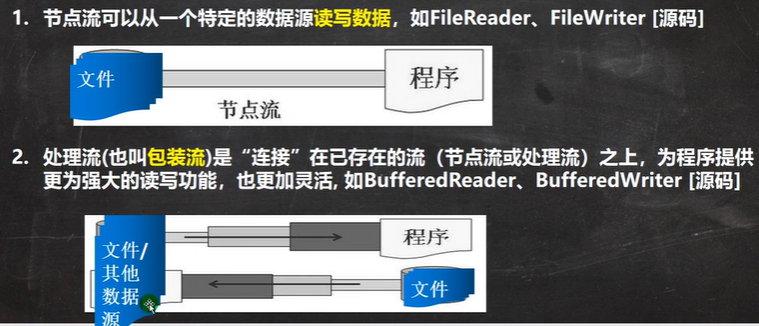
**IO流体系图**



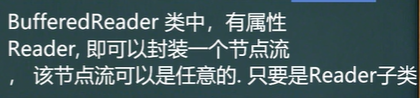
**流和文件关系：**

## 节点流和处理流



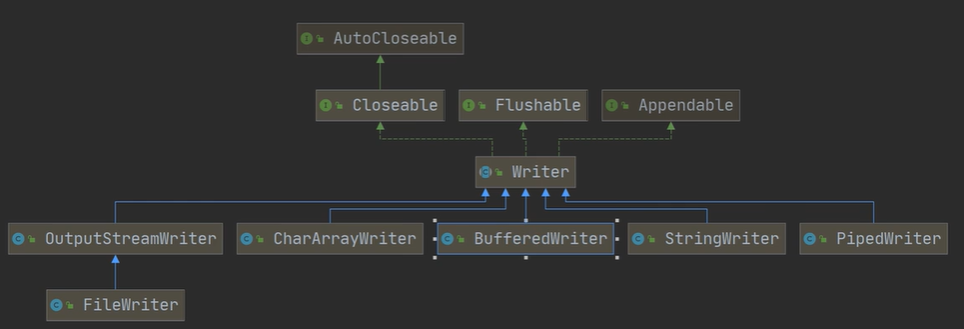
**bufferedReader包装原理**



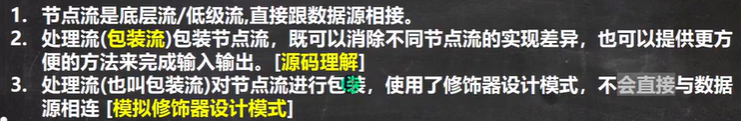
**buffereWriter包装原理**

源码含有writer属性，可封装Writer子类的节点流



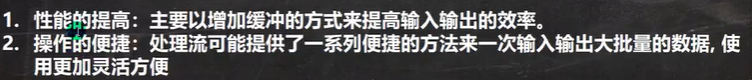
 

**节点流与处理流区别和联系**



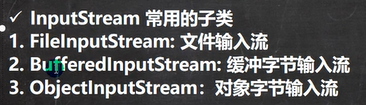


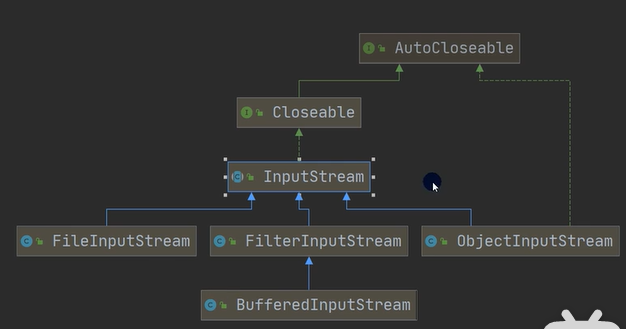
**处理流功能**



## InputStream（字节输入流）

**常用子类**





## FileInputStream

视作外卖小哥，处理物品

**方法摘要**



文件读取完毕需关闭文件流，释放资源（文件连接）

**读取文件**

法1 read()



法2 read(byte[] b)



## FileOutputStream

**方法摘要**



**写入文件**

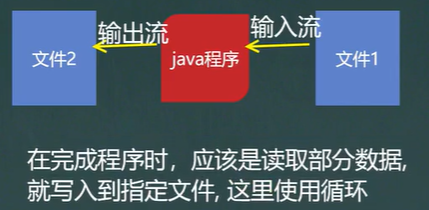
覆盖/追加



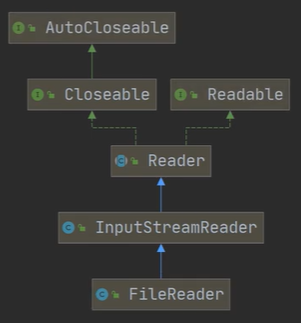


**文件拷贝**

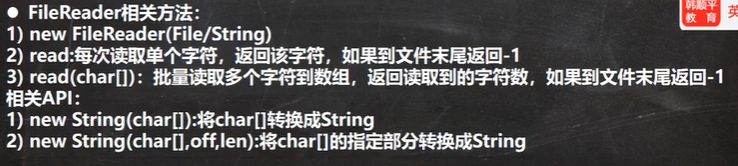
1 创建输入流，文件读入程序；2 创建输出流，程序将读取的文件数据写入到指定文件

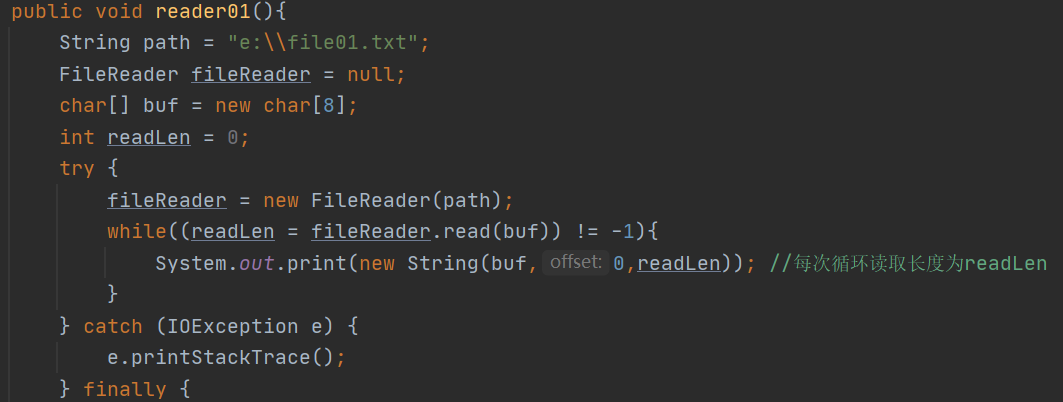


## FileReader(字符输入流)

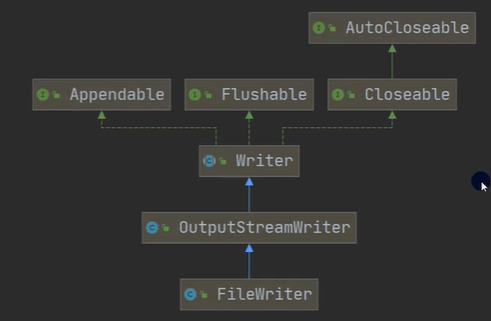


**相关方法**

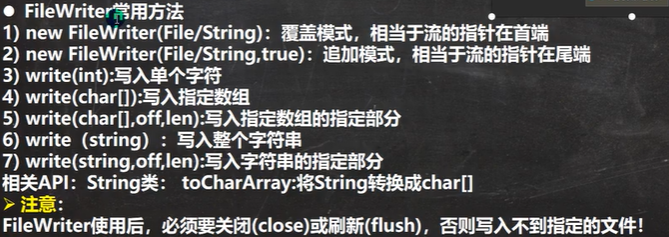




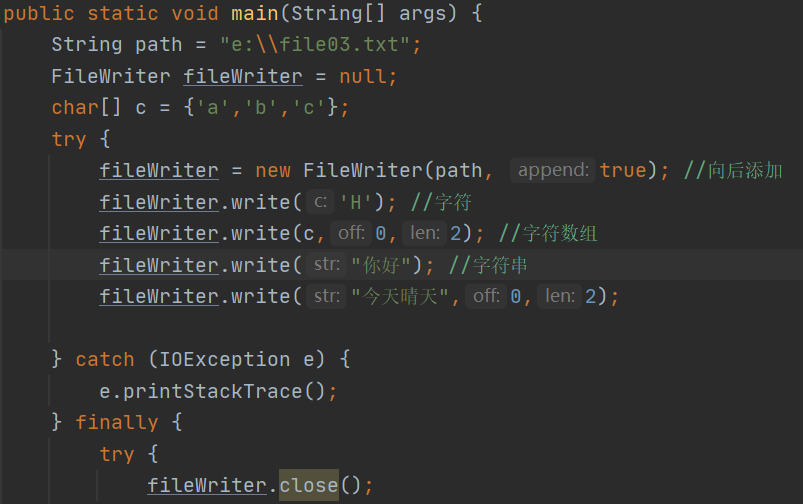
## Filewriter(字符输出流)



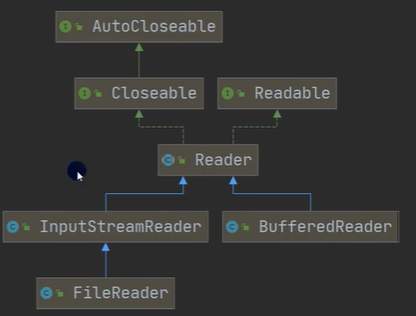
**常用方法**



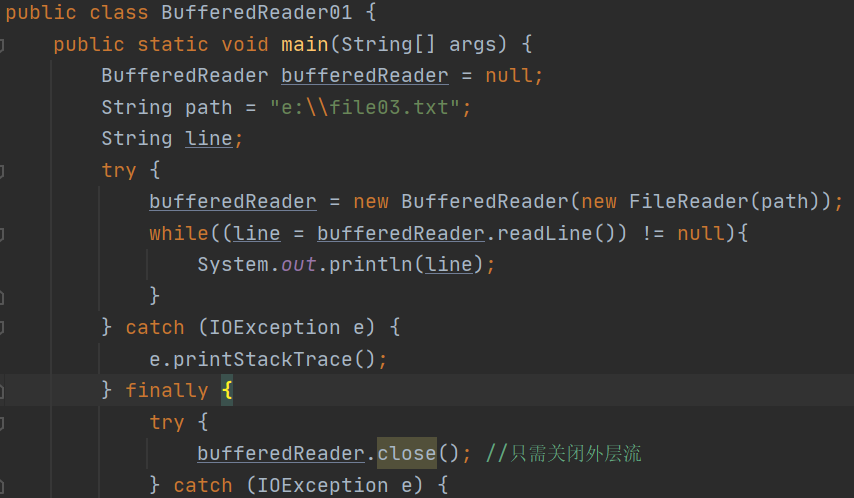
需close() 或 flush() 才能将数据写入文件，close() = flush() + 关闭



## BufferedReader(处理流)



关闭处理流：只需关闭外层流



## BufferedWriter(处理流)

