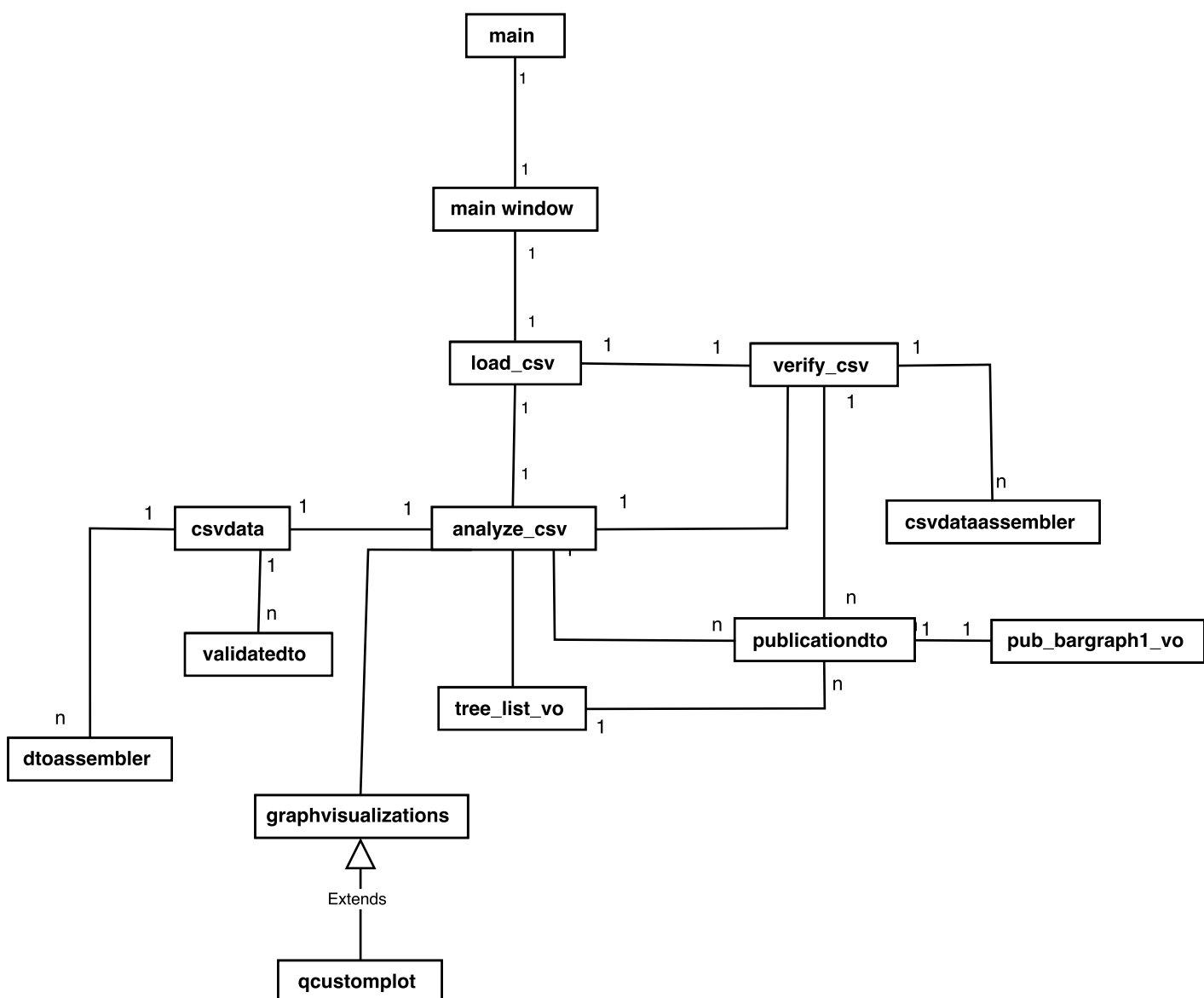


# CLASS DIAGRAM



analyze_csv
<ul style="list-style-type: none"><li>- ui: AnalyzeCSV</li><li>- scene: QGraphicsScene</li><li>- customPlot: QCustomPlot</li></ul>
<ul style="list-style-type: none"><li>+ PopulateDateCombos (data: shared_ptr&lt;CSVData&lt;PublicationDTO&gt;&gt;)</li><li>+ AddRoot( field: QString, total: QString)</li><li>+ AddChild(parent: QTreeWidgetItem, field: QString, total: QString)</li><li>+ AddGrandChild(parent: QTreeWidgetItem, field: QString, total: QString)</li><li>- on_load_btn_clicked()</li><li>- on_verify_btn_clicked()</li><li>+ PopulateDateCombos()</li><li>+ AnalyzeCSV(_data: publicationDTO, parent: QWidget)</li></ul>

csvdata
<ul style="list-style-type: none"><li>+ nMan: int</li><li>+ errorRows: vector&lt;vector&lt;string&gt;&gt;</li><li>+ dtos: vector&lt;DTOType&gt;</li><li>+ header: vector&lt;string&gt;</li></ul>
+ templates?
<ul style="list-style-type: none"><li>+</li><li>+</li></ul>

csvdataassembler
<ul style="list-style-type: none"><li>+ AssembleData (data: CSVData&lt;PublicationDTO&gt;&gt;, filename: string)</li></ul>

load_csv
<ul style="list-style-type: none"><li>- ui: LoadCSV</li><li>- verify_csv_page: VerifyCSV</li><li>- analyze_csv_page: AnalyzeCSV</li><li>- filename: QString</li></ul>
<ul style="list-style-type: none"><li>- on_verify_btn_clicked()</li><li>- on_analyze_btn_clicked()</li><li>- on_publication_btn_clicked()</li><li>+ LoadCSV(parent: QWidget)</li></ul>

main
+ main: int

main window
<ul style="list-style-type: none"><li>- ui: MainWindow</li><li>- load_cv_page: LoadCSV</li></ul>
<ul style="list-style-type: none"><li>+ MainWindow (parent: QWidget)</li><li>- on_login_btn_clicked()</li></ul>

qcustomplot
+ field: type
+ method(type): type

dtoassembler
+ assembleDTO (dto: PublicationDTO, f: vector<string>)

publicationdto
<ul style="list-style-type: none"><li>+ name: String</li><li>+ domain: String</li><li>+ journalName: String</li><li>+ title: String</li><li>+ ISBN: String</li><li>+ status: String</li><li>+ type: String</li><li>+ role: String</li><li>+ date: unsigned int</li><li>+ id: unsigned int</li><li>+ authors: shared_ptr&lt;vector&lt;string&gt;&gt;</li><li>+ volume: String</li><li>+ issue: String</li><li>+ pageRange: String</li><li>+ DOI : String</li><li>+ website: String</li><li>+ publisher: String</li><li>+ personalRenumeration: String</li><li>+ traineeDetails: String</li><li>+ mostSignificantDetails: String</li><li>+ pubmedID: String</li><li>+ authorNumber: String</li><li>+ impactFactor: String</li><li>+ peerReviewed: String</li><li>+ international: String</li><li>+ presentation: String</li><li>+ mostSignificant: String</li><li>+ education: String</li></ul>
+ publicationDTO()

graphvisualizations
+ field: type
<ul style="list-style-type: none"><li>+ plot_pub_vs_type (plot: QCustomPlot, bargraph_vo: Pub_BarGraph1_VO)</li><li>+ plot_grants_vs_trials(plot: QCustomPlot)</li><li>+ plot_pubtype_vs_date (plot: QCustomPlot)</li><li>- bar_plot(plot: QCustomPlot)</li><li>- pie_chart(plot: QCustomPlot)</li></ul>

tree_list_vo
+ num_pub_types: int  + publication_types: vector<string>  + author_name_set: vector<vector<author_number>>  + publication_type_sums: vector<int>
+ tree_list_vo() + tree_list_vo( _data: shared_ptr<CSVData<PublicationDTO>>)  + get_publication_types()  + get_author_name_set()  + get_publication_type_sums()  + populate_publication_set( _data: shared_ptr<CSVData<PublicationDTO>>) + populate_pub_tree (t: QTreeWidget)  - find_pub_type (typ: string, p_types: vector<string>)  - find_author (name: string, a_n_set: vector<author_number>)

validatedto
+ trimLeft (s: string) + trimRight(s: string) + trimString(s: string) + validateString(s: string)  + isLeapYear(y: int)  + makeDate(s: string) + validateDate(s: string)  + validateAuthorName(s: string) + makeAuthors(s: string)  + validateAuthors(s: string)  + validatePublications (fields: vector<string>)

pub_bargraph1_vo
+ name: string  + years: vector<string>  + pubTypes: vector<string>  + values: vector<vector<int>>
+ Pub_BarGraph1_VO (data: shared_ptr<CSVData<PublicationDTO>>, start: int, end: int)

verify_csv
- ui: VerifyCSV  - analyze_csv_page: AnalyzeCSV  - data: shared_ptr<CSVData<PublicationDTO>>  - select: QItemSelectionModel  - changesMade: bool
+ verifyVSC (filename: QString, parent: QWidget)  - on_load_btn_clicked()  - on_analyze_btn_clicked()  - on_ignoreall_btn_clicked()  - on_ignore_btn_clicked()  - PublicationTableModel (filename: QString)  - on_ignore_btn_clicked()  - enableConfirmChanges()