OOP MINI-PROJECT

TOPIC 7: DEMONSTRATION OF TYPES OF VIRUS AND ITS MECHANISM

Ngày 6 tháng 1 năm 2024

Student Code:	Fullname	Assignment
20215072	Nguyễn Cao Kỳ (Leader)	Main Screen, Help Screen, Virus-related classes, Report
20215068	Hoàng Mạnh Kiên	Illustration Screen, Class diagram, Use-case diagram
20210494	Trần Trung Kiên	Inspect Infection Screen, Data Preparation
20210531	Đoàn Văn Linh	Virus Item, Slides, Help Screen Content

1. **Assignments**

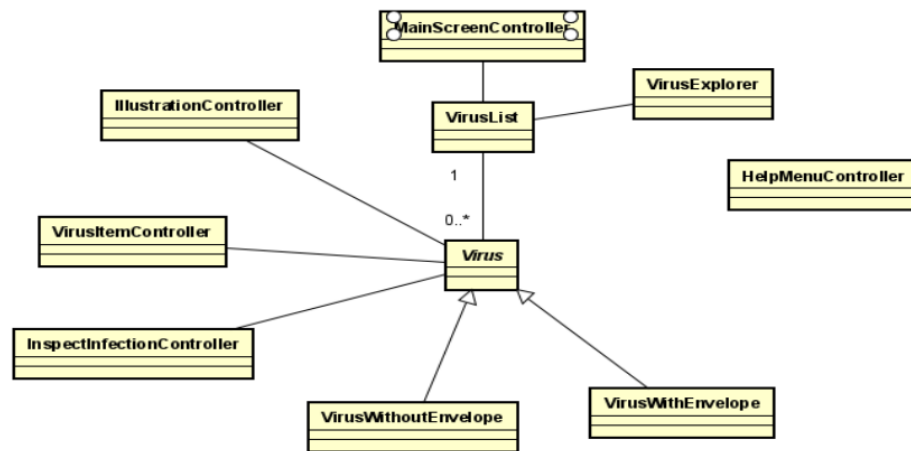- Nguyễn Cao Kỳ:
    - Virus and its subclasses
    - HelpScreenController
    - Main Screen:
        * MainScreen.fxml
        * btnReturnClicked()
        * btnHelpClicked()
        * btnQuitClicked()
    - Report
- Hoàng Mạnh Kiên:
    - Illustration Screen:
        * Illustration.fxml
        * IllustrationController
    - VirusItemController::btnExamineVirusClicked()
    - Class and Use-case diagram
- Trần Trung Kiên
    - Inspect Infection Screen:
        * InspectInfection.fxml
        * InspectInfectionController

- – VirusItemController::btnInspectInfectionClicked()
- – Data Preparation
- Đoàn Văn Linh
  - – Virus Item
    - ∗ VirusItem.fxml
    - ∗ VirusItemController::setData()
  - – MainScreenController::btnNoEnvelopeClicked(ActionEvent e)
  - – MainScreenController::btnEnvelopeClicked(ActionEvent e)
  - – Help Screen Content
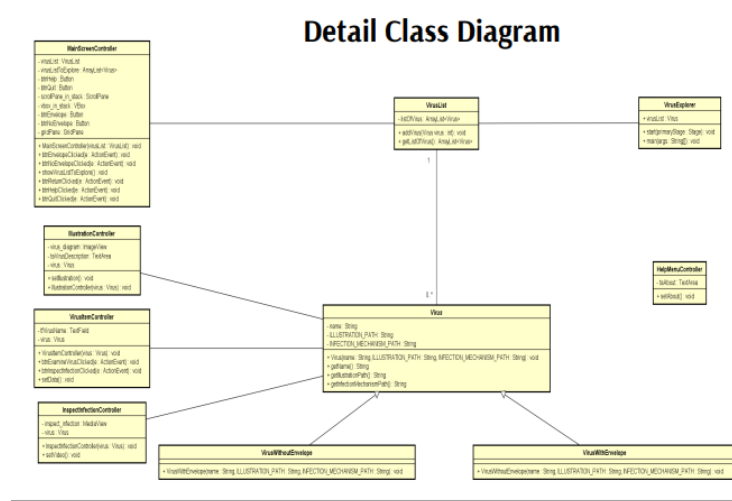 - – Slides

2. **Mini-project Description**

- Project Requirements:
  - – Being familiar with OOP's techniques.
  - – Having basic knowledge of 2 types of viruses: enveloped and non-enveloped.
  - – User-friendly GUI.
  - – Demonstration
    - ∗ Display the structure of the chosen virus and explain its components.
    - ∗ Demonstrate the basic mechanism of virus spreading.
    - ∗ Include a return button for users to navigate back to the main menu at any time.
- Use-case diagram:
  - – Choose Virus Type: Users click on Virus With Envelop or Virus Without Envelop button on Main Screen to choose the desired type of viruses to study.
  - – Explore Virus Structure: Users click on Examine button to observe its structure and read its description.
  - – Inspect Infection Mechanism: Users click on Inspect Infection button to observe the infection process of virus.
  - – View Applicatin Information: Users click on Help button to view the User Manual and Program Information.

3. **Design:**

Hình 1: General Class Diagram

- VirusWithEnvelop and VirusWithoutEnvelop classes inherit from abstract Virus class since these two classes are specialized case of Virus class.

Hình 2: Detailed Class Diagram