(C++) ROOT & ALICE Data Analysis (++ More ??!!)

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Outline : Life cycle of EHEP PhD student

1. C++ language
2. ROOT : HEP analysis tool
3. AliRoot : ALICE Analysis Software
4. Various

Handson tests

1. ROOT
2. Checkpoints
3. ALICE Analysis tests

Checkpoint I

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- Spot the memory leak in the code that you have written before.
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Tree

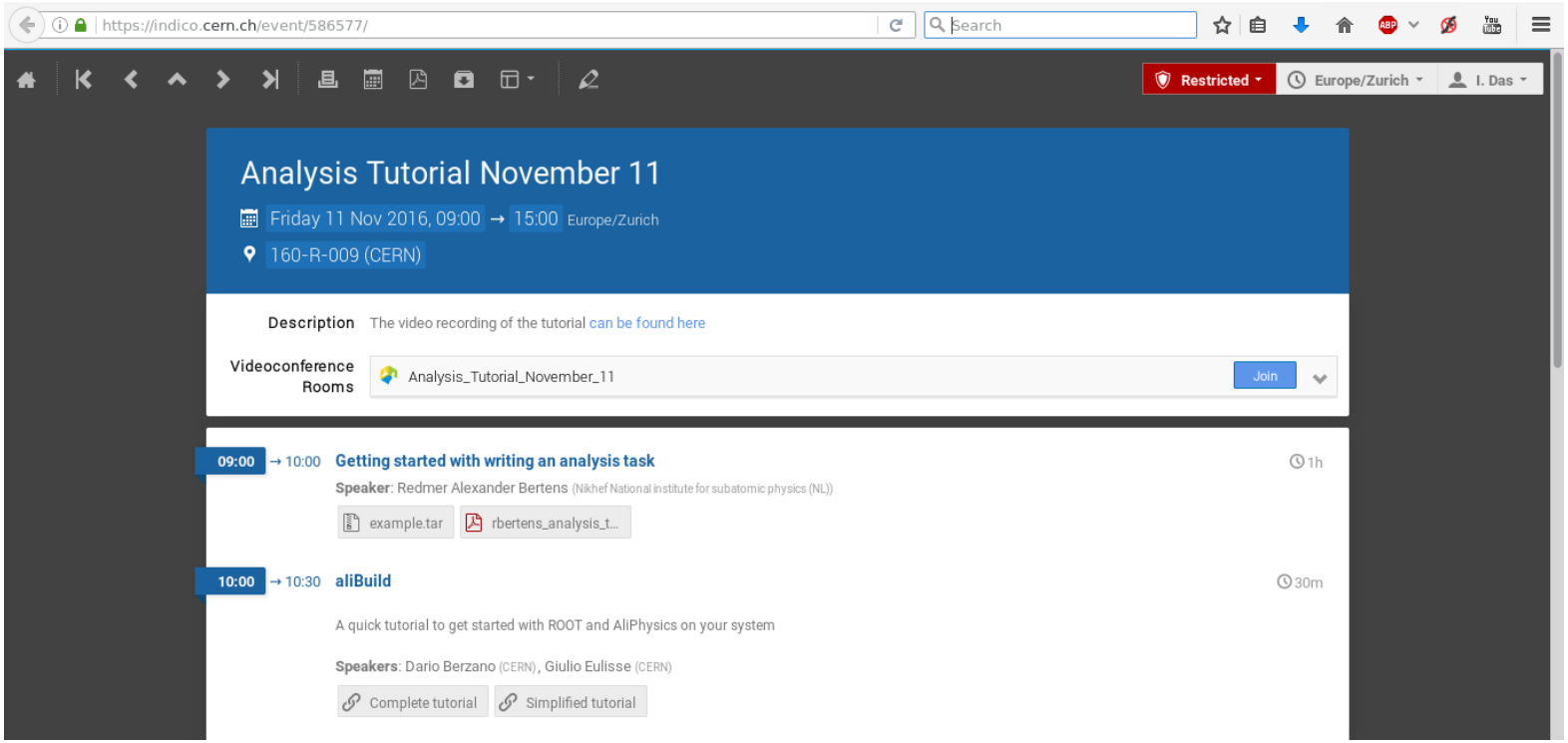
- Arrange different types of objects and data types in single place.
- Formatted in such way such that accessing the entries is fast.
- While written to disk uses less disk resource

Checkpoint II

1. In case multiple files are opened, how the object can be written in the first file instead of last ?
2. In which case the input ROOT file can be closed while you are still using the object stored into that file ?
3. Write/read the event tree to/from ROOT file
4. Now scan tree.root for fNtrack and fNvertex in ROOT session
5. Next scan tree.root for fNTracks->fPx and fNvertex in ROOT session
6. Draw fNTracks->fPx from tree.root in ROOT session using tree->Draw("")
7. Draw fNTracks->fPx vs fNTracks->fPz from tree.root in ROOT session
8. Draw fNTracks->fPx vs fNTracks->fPz for (fNvertex>5) in ROOT session

- Copy the tree.root of above example into tree1.root, tree2.root and tree3.root and read all three files using TChain in a macro.

Analysis Tutorial



- https://indico.cern.ch/event/586577/
- Or Open http://alice-collaboration.web.cern.ch/ ⟶ Analysis ⟶ Tutorial
- Download the example.tar

THANK YOU