143577

Demonstration of types of cell division

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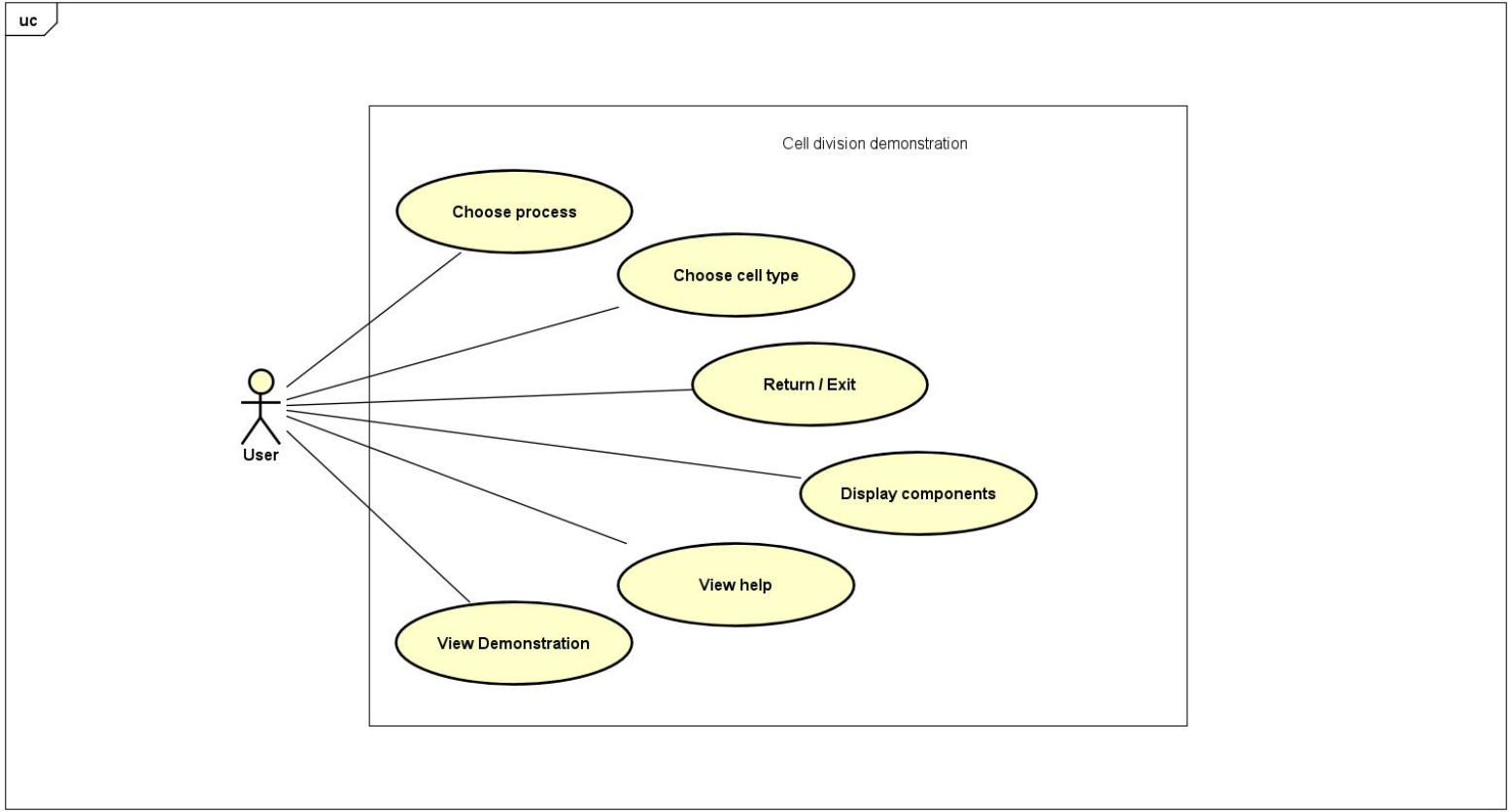
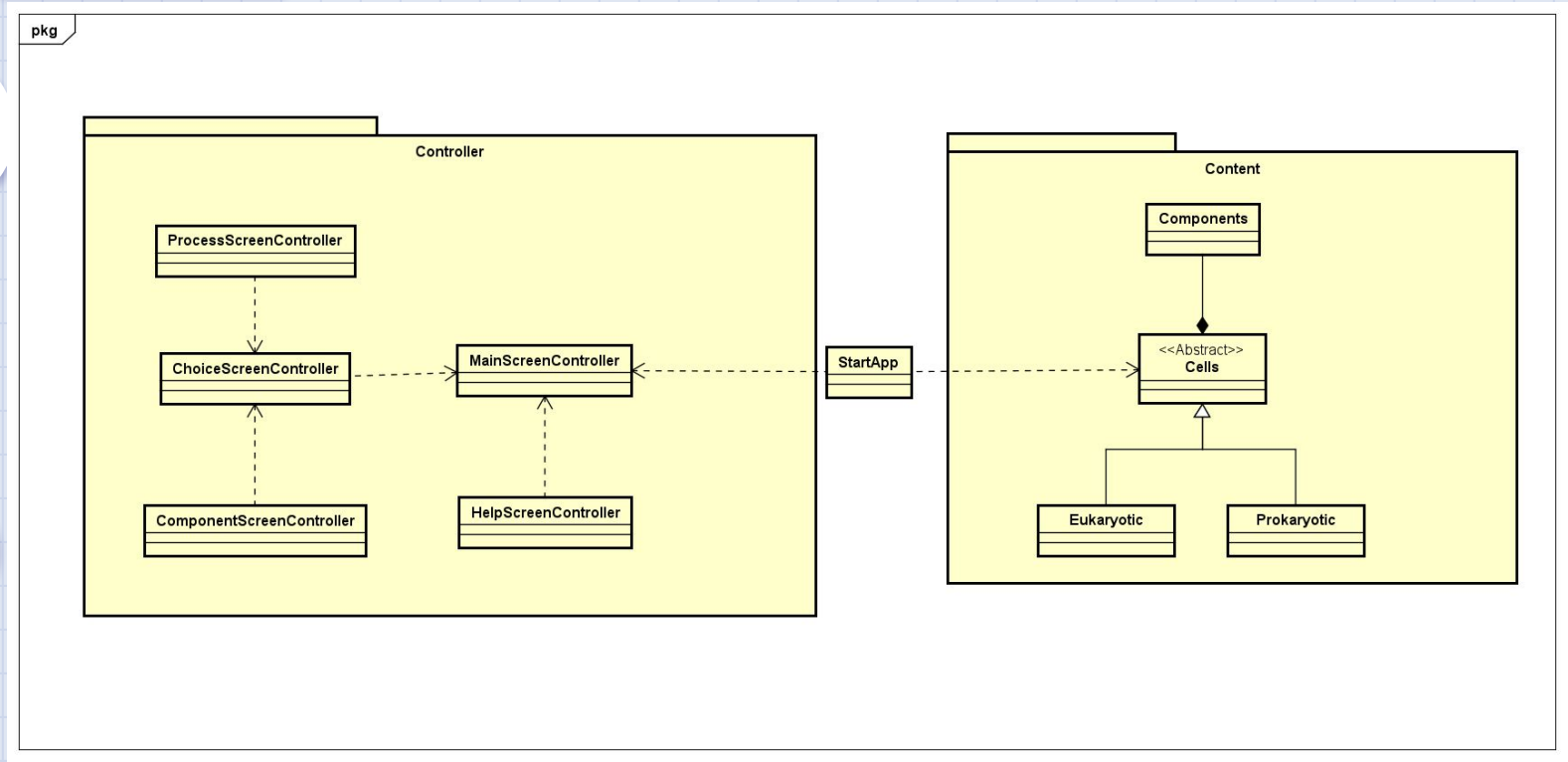
01 Problem statement

- Cell division:
  - Amitosis in prokaryotic cells
  - Meiosis and mitosis in eukaryotic cells
- Main screen: Help button, choose type of cells, quit button
- Display:
  - Cell components
  - Cell division processes

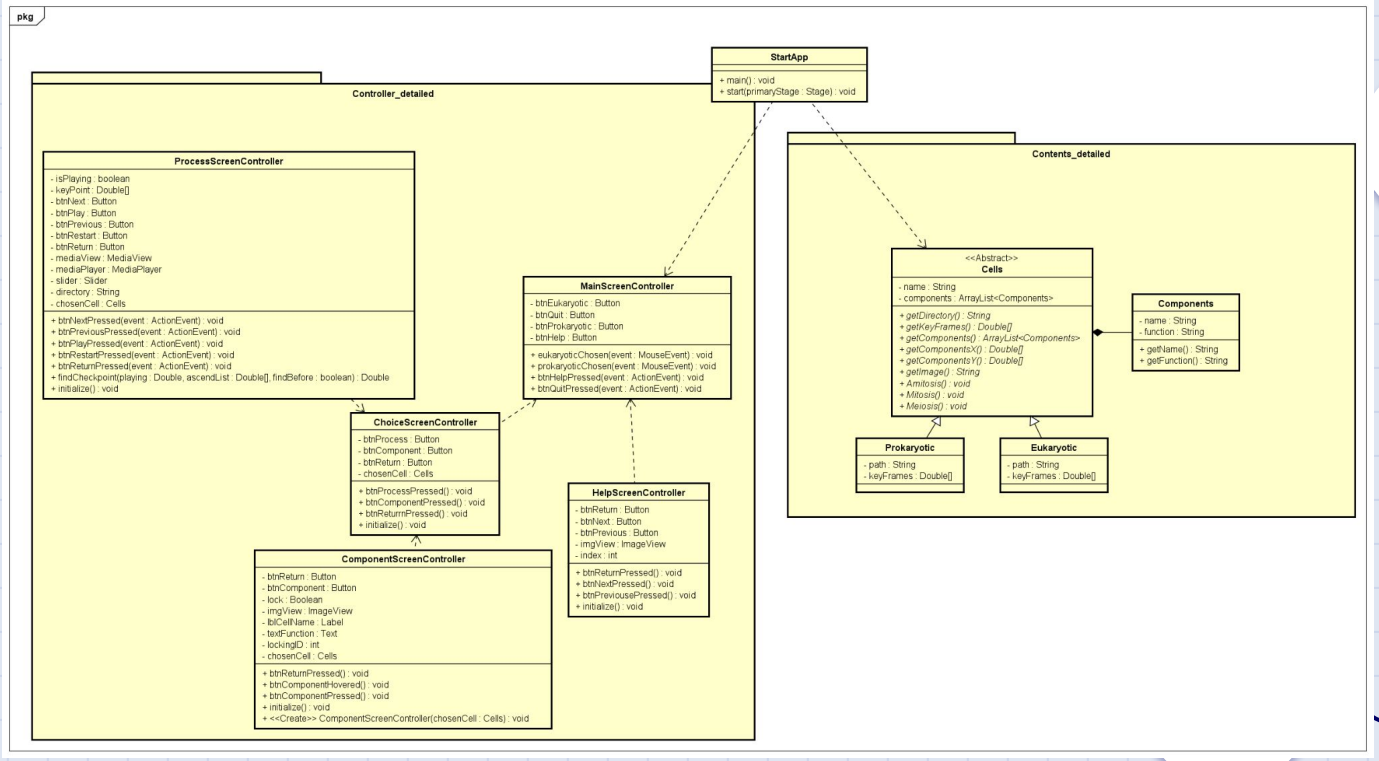
02 Use case diagram



03 General class diagram



04 Detailed class diagram



05 OOP Programing techniques

Encapsulation

- Private class attributes prevent access from outside
- Methods defined in class to handle those attributes

Abstraction

- Real life cells are abstracted into java classes and objects
- Hiding process details from user

05 OOP Programing techniques

Inheritance

- Classes of similar traits can generalize into parent class and vice versa
- Cells are superclass of Prokaryotic and Eukaryotic

Polymorphism

- Eukaryotic and Prokaryotic implements Process interface
- A function of the same name behaves differently depending on the calling object

06 Demo

Link: https://www.youtube.com/watch?v=H5pNMPDcC7s