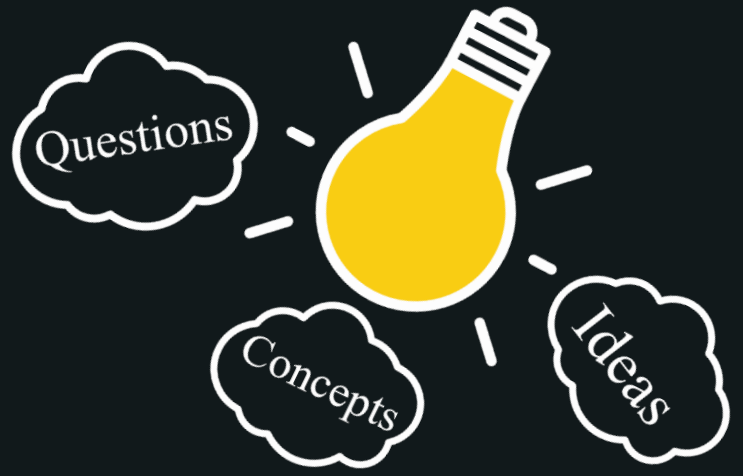


File Input / Output

C++ Programming

VEDINESH

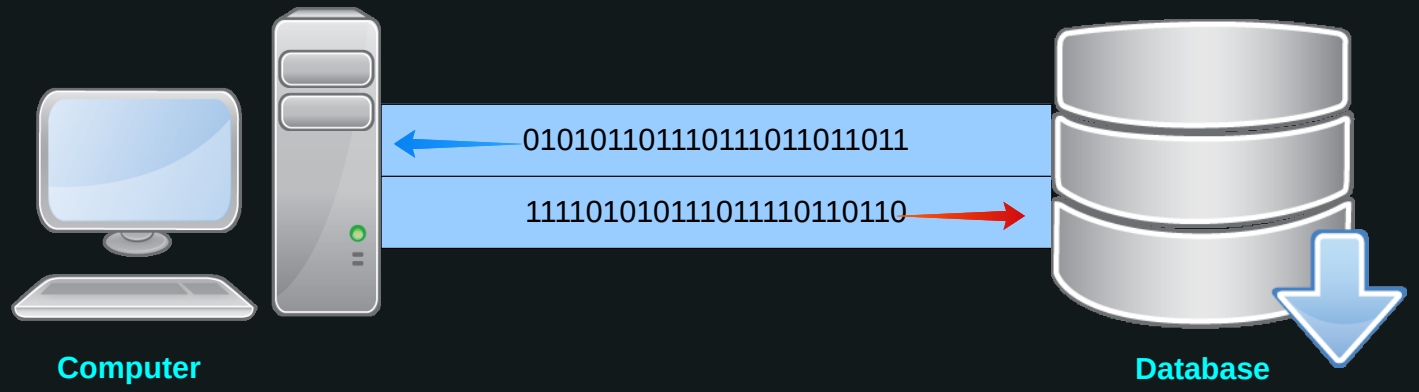
Streams

Commuting

Connecting with external world.

Provides essential entities

Streams



Streams are nothing but FLOW of data.

Streams are used for sending data to and from program to some external source.

Input / Output Streams

VEDINESH

Keyboard

Cin >>

Program

Cout <<

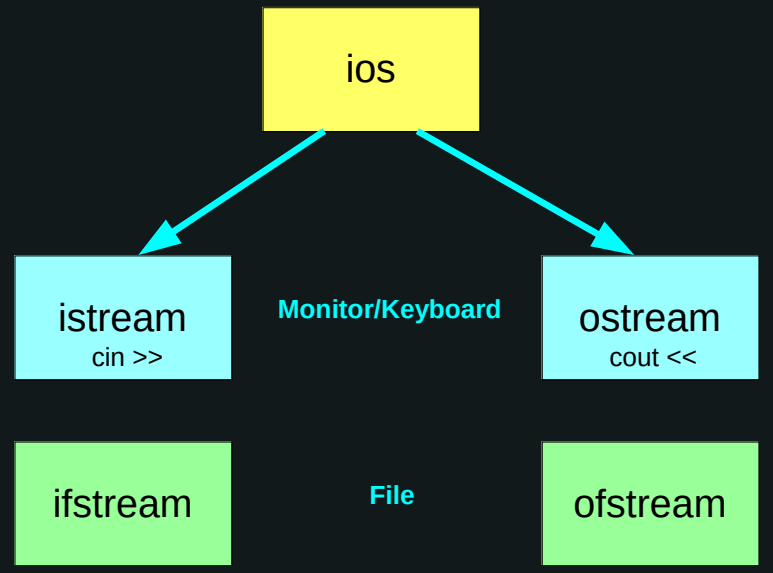
Monitor

Input Stream

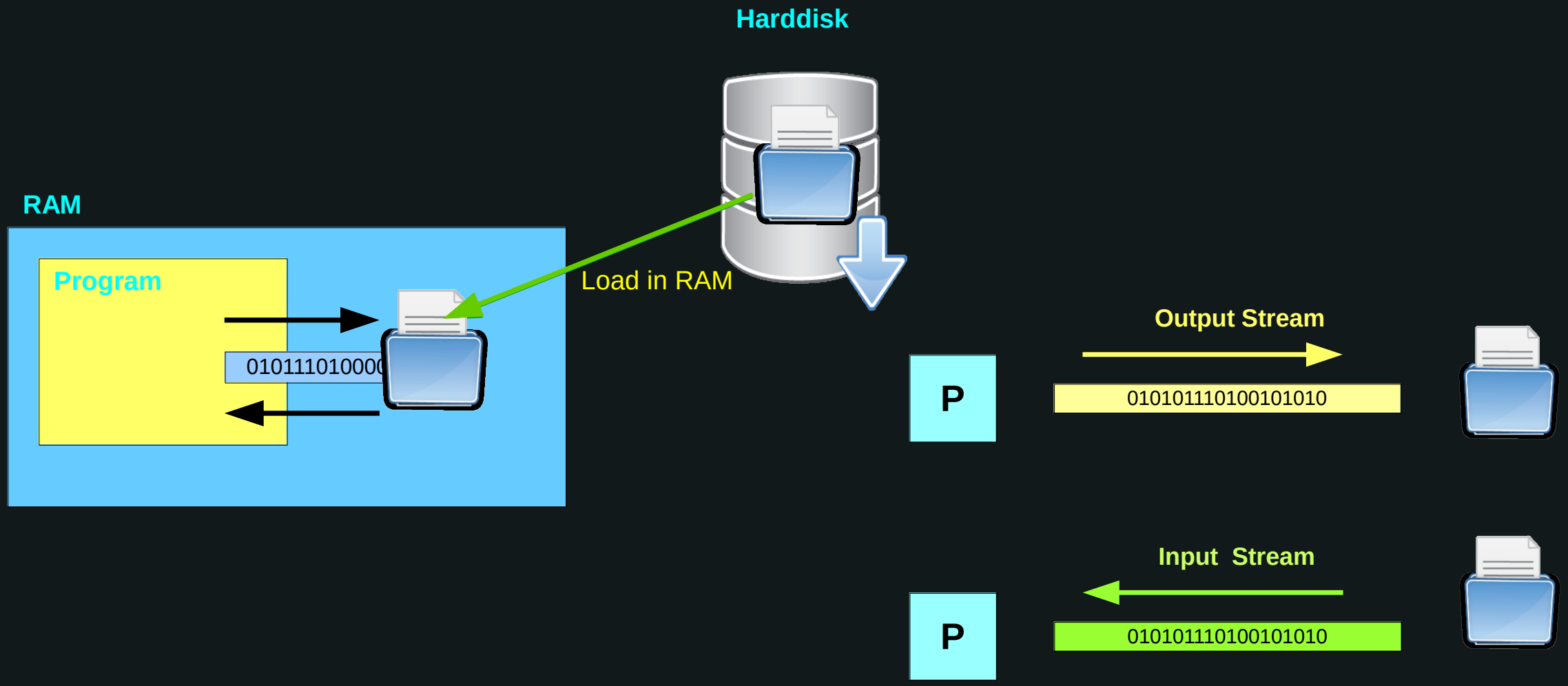
Output Stream

File

Input/ Output Stream



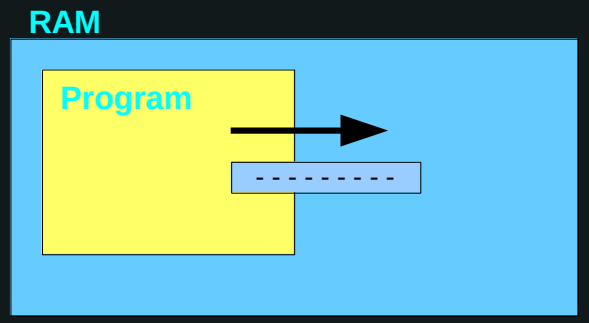
How reading / writing is done



Writing Data Into File

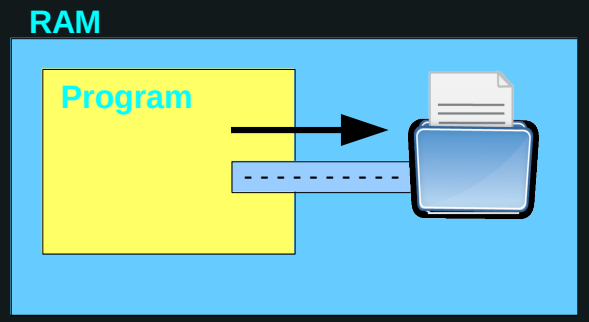
VEDINESH

ofstream fout ;
(object)



Create only output stream.

fout.open("my.txt");
(create if not exists)



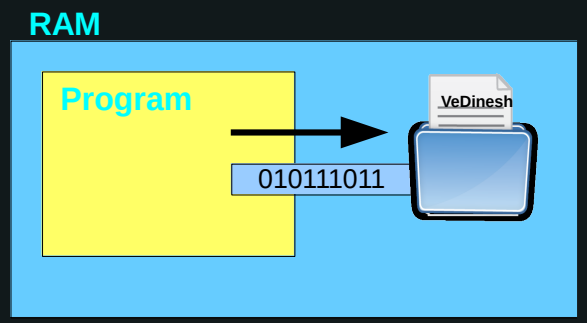
loads the file into RAM.

Writing Data Into File

VEDINESH

fout << "VeDinesh";

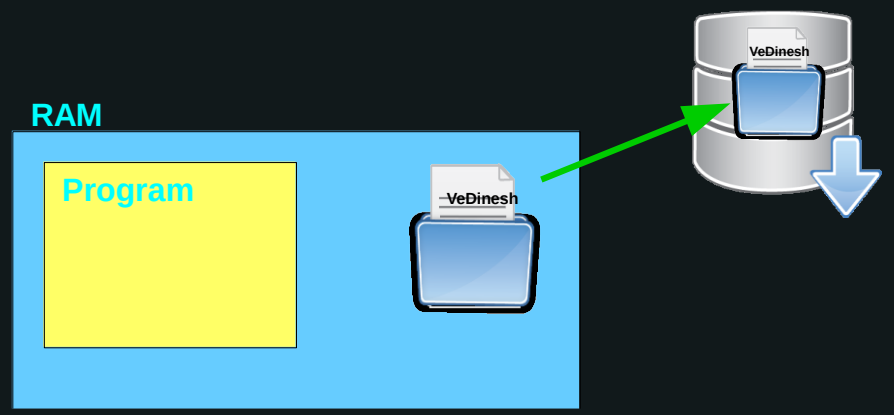
(writing into file)



writing data to file with the help of output stream.

fout.close( );

(writing into file)



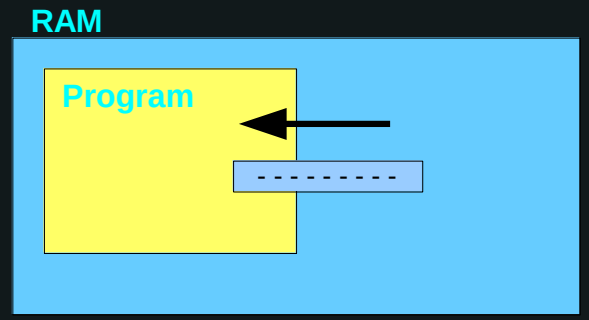
write the file into harddisk and close file in RAM

Reading Data from File

VEDINESH

ifstream fin ;

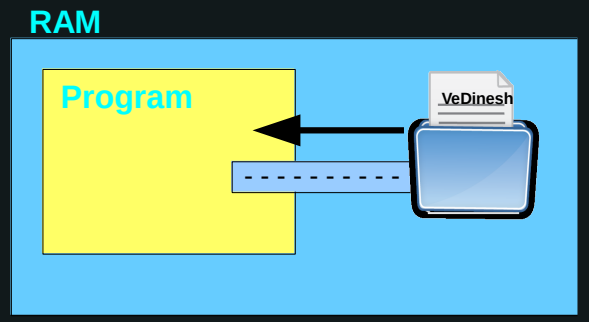
(object)



Create only input stream.

fin.open("my.txt");

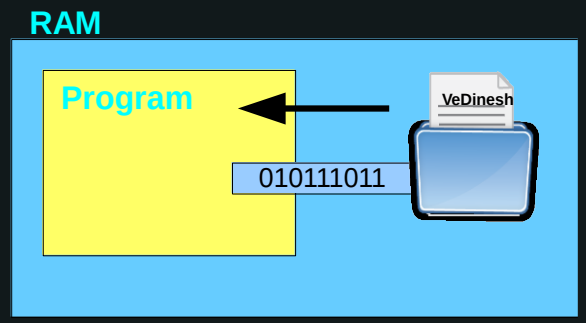
(error if not exists)



loads the file into RAM.

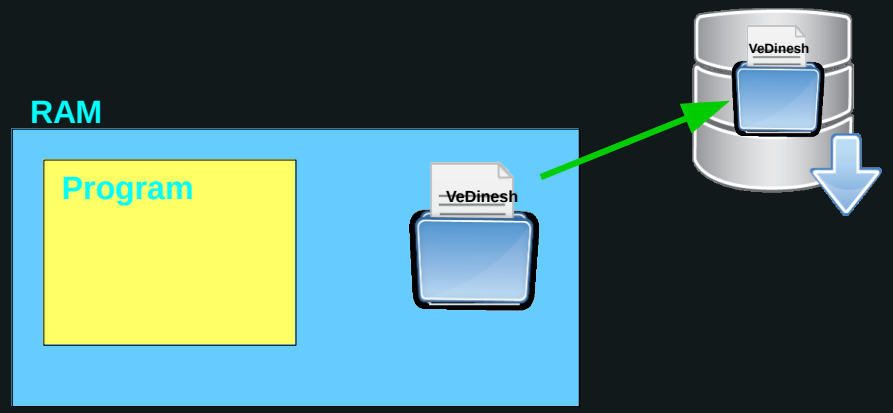
Reading Data from File

```
while ( !fin.eof( ) )
{
   cout << ch;
   fin >> ch;
}
```
(reading file char. by char.)



fin >> cin (pointer points to next value)

```
fin.close( );
```
(closing file from RAM)



Remove file from harddisk (close file)

File Opening Modes

VEDINESH

ios::in → Input / read

```
fin.open( “my.txt”, ios::in );
```

ios::out → Output / write

```
fout.open( “my.txt”, ios::out );
```

Default

ios::app → append

```
fout.open( “my.txt”, ios::app);
```

Tellg

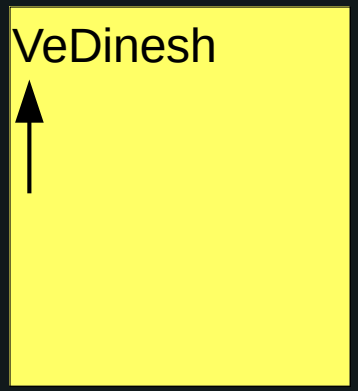
```
void main( )
{
  ifstream fin;
  char ch;

  fin.open("my.txt");
  int pos;
  pos = fin.tellg( );
  cout << pos;

  fin >> ch;
  pos = fin.tellg( );
  cout << pos;
 }
```

This function is defined in istream class.

Return the position of current character in the input stream.



my.txt

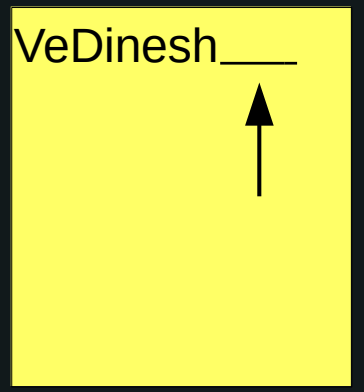
Tellp

```
void main( )
{
   ofstream fout;

    fout.open(“my.txt”, ios::app);
    int pos;
    pos = fin.tellp( );
    cout << pos;
}
```

This function is defined in ostream class.

Return the position of current character.



my.txt

Seekg

VEDINESH

```
void main( )
{
  ifstream fin;
  char A[10];
  fin.open("my.txt");
```

```
 for (int i = 0; i < 10; i++)
            {
                        A[i] = 0;
            }

  fin.seekg(-3, ios_base::end);
```

```
fin.read(A, 3);
for (int i = 0; A[i]!=0; i++)
            {
                        cout << A[i];
            }
 fin.close();
}
```

seekg() is used to move the get pointer to a desired location with respect to a reference point. (istream)

file_pointer.seekg (number of bytes ,Reference point);

my.txt

ios_base::beg

ios_base::cur

ios_base::end

Seekp

```
void main( )
{
  ofstream fout;
  char A[8] = "Academy";

  fout.open(“my.txt”, ios::in);

  fout.seekp(3, ios_base::beg);

  fout.write(A,8);
  fout.close( );
 }
```

seekp() is used to move the put pointer to a desired location with respect to a reference point. (ostream)

file_pointer.seekp (number of bytes ,Reference point);

my.txt

- ios_base::beg
- ios_base::cur
- ios_base::end