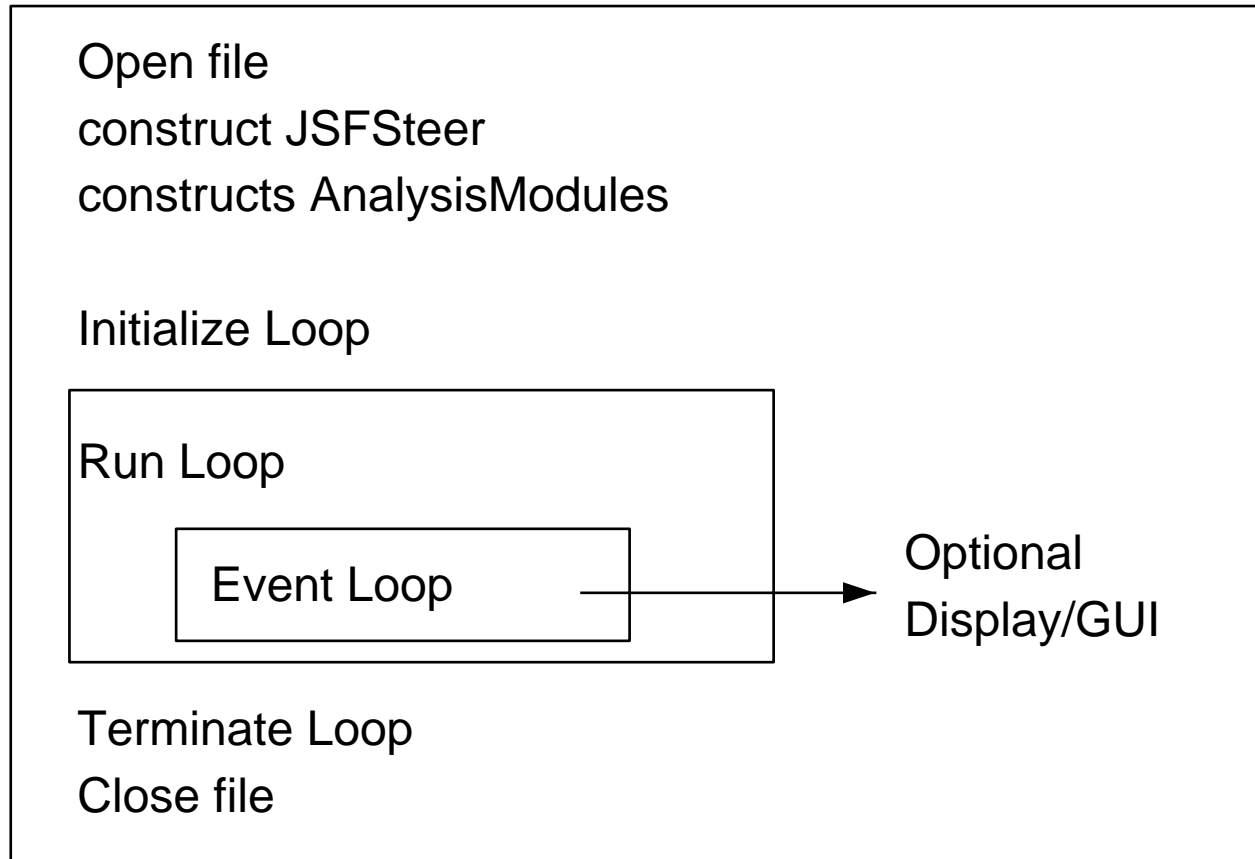# What is JSF ?

JSF is a ROOT based libraries for

- Detector Simulation  -- fast and ful MC

- Data Analysis -- raw data, dst, mini-dst

- Data acquisition -- for beam test ( real experiment in future)

## Features to be satisfied

- Object-oriented file system to store raw data, dst, histograms, calibration,..

- Portability -- support many platforms with minimum effort

- Control by GUI

- Utilize Web, html and Java technology to cooporate with offsite collaborators.

- Not only for a future experiment but also for todays R&D

- Have function for parallel processing

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# JSF general analysis flow

Job

Open file

construct JSFSteer

constructs AnalysisModules

Initialize Loop

Run Loop

Event Loop →  Optional Display/GUI

Terminate Loop

Close file

*HEP data analysis usually consists of several modules,
( generator + simulator + analysis ) or
analyses of ( VTX + CDC + CAL )
===> JSF provides a framework for modular data analysis.
Modules are executed serially in the Loop*

# JSF components

## 1. Libraries

Such as libJSF.a, libJSFQuickSim.a, ....
Precompiled C++ classes to build JSF executables

## 2. Executables

ROOT libraries + JSF libraries + Fortran libraries --> JSF application

To use Fortran libraries, such as LCLIB and CERNLIB, they mus be linked statistically

## 3. Macro

C++ program is used as Macro thanks to CINT.

Macro can be used to

Control job execution, provides parameters
Debug programs ( no times required for compile and link )

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# History of JSF development

JSF update information is distributed to acfa-sim mailing list

Summer-1998       Start to develop JSF

6-Oct-1998       jsf-0-4-1 first pre-release

20-Nov-1998       jsf-1-0 is released

26/27-Nov-1998       ACFA 1st workshop at Beijing

9-Dec-1999       jsf-1-2 (84kb) is released: With an example of Zh analysis

5-Jan-1999       jsf-1-3 (100kb) is released:
Include example for Helas/Bases/Spring
VTX layer can be more than 2

16-Feb-1999       jsf-1-4 (127kb) is released:
Add module to output SIMDST format data

10-Mar-1999       jsf-1-5 (153kb) is released:
Add Event display and GUI

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