**Task Management Documentation**

**Group Magical Chess (wait for changing)**

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**2110215 Programming Methodology**

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Task Management

Introduction

Class diagram

Implementation detail

This project uses org.json library that is embedded to runnable jar file

1.Package models

1.1 class MainInterface

1.1.1 Fields

|  |  |
| --- | --- |
| - int idxTaskFile | id for new taskfile |
| - List<TaskFile> taskFiles | keep all taskfile in application |

1.1.2 Methods

|  |  |
| --- | --- |
| + MainInterface() | set idxTaskFile to 0 and create new ArrayList to taskFiles |
| + void addTaskFile(String title,FileType fileType, MainInterface mainInterface) | add new TaskFile using title, fileType and mainInterface in taskFiles and increase idxTaskFile by 1 |
| + void addTaskFile(JSONObject jsonObject, MainInterface mainInterface) | add new TaskFile using jsonObject and mainInterface in taskFiles and increase idxTaskFile by 1 |
| + TaskFile findTaskFile(int id) | return TaskFile that has id same as argument |
| + void deleteTaskFile(int id) | delete TaskFile that has id same as argument |
| getters and setters for all variables |  |

1.2 class TaskFile implements Exportable

1.2.1 Fields

|  |  |
| --- | --- |
| - int id | unique id of this TaskFile |
| - MainInterface mainInterface | MainInterface of this TaskFile |
| - Displayable display | Display of this TaskFile |

1.2.2 Methods

|  |  |
| --- | --- |
| + TaskFile(int id, String title, FileType fileType, MainInterface mainInterface) | initialize id and mainInterface and display depend on FileType |
| + TaskFile(int id, JSONObject jsonObject, MainInterface mainInterface) | initialize id and mainInterface and display using jsonObject |
| + Displayable jsonToDisplay(JSONObject jsonTaskFileObject) | return Displayable by using jsonTaskFileObject |
| + JSONObject getJsonObject() | return JSONObject of this TaskFile |
| getters and setters for all variables except id’s setter |  |

1.3 class PersonalDisplay implements Displayable,Exportable

1.3.1 Fields

|  |  |
| --- | --- |
| - int id | unique id of this PersonalDisplay |
| - int idxListNode | id for new NodeList |
| - String name | name of this PersonalDisplay |
| - List<NodeList> nodeLists | all NodeList of this PersonalDisplay |

1.3.2 Methods

|  |  |
| --- | --- |
| + PersonalDisplay(int id, String name) | initialize id and name, set idxListNode to 0 and create new ArrayList to nodeLists |
| + void addNodeList(NodeList List) | add List to nodeLists |
| + void removeNodeList(int id) | remove NodeList that has id same as argument |
| + NodeList getNodeList(int id) | return NodeList that has id same as argument |
| + JSONObject getJsonObject() | return JSONObject of this PersonalDisplay |
| getters and setters for all variables except id’s setter |  |

1.4 class TeamDisplay implements Displayable,Exportable

1.4.1 Fields

|  |  |
| --- | --- |
| - int id | unique id of this TeamDisplay |
| - int idxListNode | id for new NodeList |
| - int idxMember | id for new Member |
| - String name | name of this TeamDisplay |
| - List<NodeList> nodeLists | all NodeList of this TeamDisplay |
| - List<Member> members | all Member of this TeamDisplay |

1.4.2 Methods

|  |  |
| --- | --- |
| + TeamDisplay(int id, String name) | initialize id and name, set idxListNode to 0 and create new ArrayList to nodeLists |
| + void addNodeList(NodeList List) | add List to nodeLists and set idxNodeList equal id of List + 1 |
| + void removeNodeList(int id) | remove NodeList that has id same as argument |
| + NodeList getNodeList(int id) | return NodeList that has id same as argument |
| + void addMember(Member member) | add Member to members and set idxMember equal id of member + 1 |
| + void removeMember(int id) | remove Member that has id same as argument |
| + Member getMember(int id) | return NodeList that has id same as argument |
| + JSONObject getJsonObject() | return JSONObject of this TeamDisplay |
| getters and setters for all variables except id’s setter |  |

1.5 class NodeList implements Exportable

1.5.1 Fields

|  |  |
| --- | --- |
| # int id | unique id of this NodeList |
| # Displayable displayOwner | Displayable that contain this NodeList |
| # int idxCard | id for new Card |
| # String title | title of this NodeList |
| # List<Card> cards | all Card of this NodeList |

1.5.2 Methods

|  |  |
| --- | --- |
| + NodeList(int id, Displayable displayOwner, String title) | initialize id, displayOwner and title and set idxCard to 0 and create new ArrayList for cards |
| + void addCard(Card card) | add Card to cards |
| + void removeCard(int id) | remove Card that has id same as argument |
| + JSONObject getJsonObject() | return JSONObject of this NodeList |
| getters and setters for all variables except id’s setter |  |

1.6 abstract class Card implements Exportable

1.6.1 Fields

|  |  |
| --- | --- |
| - int id | unique id of this Card |
| - NodeList nodeListOwner | NodeList that contain this Card |
| - String title | title of this Card |
| - String description | description of this Card |
| - LocalDate date | due date of this card |
| - int idxCheckLists | id for new CheckListItem |
| - List<ChecklistItem> checkLists | all ChecklistItem in this Card |

1.6.2 Methods

|  |  |
| --- | --- |
| + Card(int id,NodeList nodeListOwner, String title) | initialize id, nodeListOwner and title , set description to empty String , set date to null , set idxChecklists to 0 and create new ArrayList to checkLists |
| + void addChecklist(ChecklistItem item) | add ChecklistItem to checklists |
| + void removeChecklist(int id) | remove CheckListItem that has id same as argument |
| + ChecklistItem getChecklist(int id) | return CheckListItem that has id same as argument |
| + int getNumberOfCheckedChecklist() | return number of CheckListItem that is checked(complete) |
| + double getChecklistPercentage() | return percentage of CheckListItem that is checked(complete) |
| + abstract JSONObject getJsonObject() | return JSONObject of this Card |
| getters and setters for all variables except id’s setter |  |

1.7 class PersonalCard extends Card

1.7.1 Fields

|  |  |
| --- | --- |
| - Label label | // TODO |

1.7.2 Methods

|  |  |
| --- | --- |
| + PersonalCard(int id,NodeList nodeListOwner, String title) |  |
| + JSONObject getJsonObject() |  |
| getters and setters for all variables |  |

1.8 class TeamCard extends Card

1.8.1 Fields

|  |  |
| --- | --- |
| - List<Member> members |  |
| - Priority priority | // TODO |

1.8.2 Methods

|  |  |
| --- | --- |
| + TeamCard(int id,NodeList nodeListOwner, String title) |  |
| + void addMember(Member member) |  |
| + void removeMember(int id) |  |
| + Member getMember(int id) |  |
| + JSONObject getJsonObject() |  |
| getters and setters for all variables |  |

1.9 class CheckListItem implements Exportable

1.9.1 Fields

|  |  |
| --- | --- |
| - int id |  |
| - String title |  |
| - boolean isChecked |  |

1.9.2 Methods

|  |  |
| --- | --- |
| + ChecklistItem(int id,String title) |  |
| + void toggleChecked() |  |
| + JSONObject getJsonObject() |  |
| getters and setters for all variables except id’s getter |  |

1.10 class Member implements Exportable // TODO

1.11 class Label implements Exportable // TODO

2.Package enums

2.1 enum FileType

|  |  |
| --- | --- |
| Personal | use for TaskFile that contain PersonalDisplay |
| Team | use for TaskFile that contain TeamDisplay |

2.2 enum Priority

|  |  |
| --- | --- |
| LOW | low priority card |
| MEDIUM | medium priority card |
| HIGH | high priority card |
| NONE | undecided priority card |

3.Package interfaces

3.1 interface Displayable

3.1.1 Methods

|  |  |
| --- | --- |
| + String getName() | return name of this Displayable |
| + List<NodeList> getNodeLists | return all NodeList of this Displayable |

3.2 interface Exportable

3.2.1 Methods

|  |  |
| --- | --- |
| + JSONObject getJsonObject() | return JSONObject of this Exportable |

4.Package controllers

4.1 class MainInterfaceUI

4.1.1 Fields

|  |  |
| --- | --- |
| - MainInterface mainInterface |  |
| - @FXML HBox mainInterfaceGUI |  |
| - @FXML VBox fileContainer |  |
| - @FXML HBox addFileZone |  |
| - @FXML ComboBox<String> filetype |  |
| - @FXML TextField newFileName |  |
| - @FXML StackPane displayContainer |  |
| - @FXML StackPane warningNewFileName |  |
| - @FXML StackPane warningFileType |  |

4.1.2 Methods

|  |  |
| --- | --- |
| + MainInterfaceUI() |  |
| + void loadInitialFXML() |  |
| + void updateGUI() |  |
| + void handleAddFile() |  |
| + void handleShowAddFileZone() |  |
| + void handleHideAddFileZone() |  |
| + void handleHideWarningNewFileName() |  |
| + void handleShowWarningNewFileName() |  |
| + void handleHideWarningFileType() |  |
| + void handleShowWarningFileType() |  |
| + void handleImportFile() |  |
| getters and setters for mainInterface, mainInterfaceGUI and displayContainer |  |

4.2 class TaskFileUI

4.2.1 Fields

|  |  |
| --- | --- |
| - TaskFile taskFile |  |
| - @FXML HBox taskFileGUI |  |
| - @FXML Label fileName |  |

4.2.2 Methods

|  |  |
| --- | --- |
| - TaskFileUI(TaskFile taskFile) |  |
| - void loadInitialFXML() |  |
| - void handleDeleteFile() |  |
| - void handleOpenFile() |  |
| - void handleExportFile() |  |
| - getters and setters for taskFile and taskFileGUI |  |

4.3 class PersonalDisplayUI

4.3.1 Fields

|  |  |
| --- | --- |
| - PersonalDisplay personalDisplay |  |
| - @FXML VBox personalDisplayGUI |  |
| - @FXML Label displayName |  |
| - @FXML VBox displayZone |  |

4.3.2 Methods

|  |  |
| --- | --- |
| - PersonalDisplayUI(PersonalDisplay personalDisplay) |  |
| - void loadInitialFXML() |  |
| - void updateGUI() |  |
| - void handleClearDisplay() |  |
| - getters and setters for personalDisplay and personalDisplayGUI |  |

4.4 class TeamDisplayUI

4.4.1 Fields

|  |  |
| --- | --- |
| - TeamDisplay teamDisplay |  |
| - @FXML VBox teamDisplayGUI |  |
| - @FXML Label displayName |  |
| - @FXML HBox displayZone |  |
| - @FXML VBox addListZone |  |
| - @FXML VBox addListNodeDetail |  |
| - @FXML TextField titleArea |  |
| - @FXML Button addListNodeButton |  |
| - @FXML StackPane warningNewListName |  |

4.4.2 Methods

|  |  |
| --- | --- |
| + TeamDisplayUI() |  |
| + void loadInitialFXML() |  |
| + void updateGUI() |  |
| + void handleAddNodeListToBoard() |  |
| + void handleShowAddListDetailButton() |  |
| + void handleHideAddListDetailButton() |  |
| + void handleClearDisplay() |  |
| + void handleHideWarningNewListName() |  |
| + void handleShowWarningNewListName() |  |
| getters and setters for teamDisplay and teamDisplayGUI |  |

4.5 class PersonalNodeListUI

4.5.1 Fields

|  |  |
| --- | --- |
| - NodeList nodeLIst |  |
| - @FXML HBox nodeListGUI |  |
| - @FXML Text nodeListTitle |  |
| - @FXML HBox cardContainer |  |
| - @FXML TextField titleArea |  |
| - @FXML VBox addCardDetail |  |
| - @FXML StackPane warningCardName |  |

4.5.2 Methods

|  |  |
| --- | --- |
| + PersonalNodeListUI() |  |
| + void loadInitialFXML() |  |
| + void updateGUI() |  |
| + void handleAddCardToNodeList() |  |
| + void handleShowAddDetailButton() |  |
| + void handleHideAddDetailButton() |  |
| + void handleDeleteNodeList() |  |
| + void handleHideWarningCardName() |  |
| + void handleShowWarningCardName() |  |
| getters and setters for personalNodeList and personalNodeListGUI |  |

4.6 class TeamNodeListUI

4.6.1 Fields

|  |  |
| --- | --- |
| - NodeList nodeLIst |  |
| - @FXML VBox nodeListGUI |  |
| - @FXML Label nodeListTitle |  |
| - @FXML VBox cardContainer |  |
| - @FXML TextField titleArea |  |
| - @FXML VBox addCardDetail |  |
| - @FXML Button addACardButton |  |
| - @FXML StackPane warningCardName |  |

4.6.2 Methods

|  |  |
| --- | --- |
| + TeamNodeListUI() |  |
| + void loadInitialFXML() |  |
| + void updateGUI() |  |
| + void handleAddCardToNodeList() |  |
| + void handleShowAddDetailButton() |  |
| + void handleHideAddDetailButton() |  |
| + void handleDeleteNodeList() |  |
| + void handleHideWarningCardName() |  |
| + void handleShowWarningCardName() |  |
| getters and setters for teamNodeList and teamNodeListGUI |  |

4.7 class PersonalCardUI

4.7.1 Fields

|  |  |
| --- | --- |
| - PersonalCard personalCard |  |
| - @FXML VBox personalCardGUI |  |
| - @FXML Label title |  |
| - @FXML Text date |  |
| - @FXML Text checklistStat |  |
| - @FXML Text description |  |

4.7.2 Methods

|  |  |
| --- | --- |
| + PersonalCardUI() |  |
| + void loadInitialFXML() |  |
| + void updateGUI() |  |
| + void handleDeleteCard() |  |
| + void handleModalPopupCard() |  |
| getters and setters for personalCard and personalCardGUI |  |

4.8 class TeamCardUI

4.8.1 Fields

|  |  |
| --- | --- |
| - TeamCard teamCard |  |
| - @FXML StackPane teamCardGUI |  |
| - @FXML Label title |  |
| - @FXML Text dateText |  |
| - @FXML Text checklistStat |  |
| - @FXML CheckBox checkBox |  |

4.8.2 Methods

|  |  |
| --- | --- |
| + TeamCardUI() |  |
| + void loadInitialFXML() |  |
| + void updateGUI() |  |
| + void handleDeleteCard() |  |
| + void handleModalPopupCard() |  |
| getters and setters for teamCard and teamCardGUI |  |

4.9 class ModalPopupCardUI

4.9.1 Fields

|  |  |
| --- | --- |
| - Card cardOwner |  |
| - @FXML Label cardTitle |  |
| - @FXML DatePicker datePicker |  |
| - @FXML Button saveDateButton |  |
| - @FXML Button cancelDateButton |  |
| - @FXML Button editDateButton |  |
| - @FXML TextArea descriptionDetail |  |
| - @FXML Button saveDescriptionButton |  |
| - @FXML Button editDescriptionButton |  |
| - @FXML Button cancelDescriptionButton |  |
| - @FXML ProgressBar progressCheckListBar |  |
| - @FXML Text progressCheckListPercentage |  |
| - @FXML VBox checkListPercentage |  |
| - @FXML HBox addCheckListArea |  |
| - @FXML TextField textFieldNewCheckList |  |
| - @FXML Button closePopupButton |  |
| - @FXML Pane modalPopupCardGUI |  |

4.9.2 Methods

|  |  |
| --- | --- |
| - ModalPopupCardUI() |  |
| - void loadInitialFXML() |  |
| - void updateGUI() |  |
| - void handleSaveDate() |  |
| - void handleCancelEditDateMode() |  |
| - void handleEditDate() |  |
| - void handleEditDescriptionMode() |  |
| - void handleSaveDescription() |  |
| - void handleCancelEditDescriptionMode() |  |
| - void handleEditCheckListMode() |  |
| - void handleCancelEditCheckListMode() |  |
| - void handleAddCheckList() |  |
| getters and setters for modalPopupCard and modalPopupCardGUI |  |

5.Package app

5.1 class Main

5.1.1 Fields

|  |  |
| --- | --- |
| - MainInterfaceUI mainInterfaceUI |  |
| - Stage primaryStage |  |
| - int taskFieldOpening |  |

5.1.2 Methods

|  |  |
| --- | --- |
| + void start(Stage primaryStage) |  |
| + void main(String[] args) |  |