ĐẠI HỌC
BÁCH KHOA HÀ NỘI
HANOI UNIVERSITY
OF SCIENCE AND TECHNOLOGY

BÁO CÁO MINI PROJECT MÔN LẬP TRÌNH HƯỚNG ĐỐI TƯỢNG

Team 21 Topic 1: Visualization of operations on tree data structures

Team members and assignment:

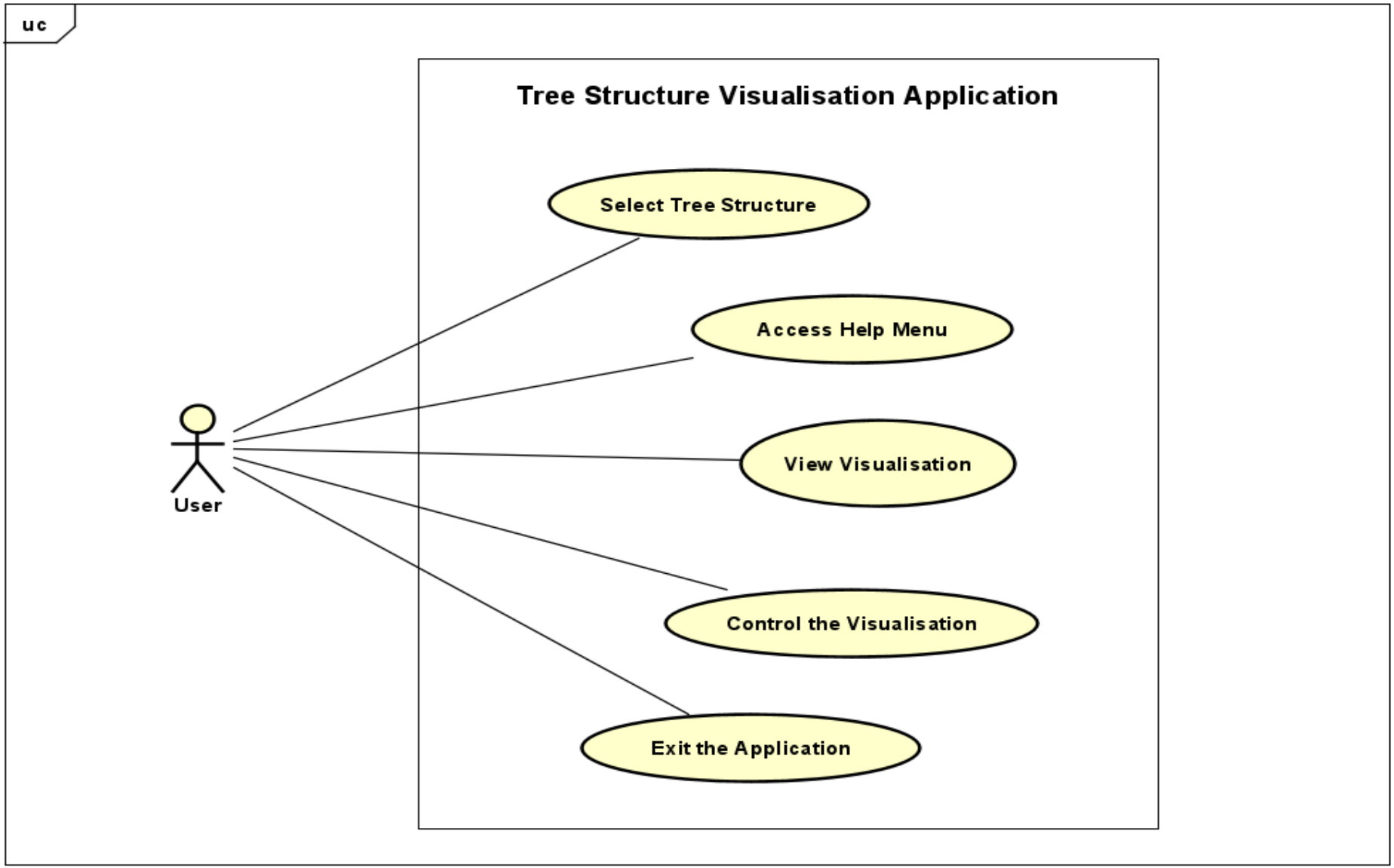
1. Lê Quang Minh 20215088 (Leader): Algorithm and UI
2. Nguyễn Phúc Mạnh 20215087: UI
3. Đoàn Quang Minh 20210606: UI
4. Hoàng Nhật Minh 20210607: UI

ONE LOVE. ONE FUTURE.

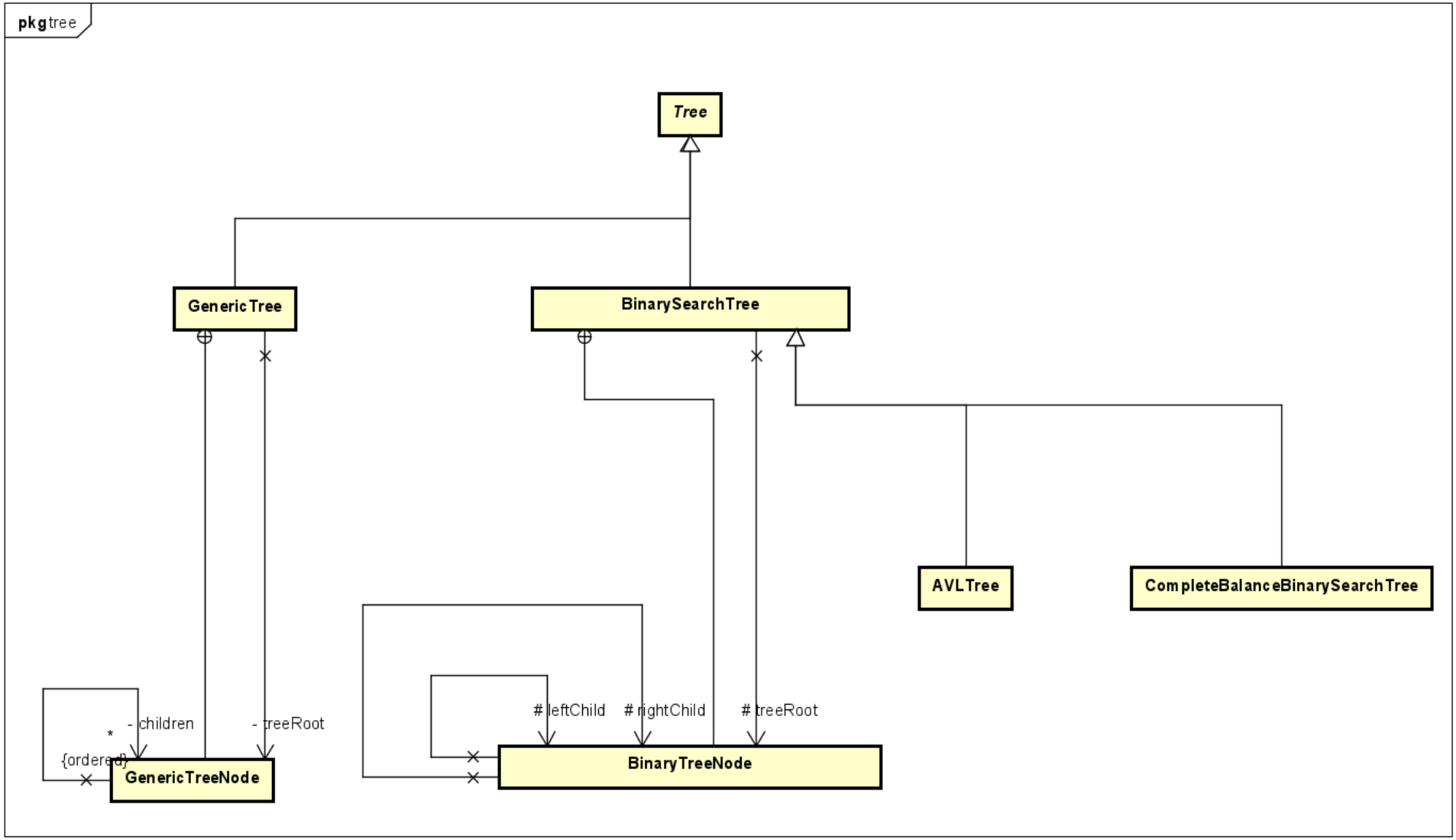
Problem statement

- Tree data structures are interesting and useful, yet not many students can study tree structure that well.
- A tree visualization application can help with that
- Demonstrate step by step of any operations of a tree.

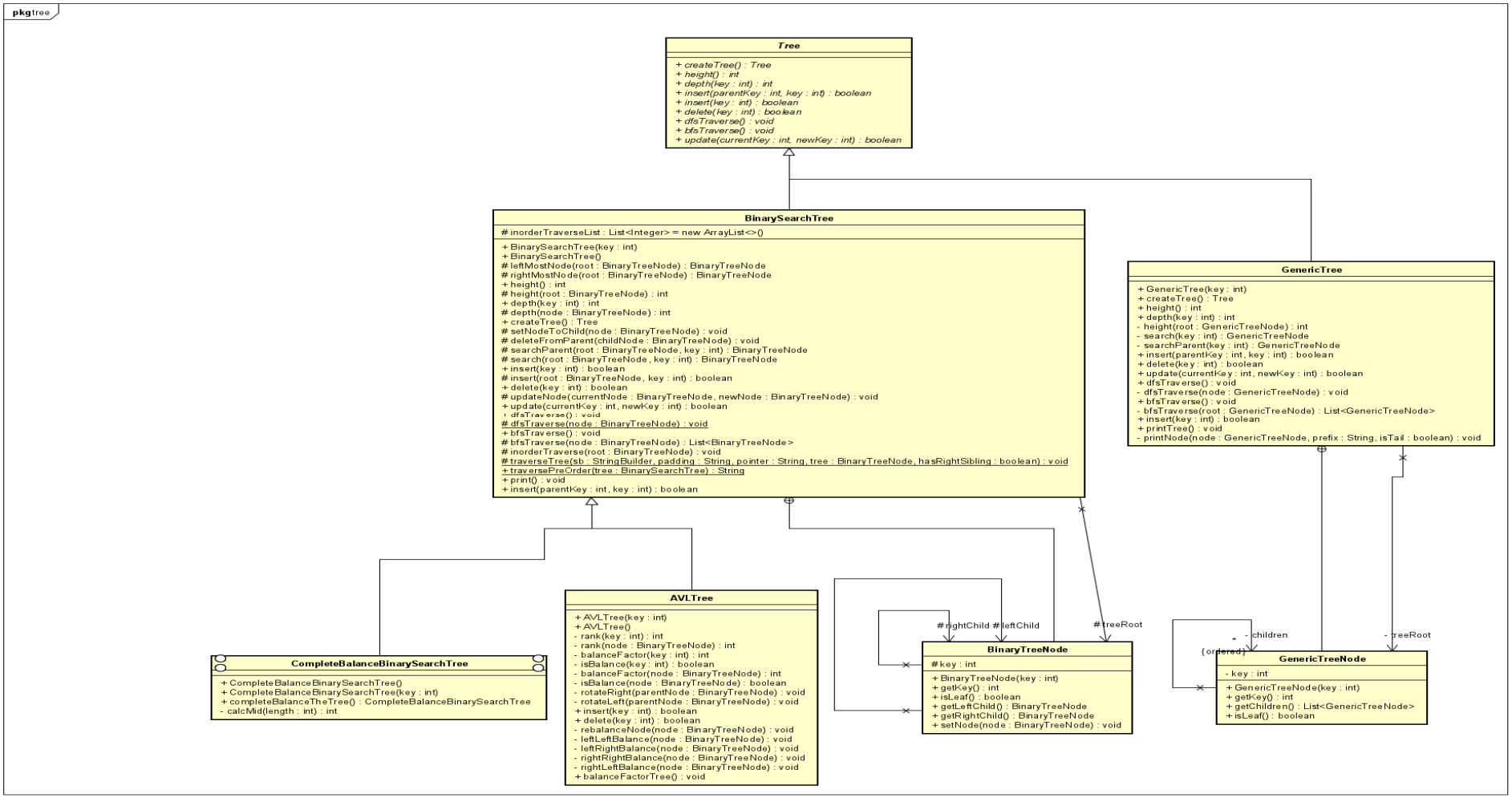
Use case diagram



General class diagram



Class diagrams for packages/modules



Inheritance

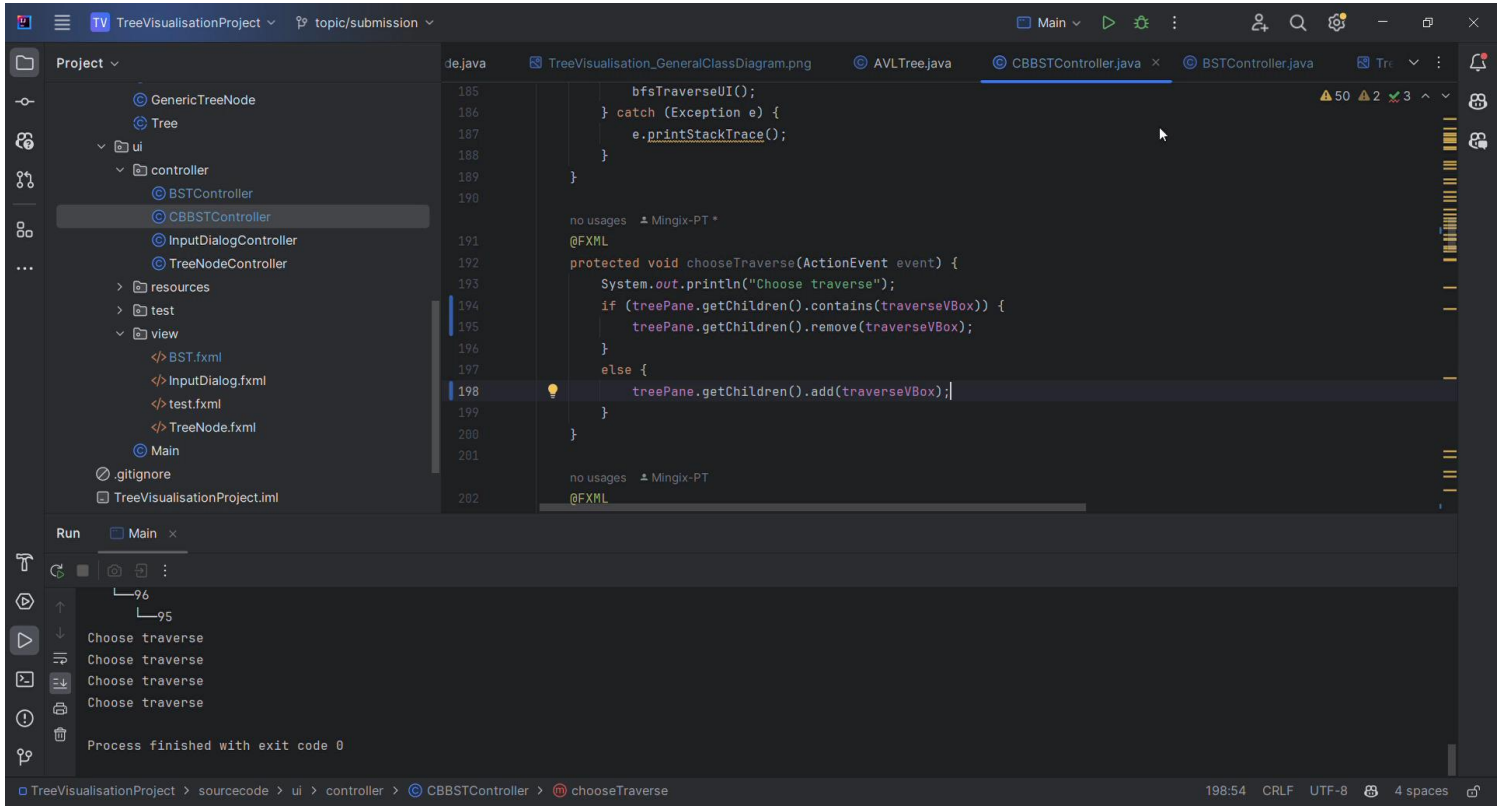
- GenericTree, BinarySearchTree inherit abstract Tree
- AVLTree, CBBST inherit BinarySearchTree

Association/Aggregation/Composition

- GenericTree contains GenericTreeNode (Aggregation)
- BinarySearchTree, AVLTree, CBBST contain BinaryTreeNode (Aggregation)

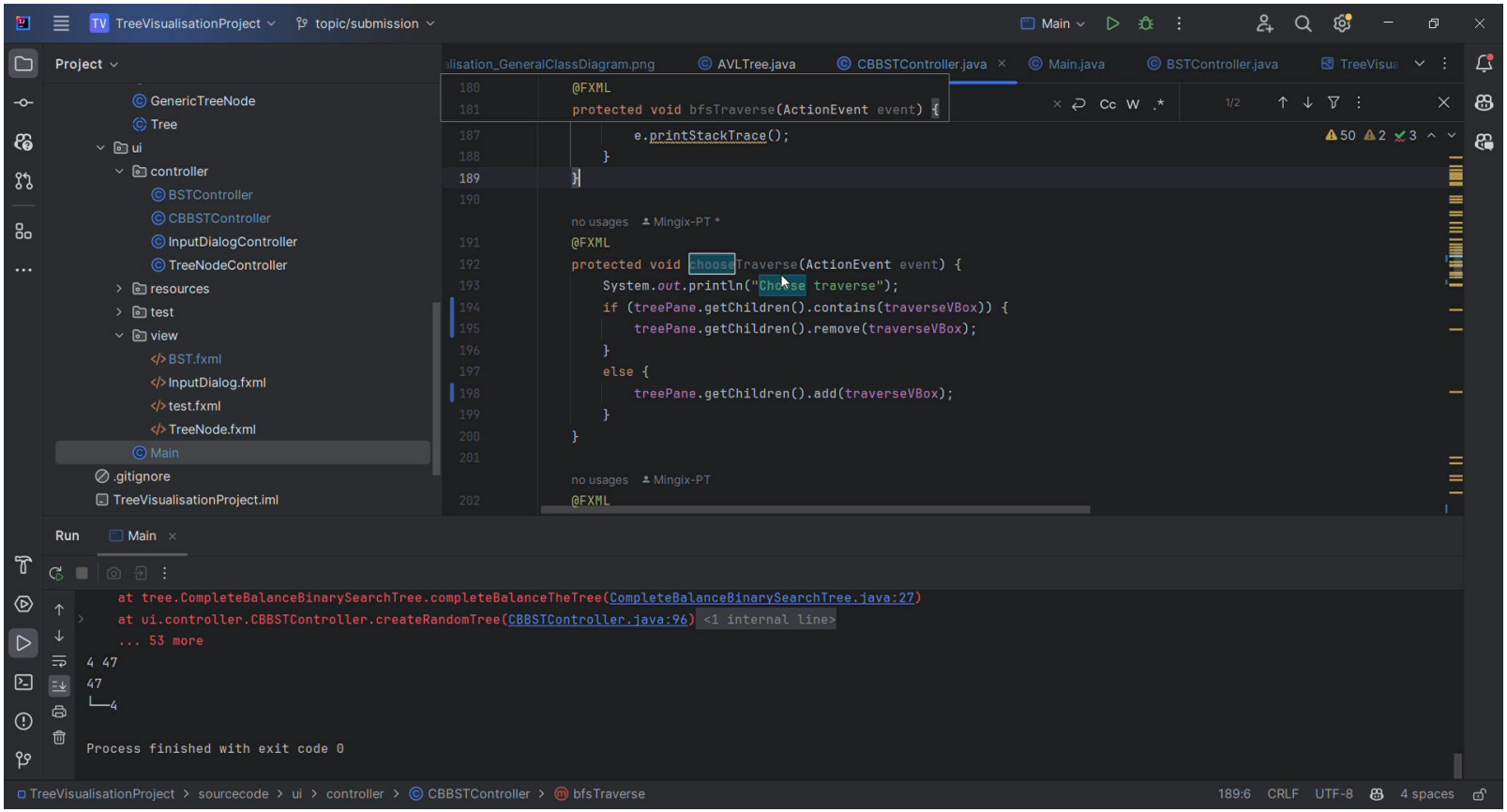
Demo scenario

- https://husteduvn-my.sharepoint.com/:f:/g/personal/minh_lq215088_sis_hust_edu_vn/EmYWON1QnCREroOsiEsDZTEByajtv1NTOWhlrd37D0mjHA?e=yA453V



Demo scenario

- https://husteduvn-my.sharepoint.com/:f:/g/personal/minh_lq215088_sis_hust_edu_vn/EmYWON1QnCREroOsiEsDZTEByajtv1NTOWhlrd37D0mjHA?e=yA453V



HUST

hust.edu.vn fb.com/dhbkhn

THANK YOU !