LABORATORY 14

REQUIREMENTS

1. Add a multiple undo and redo functionality for the operations "add", "remove", "update" in your repository. Implement this functionality using **inheritance and polymorphism.** You will have a "Undo" and "Redo" buttons on your GUI, as well as a key combination to undo and redo the operations (e.g. Ctrl+Z, Ctrl+Y).

2. Create a new window which presents the contents of your:
   - adoption list
   - movie watch list
   - shopping basket
   - tutorial watch list

This window will contain a list view/table view with all the elements in your list. You must use Qt View/Model components (QTableView). Create your own model – a class which inherits from QAbstractListModel or QAbstractTableModel.

This window will be opened from your GUI main window.

ADDITIONAL REQUIREMENTS - BONUS POSSIBILITY (0.1P FOR EACH REQUIREMENT)

For each of the requirements below, you can get 0.1 bonus points.

1. Add a multiple undo and redo functionality for your adoption list/movie watch list/shopping basket/tutorial watch list. This will be tested through the application's GUI.
2. Use custom delegates in Qt. In one of the columns of the Qt table view that shows the elements in your adoption list/movie watch list/shopping basket/tutorial watch list, display an image of the dog/trench coat or a play button - depending on the problem statement. Please see two examples on the following page.

Lecture11_demo_custom_models

| TableView | TreeView | ListView | TableView - Paginated | **TableWithPictures** |

Gene name	Organism name	Gene function
ABO		Determinant of blood type (ABO)
ALB		The most abundant protein in human blood plasma
accD		enzyme; Fatty acid and phosphatidic acid biosynthesis
BCL2		The prototype anti-apoptotic protein

PlaylistQt_Models

File

| Songs | **Editable Songs** | BarChart | List |

Artist	Title	Duration	Source	Play
Ed Sheeran	I see fire	4:54	https://www.youtube.com/watch?v=2fngvQS_PmQ	▶
The Proclaimers	I would walk 500 miles	3:37	https://www.youtube.com/watch?v=otXGqU4LBEI	▶
Hozier	Take me to church	4:2	https://www.youtube.com/watch?v=MYSVMgRr6pw&index=30&list=PLb5DqBOB_Gn7CfN91JAI39ZWX4lwqcBBz	▶
Two Steps From Hell	Heart of Courage	8:12	https://www.youtube.com/watch?v=XYKUeZQbMF0	▶
Two Steps From Hell	Protectors of the Earth	2:50	https://www.youtube.com/watch?v=ASj81daun5Q	▶
John Dreamer	Becoming A Legend	3:36	https://www.youtube.com/watch?v=toPm-L7Ib44	▶
Pink Martini	Splendour in the Grass	3:47	https://www.youtube.com/watch?v=6L-_DiZIrUI	▶
Pink Martini	Pana cand nu te iubeam	4:40	https://www.youtube.com/watch?v=admIEqRuPf0	▶
Two Steps From Hell	Strength of a Thousand Men	6:38	https://www.youtube.com/watch?v=N2RK6OGNMCY&list=PL28C0A27C5F5E5D3A	▶