03-07-2024

STREAMS =>

I/O STREAMS :- A stream is a collection of flow of bytes.

INPUT STREAM :-

The stream which supplies data is called Input Stream.
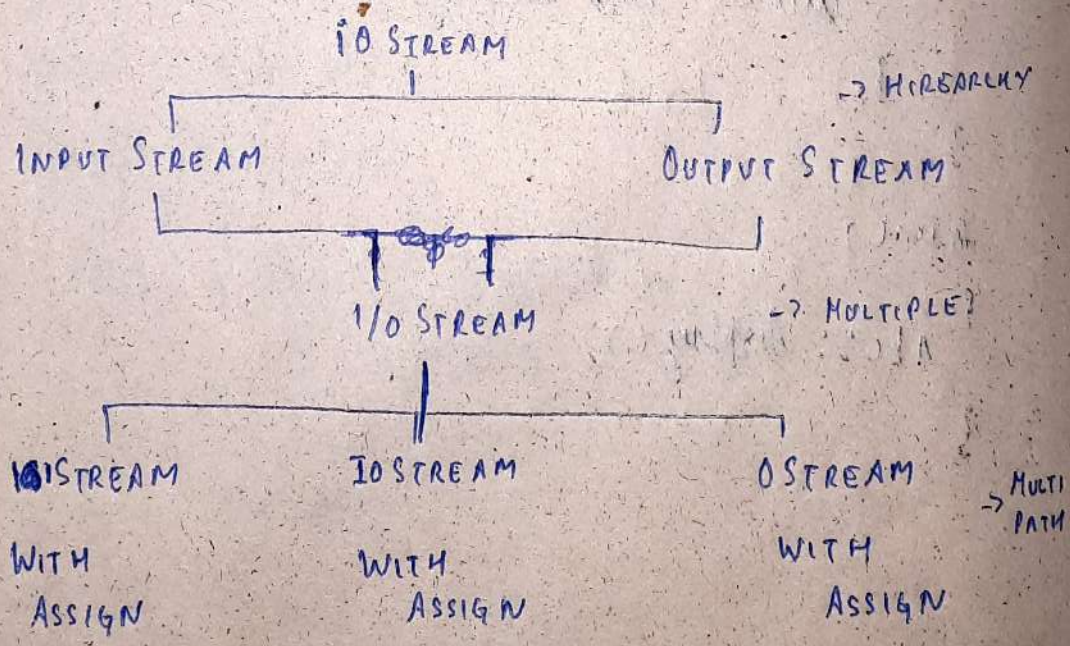
we extract data from input stream.

OUTPUT STREAM :-

The stream which is useful to produce output is called output stream.

we insert data in output stream.

HEIRARCH OF STREAM CLASSESS IN IO STREAM =>

iostream.h

```
                          IO STREAM
                              |                          -> HIERARCHY
          ┌───────────────────────────────────────────┐
     INPUT STREAM                              OUTPUT STREAM
          └─────────────────────┬─────────────────────┘
                              ↓ obj ↑
                          I/O STREAM                    -> MULTIPLE?
                              |
          ┌───────────────────┴─────────────────────────┐
     IOISTREAM                IO STREAM              O STREAM      -> MULTI
                                                                     PATH
     WITH                      WITH                 WITH
     ASSIGN                    ASSIGN               ASSIGN
```

ios :- It is a virtual based class. It provides all basic facilities for formated I/O operations

i STREAM :- It inherits the properties of ios. It defines get ( ); getline ( ); read ( ). .

~~<~~ >>

It overload extraction operator.

o STREAM :- It inherits the properties of ios. It defines put ( ); write ( ). It overloaded insertion operator.

put write

~~→~~ <<

io STREAM :- It inherits the properties of i stream to stream through multiple inheritance.

io stream -> VIRTUAL -> VIRTUAL BASE CLASS

EX:-

→ using namespace std;
include < iostream >
main ( )
{
    char a [20];
    int i;
    cout << " enter a string ";
    cin. getline (A, 20);
    for (i = 1; i < = 6; i + +, cout << " \n ").
    cout. write (A, i);
}

Streams . CPP

O/p :-
for (i = 1; i < = 6; i + +,
    cout << " \n ")

Enter a string : HEMANT
H
HE
HEM
HEMA
HEMAN
HEMANT

O/p :- for (i = 1; i < = 8; i + +,
    cout << " \n ")

Enter a string : SREED HAR
S
SR
SRE
SREE
SREED
SREEDH
SREEDHA
SREEDHAR