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InputStream & OutputStream classes in Java

InputStream & OutputStream Diagram :-

=> FileInputStream :-

-> FileInputStream is used to read the data for eg text, image, video, audio etc in the form of bytes

-> FileInputStream can read the character stream data also, but you should use FileReader to read character type of data

-> In this case, if file/data is not found, then it will throw FileNotFoundException

=> FileOutputStream :-

-> FileOutputStream is used to write the data for eg text, image, video, audio etc in the form of bytes

-> FileOutputStream can read the character stream data also but you should use FileWriter to write character stream data

-> In this case if file is not found, then it will create new file

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=> ByteArrayInputStream :-

-> ByteArray + InputStream : As name suggests, ByteArrayInputStream can be used to read ByteArray data only as an input stream

-> ByteArrayInputStream uses internal buffer to read the byte array data

=> ByteArrayOutputStream :-

-> ByteArrayOutputStream is used to write the common data to multiple files

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=> FilterInputStream :

-> FileInputStream is less used because it provides sub-classes for more functionalities i.e. DataInputStream, BufferedInputStream & PushBackInputStream

=> FilterOutputStream :-

-> FilterOutputStream is less used because it provides sub-class for more functionalities i.e. DataOutputStream, BufferedOutputStream & PrintStream

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=> DataInputStream :-

-> DataInputStream is used to read the primitive data from input stream in a machine-independent way

=> DataOutputStream :-

-> DataOutputStream is used to write the primitive data form input stream in a machine-independent way

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=> BufferedInputStream :-

-> In this case buffer machanish is used internally which will improve the performance

=> BufferedOutputStream :-

-> BufferedOutputStream also use buffer to write the data in order to improve the performance

(flush() method is used forcefully write the data into the stream or output before erasing the buffer memory)

=> PushBackInputStream :

-> PushBackInputStream can be used to unread a byte which is already read and push back one byte

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=> PrintStream :-

-> PrintStream provides the methods to write the data into another stream

-> PrintStream class automatically flushes the data so there is no need to use flush() method

-> PrintStream method does not throw IOException

=> PipedInputStream & PipedOutputStream :-

-> PipedInputStream and PipedOutputStream are used simultaneously

-> These streams are used to transfer the data from one thread to another thread

-> Both these streams should be connected

=> ObjectInputStream & ObjectOutputStream :-

-> These streams are used in serialization

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