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Revision History

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| 10 August 2012 | 1.0 | Initial version | Heng Boon Kui, Swarna Ashok |
| 6 August 2013 | 1.1 | Revised for SE-OOAD 2013 run. Refined the interaction diagram. | Heng Boon Kui, Saisudha Rajagopal |
| 19 August 2013 | 1.2 | Revised for SE-OOAD 2013 run. Refined the interaction diagram. | Heng Boon Kui |
| 24 June 2015 | 2.0 | Ported to Enterprise Architect. Refined the class and interaction diagrams. | Heng Boon Kui |
| 10 Sep 2016 | 3.0 | Added Maintain Schedule, Review/Select Scheduled Program, Review/Select Presenter/Producer, Maintain Users | Team PT4 |

Work assignment

1. Create Annual Schedule sequence diagram - HU RENWEN & GONG SHENGLIANG

1. Create/Modify Program Slot sequence diagram - Ankur
2. Delete Program Slot sequence diagram - CHENG Hao
3. Review/Select Scheduled Program sequence diagram - HU RENWEN & GONG SHENGLIANG
4. Review/Select Presenter/Producer sequence diagram - CHENG Hao
5. Create/Modify user/Assign Role sequence diagram - Amar
6. Delete user sequence diagram - Amar
7. List/Manage user sequence diagram - Amar
8. Copy from previous weekly schedule - Amar
9. Review/Select Scheduled Program class diagram - HU RENWEN & GONG SHENGLIANG
10. Review/Select Presenter/Producer class diagram - CHENG Hao
11. Maintain schedule class diagram - CHENG Hao
12. Maintain user class diagram - Amar
13. High Level Design - CHENG Hao

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# Overview

## Architecture Layers



1. Architecture Layers

This diagram depicts the organization of the design model into layers. This diagram will be presented in the document generated using the SoDA Software Architecture Document.

See Rational Unified Process:

Activity: Architectural Analysis

Step: Define the High-Level Organization of Subsystems

Activity: Incorporate Existing Design Elements

Step: Update the Organization of the Design Model

# Design Objects

## Class Diagram for Entity Classes (Users)



1. Class Diagram for Entity Classes (Users)

## Class Diagram of Entity Classes (Radio Programs)



1. Class Diagram of Entity Classes (Radio Programs)

## phoenix

### musicchart

#### entity

##### ChartItem

##### MusicChart

### playlist

#### entity

##### AuditItem

##### Playlist

##### PlaylistAuditTrial

### core

#### controller

##### PhoenixFrontController

The Nocturne Application Controller that is the entry point of all the HTTP requests.

void doGet()

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| request | HttpServletRequest | Refer to Java API specification. |
| response | HttpServletResponse | Refer to Java API specification. |

void doPost()

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| request | HttpServletRequest | Refer to Java API specification. |
| response | HttpServletResponse | Refer to Java API specification. |

void processRequest()

Processes a HTTP request and forwards to another page. The processing involves mapping the request path, executing the corresponding command object and obtaining the response path.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| request | HttpServletRequest | Refer to Java API specification. |
| response | HttpServletResponse | Refer to Java API specification. |

#### dao

##### DAOFactory

The factory that instantiates all the DAO objects.

DAOFactory()

The constructor of the factory.

ProgramDAO getProgramDAO()

Returns the DAO for radio programs.

RoleDAO getRoleDAO()

Returns the DAO for user roles.

ScheduleDAO getScheduleDAO()

Returns the DAO for schedule-related objects.

UserDAO getUserDAO()

Returns the DAO for users.

UserMaintenanceDAO getUserMaintenanceDAO()

Returns the DAO for User Maintenance

### authenticate

#### controller

##### LoginCmd

This command captures the Login request.

String perform()

Performs the login request by passing the input user id and password to the Business Layer, setting the authenticated User object in HTTP session and forwarding to the home page.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String | Refer to Nocturne Application Controller framework. |
| req | HttpServletRequest | Refer to Java API specification. |
| resp | HttpServletResponse | Refer to Java API specification. |

##### LogoutCmd

This command captures the Logout request.

String perform()

Performs the login request by invalidating the HTTP session and forwarding to the logout page.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String | Refer to Nocturne Application Controller framework. |
| req | HttpServletRequest | Refer to java API specification. |
| resp | HttpServletResponse | Refer to java API specification. |

#### 

#### dao

##### impl

###### RoleDAOImpl

The implementation of the DAO for user roles. Refer to the documentation of the interface for the details of the class.

List<Role> loadAll()

Refer to the documentation of interface RoleDAO.

RoleDAOImpl()

The constructor of the DAO implementation.

List<Role> searchMatching()

Refer to the documentation of interface RoleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | Role |  |

###### UserDAOImpl

The implementation of the DAO for users. Refer to the documentation of the interface for the details of the class.

List<User> loadAll()

Refer to the documentation of interface UserDAO.

List<User> searchMatching()

Refer to the documentation of interface UserDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User |  |

UserDAOImpl()

The constructor of the DAO implementation.

#### 

#### delegate

##### AuthenticateDelegate

The delegate of the Authenticate Users use case.

AuthenticateDelegate()

The constructor of the delegate.

User validateUserIdPassword()

Validates the user id and password of the user.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User | The input user object specifying the user id and password. |

#### entity

##### Role

This object represents the access privileges of a role that is assigned to users.

Attributes

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Type** | **Documentation** |
| accessPrivilege | String | The access privileges for the user role. |
| role | String | The name of the user role. |

getter()

The generic representation of getter operations.

Role()

The constructor of the user role.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| role | String | The name of the user role. |

setter()

The generic representation of setter operations.

##### User

This entity object represents the common user characteristics.

Attributes

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Type** | **Documentation** |
| id | String | The user id of the user. |
| name | String | The name of the user. |
| password | String | The password of the user. |
| roles | String[] | The names of all roles assigned to the user. |

getter()

The generic representation of getter operations.

setter()

The generic representation of setter operations.

User()

The constructor of the user.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| id | String | The user id of the user. |
| name | String | The name of the user. |
| password | String | The password of the user. |

#### 

#### service

##### AuthenticateService

The service of the Authenticate Users use case. Refer to the documentation of the delegate for the details of the class.

AuthenticateService()

The constructor of the service.

User validateUserIdPassword()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User |  |

#### homePage

This boundary object represents the main screen of the PRMS application.

###### init()

Initializes the JSP page.

###### manageRadioProgram()

User request to manage radio programs.

###### manageSchedule()

User request to manage Schedules

###### manageUser()

User request to manage Users

###### selectLogout()

User request to logout from the system.

#### loginPage

This boundary object represents the screen used by users to log-in to the system.

###### enterUserIdAndPassword()

User request to login to the system.

###### init()

Initializes the JSP page.

#### logoutPage

This boundary object represents a confirmation dialog to prompt if the user wants to logout.

###### init()

Initializes the JSP page.

### radioprogram

#### controller

##### AddEditRadioProgramCmd

This command captures the request to add a new radio program or edit an existing radio program.

String perform()

Performs the request forwarding to the setup program page for creation or editing of radio program.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String | Refer to Nocturne Application Controller framework. |
| req | HttpServletRequest | Refer to Java API specification. |
| resp | HttpServletResponse | Refer to Java API specification. |

##### DeleteRadioProgramCmd

This command captures the request to delete an existing radio program.

String perform()

Performs the request by passing the name of the radio program to delete to the Business Layer, invoking the Review/Select Radio Program use case to display the resultant list of radio programs.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String | Refer to Nocturne Application Controller framework. |
| req | HttpServletRequest | Refer to Java API specification. |
| resp | HttpServletResponse | Refer to Java API specification. |

##### EnterProgramDetailsCmd

This command captures the request to submit the details of a radio program entered by the actor.

String perform()

Performs the request by passing the input details of the radio program to be created/modified to the Business Layer, invoking the Review/Select Radio Program use case to display the resultant list of radio programs.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String | Refer to Nocturne Application Controller framework. |
| req | HttpServletRequest | Refer to Java API specification. |
| resp | HttpServletResponse | Refer to Java API specification. |

void validateFormat()

Validates the format of details entered by the actor.

##### ManageRadioProgramCmd

This command captures the request to manage radio programs.

String perform()

Performs the request by invoking the Review/Select Radio Program use case to display the current list of radio programs.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String | Refer to Nocturne Application Controller framework. |
| req | HttpServletRequest | Refer to Java API specification. |
| resp | HttpServletResponse | Refer to Java API specification. |

#### dao

##### impl

###### ProgramDAOImpl

The implementation of the DAO for radio programs. Refer to the documentation of the interface for the details of the class.

bool checkProgramExists()

Refer to the documentation of interface ProgramDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | RadioProgram |  |

void createProgram()

Refer to the documentation of interface ProgramDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | RadioProgram |  |

void deleteProgram()

Refer to the documentation of interface ProgramDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| name | String |  |

List<RadioProgram> findProgram()

Refer to the documentation of interface ProgramDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | RadioProgram |  |

void modifyProgram()

Refer to the documentation of interface ProgramDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | RadioProgram |  |

ProgramDAOImpl()

The constructor of the DAO implementation.

#### delegate

##### ProgramDelegate

The delegate of the Maintain Radio Programs use case.

void processCreate()

Creates a new radio program based on the input radio program.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | RadioProgram | The input radio program. |

void processDelete()

Deletes the radio program with the input name.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| name | String | The name of the radio program. |

void processModify()

Modifies an existing radio program based on the input radio program.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | RadioProgram | The input radio program. |

ProgramDelegate()

The constructor of the delegate.

##### ReviewSelectRadioProgramDelegate

The delegate of the Review/Select Radio Program use case.

void reviewSelectRadioProgram()

Starts the selection of a radio program from the list of existing radio programs.

ReviewSelectRadioProgramDelegate()

The constructor of the delegate.

#### entity

##### RadioProgram

The entity object represents a radio program as defined by the radio station manager.

Attributes

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Type** | **Documentation** |
| desc | String | The description of a radio program. |
| name | String | The name of a radio program. |
| typicalDuration | int | The typical duration of a radio program. |

getter()

The generic representation of getter operations.

RadioProgram()

The constructor of the class.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| desc | String | The description of the radio program. |
| name | String | The name of the radio program. |
| typicalDuration | int | The typical duration of the radio program. |

setter()

The generic representation of setter operations.

#### service

##### ProgramService

The service of the Maintain Radio Programs use case.

void processCreate()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | RadioProgram |  |

void processDelete()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| name | String |  |

void processModify()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | RadioProgram |  |

ProgramService()

The constructor of the service.

##### ReviewSelectRadioProgramService

This service of the Review / Select Radio Program use case.

void reviewSelectRadioProgram()

Refer to the documentation of the delegate.

ReviewSelectRadioProgramService()

The constructor of the service.

#### webpages

##### programListPage

This boundary object represents the screen used to list radio programs.

void init()

Initializes the JSP page.

selectAdd()

User request to create a new radio program.

selectDelete()

User request to delete an existing radio program.

selectEdit()

User request to modify an existing radio program.

##### setupProgramPage

This boundary object represents the screen used to maintain radio programs.

enterProgramDetails()

User request to submit the details of a new or modified radio program.

init()

Initializes the JSP page.

### schedule

#### controller

##### CopyProgramSlotCmd

This command captures the request to copy Schedule from previous week

String perform()

Performs the request by invoking the Review/Select Scheduled Program use case to display the current list of scheduled program slots.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String |  |
| req | HttpServletRequest |  |
| resp | HttpServletResponse |  |

##### CreateAnnualScheduleCmd

This command captures the request to create annual schedule.

String perform()

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String |  |
| req | HttpServletRequest |  |
| resp | HttpServletResponse |  |

##### DeleteProgramSlotCmd

This command captures the request to delete an existing program slot.

String perform()

Performs the request by passing the ID of the program slot to delete to the Business Layer, invoking the Review/Select Scheduled Program use case to display the resultant list of program slots.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String |  |
| req | HttpServletRequest |  |
| resp | HttpServletResponse |  |

##### EnterProgramSlotDetailsCmd

This command captures the request to submit the details of a program slot entered by the actor.

void perform()

Performs the request by passing the input details of the program slot to be created/modified to the Business Layer, invoking the Review/Select Scheduled Program use case to display the resultant list of program slots.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String |  |
| req | HttpServletRequest |  |
| resp | HttpServletResponse |  |

void validateFormat()

Validates the format of details entered by the actor.

##### ManageProgramSlotCmd

This command captures the request to manage program slots.

String perform()

Performs the request by invoking the Review/Select Scheduled Program use case to display the current list of scheduled program slots.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String |  |
| req | HttpServletRequest |  |
| resp | HttpServletResponse |  |

##### ManageScheduleCmd

This command captures the request to manage schedules.

String perform()

Performs the login request by displaying the list of annual schedules and their corresponding weeks, and also provide the option for user to create new annual schedule.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String |  |
| req | HttpServletRequest |  |
| resp | HttpServletResponse |  |

#### dao

##### impl

###### ScheduleDAOImpl

boolean checkAnnualScheduleExists()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | AnnualSchedule |  |

void createAnnualSchedule()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| year | int |  |

void createProgramSlot()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | ProgarmSlot |  |

void createWeeklySchedules()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| year | int |  |

void deleteProgramSlot()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| id | int |  |

AnnualSchedule findAnnualSchedule()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| year | int |  |

List<ProgramSlot> findWeeklyProgramSlots()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| year | int |  |
| weekNo | int |  |

WeeklySchedule findWeeklySchedule()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| year | int |  |
| weekNo | int |  |

boolean hasProgramSlotPassedOrStarted()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | ProgramSlot |  |

boolean isProgramSlotAssigned()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | ProgramSlot |  |

void modifyProgramSlot()

Refer to the documentation of interface ScheduleDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | ProgramSlot |  |

List<AnnualSchedule> retrieveAllAnnualSchedules()

Refer to the documentation of interface ScheduleDAO.

ScheduleDAOImpl()

The constructor of the DAO implementation.

#### delegate

##### ScheduleDelegate

The delegate of the Maintain Schedule use case.

boolean processCheckIfAnnualScheduleCreated()

Query a annual schedule based on the provided year.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| year | int |  |

void processCreateAnnualSchedule()

Creates a new annual schedule based on the input year, and creates 52 weekly schedules automatically.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| annualSchedule | AnnualSchedule |  |

void processCreateProgramSlot()

Creates a new program slot based on the input program slot.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | ProgramSlot |  |

void processDeleteProgramSlot()

Deletes the program slot with the input ID.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| id | int |  |

void processModifyProgramSlot()

Modifies an existing program slot based on the input program slot.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | ProgramSlot |  |

ScheduleDelegate()

The constructor of the delegate.

##### ReviewSelectScheduledProgramDelegate

The delegate of the Review/Select Scheduled Program use case.

void reviewSelectScheduledProgram()

Starts the Listing of scheduled program slots based on the selected year and week from previous page.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| year | int |  |
| weekNo | int |  |

void reviewSelectScheduledProgram()

Allow user to select year and week on this page, and list down the scheduled program slots based on the selected year and week.

ReviewSelectScheduledProgramDelegate()

The constructor of the delegate.

#### entity

##### AdvertItem

##### AnnualSchedule

This entity object represents the annual radio station program schedule as a list of annual schedules.

Attributes

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Type** | **Documentation** |
| assignedBy | String | The user created the Annual Schedule record. |
| year | Date | The year of the Annual Schedule. |

AnnualSchedule()

The constructor of the class.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| year | int |  |

getter()

The generic representation of getter operations.

List<WeeklySchedule> retrieveAllWeeklySchedule()

Retrieves all the weekly schedules belong to this year.

setter()

The generic representation of setter operations.

##### MusicalItem

##### ProgramAnnotation

##### ProgramSlot

This entity object represents a time slot in a weekly schedule as defined by the radio station manager in which a radio program is broadcast.

Attributes

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Type** | **Documentation** |
| assignedBy | String | The user created the program slot. |
| duration | int | The duration of the program slot. |
| startDateTime | Date | The start date and time of the program slot. |
| weekNo | int | The number of week that the program slot belongs to. |

getter()

The generic representation of getter operations.

Boolean isProgramSlotAssigned()

Validates whether the program slot has already been assigned.

ProgramSlot()

The constructor of the class.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| weekNo | int |  |
| startDateTime | Date |  |
| duration | int |  |

void removeProgramSlot()

Remove this Program Slot.

setter()

The generic representation of setter operations.

##### RunningOrder

##### SlotItem

##### SpeechItem

##### TimeSlot

isExistsFromCurrentTimeSlot()

remove()

##### WeeklySchedule

This entity object represents the radio program schedule for a week as defined by radio station manager in terms of a series of time slots in which specific programs are broadcast.

Attributes

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Type** | **Documentation** |
| assignBy | String | The user created the weekly schedule record. |
| startDate | Date | The start day of the week of the weekly schedule. |
| weekNo | int | The number of the week of the year. |
| year | int | The year that the weekly schedule belongs to. |

getter()

The generic representation of getter operations.

List<ProgramSlot> retrieveAllProgramSlots()

Retrieve all the program slots belong to this week.

setter()

The generic representation of setter operations.

WeeklySchedule()

The constructor of the class.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| startDate | Date |  |
| weekNo | int |  |
| year | int |  |

#### service

##### ScheduleService

The service of the Maintain Schedule use case.

boolean processCheckIfAnnualScheduleCreated()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| year | int |  |

void processCopyWeeklySchedule()

Refer to the documentation of the delegate.

void processCreateAnnualSchedule()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| annualSchedule | AnnualSchedule |  |

void processCreateProgramSlot()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | ProgramSlot |  |

void processDeleteProgramSlot()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| id | int |  |

void processModifyProgramSlot()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | ProgramSlot |  |

ScheduleService()

The constructor of the service.

##### ReviewSelectScheduledProgramService

This service of the Review / Select Scheduled Program use case.

void reviewSelectScheduledProgram()

Refer to the documentation of the delegate.

ReviewSelectScheduledProgramService()

The constructor of the service.

void reviewSelectScheduleProgram()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| year | int |  |
| WeekNo | int |  |

#### webpages

##### createSchedulePage

This boundary object represents the screen used to create annual schedule and corresponding weeks

void init()

##### setupProgramSlotPage

This boundary object represents the screen used to maintain program slots.

void enterProgramSlotDetails()

User request to submit the details of a new or modified program slot.

void init()

Initializes the JSP page.

void selectCreateProgramSlot()

User request to create a new program slot.

void selectDeleteProgramSlot()

User request to delete an existing program slot.

int selectEditProgramSlot()

User request to modify an existing program slot.

##### setupSchedulePage

This boundary object represents the screen used to view schedule page and other actions

void copyFromPreviousWeek()

User request to copy from previous week.

void init()

Initializes the JSP page.

##### annualScheduleListPage

This boundary object represents the screen used to list annual schedules.

void init()

Initializes the JSP page.

void selectCreateAnnualSchedule()

User request to create a new annual schedule.

void selectSelectWeeklySchedule()

User request to select an existing weekly schedule.

### user

#### controller

##### AddEditUserCmd

This command captures the request to add a new User or edit an existing User.

String perform()

Performs the request forwarding to the setup program page for creation or editing of radio program.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String | Refer to Nocturne Application Controller framework. |
| req | HttpServletRequest | Refer to Java API specification. |
| resp | HttpServletResponse | Refer to Java API specification. |

boolean validateFormat()

##### DeleteUserCmd

This command captures the request to delete an existing User

String perform()

Performs the request by passing the name of the radio program to delete to the Business Layer, invoking the Review/Select Radio Program use case to display the resultant list of radio programs.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String | Refer to Nocturne Application Controller framework. |
| req | HttpServletRequest | Refer to Java API specification. |
| resp | HttpServletResponse | Refer to Java API specification. |

##### UserMaintenanceCmd

This command captures the request to manage Users. operations like listing user, reset password, assign role will be handled by this class.

String perform()

Performs the request by invoking the Review/Select Radio Program use case to display the current list of radio programs.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| path | String | Refer to Nocturne Application Controller framework. |
| req | HttpServletRequest | Refer to Java API specification. |
| resp | HttpServletResponse | Refer to Java API specification. |

#### dao

##### impl

###### UserMaintenanceDAOImpl

The implementation of the DAO for users. Refer to the documentation of the interface for the details of the class.

boolean deleteUser()

Refer to the documentation of interface UserMaintenanceDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| String | userId |  |

List<Presenter> findPresenter()

Refer to the documentation of interface UserMaintenanceDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | Presenter |  |

List<Producer> findProducer()

Refer to the documentation of interface UserMaintenanceDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | Producer |  |

User getUserById()

Refer to the documentation of interface UserMaintenanceDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| String | userId |  |

List<User> loadAll()

Refer to the documentation of interface UserMaintenanceDAO.

User persistUser()

Refer to the documentation of interface UserMaintenanceDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User |  |

List<Presenter> retriveAllPresenters()

Refer to the documentation of interface UserMaintenanceDAO.

List<Producers> retriveAllProducers()

Refer to the documentation of interface UserMaintenanceDAO.

List<User> searchMatching()

Refer to the documentation of interface UserMaintenanceDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User |  |

User updateUser()

The constructor of the DAO implementation.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User |  |

UserMaintenanceDAOImpl()

Refer to the documentation of interface UserMaintenanceDAO.

#### delegate

##### ReviewSelectPresenterProducerDelegate

The delegate of the Review/Select Presenter/Producer use case.

ReviewSelectPresenterProducerDelegate()

The constructor of the delegate.

void reviewSelectPresenterProducerDelegate()

Starts the selection of a Presenter/Producer from the list of existing Presenters/Producers.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| selectType | String |  |

##### UserMaintenanceDelegate

The delegate for the maintain user use case.

int processAssignRole()

Object:User processCreateUser()

Creates a new radio program based on the input radio program.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User | The input radio program. |

boolean processDeleteUser()

Deletes the radio program with the input name.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| name | String | The name of the radio program. |

Object:User processGetUser()

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | String |  |

List<User> processListUsers()

operation will list all the users

Object:User processModifyUser()

Modifies an existing radio program based on the input radio program.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User | The input radio program. |

UserMaintenanceDelegate()

The constructor of the delegate.

#### entity

##### Presenter

The entity object represents a presenter.

getter()

The generic representation of getter operations.

Presenter()

The constructor of the class.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| name | String |  |

setter()

The generic representation of setter operations.

##### PresenterPhoto

##### PresenterProfile

##### Producer

The entity object represents a producer.

getter()

The generic representation of getter operations.

Producer()

The constructor of the class.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| name | String |  |

setter()

The generic representation of setter operations.

##### SiteLink

##### StationManager

##### SystemAdministrator

#### service

##### ReviewSelectPresenterProducerService

This service of the Review / Select Presenter/Producer use case.

ReviewSelectPresenterProducerService()

The constructor of the service.

void reviewSelectPresenterProducerService()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| selectType | String |  |

##### UserMaintenanceService

The service of the Maintain User usecase

Object:User getUserById()

List<User> getUserList()

processAssignRole()

Object:User processCreateUser()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User |  |

boolean processDeleteUser()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| name | String |  |

Object:User processModifyUser()

Refer to the documentation of the delegate.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User |  |

UserMaintenanceService()

The constructor of the service.

#### webpages

##### manageUserPage

This boundary object represents the screen used to list Users

AssignRole()

createUser()

User request to create a new radio program.

DeleteUser()

User request to modify an existing radio program.

init()

Initializes the JSP page.

ModifyUser()

User request to delete an existing radio program.

ResetPassword()

##### presenterProducerListPage

This boundary object represents the screen used to list Presenter/Producer list

void close()

Close the popup page.

void init()

Initializes the JSP page.

void selectSelectPresenterProducer()

User request to select an existing presenter/producer.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| id | int |  |

##### setupUserPage

This boundary object represents the screen used to list Users

AssignRole()

createUser()

User request to create a new radio program.

DeleteUser()

User request to modify an existing radio program.

init()

Initializes the JSP page.

ModifyUser()

User request to delete an existing radio program.

ResetPassword()

# Use-Case Realizations

## Design of Authenticate Users

### Class Diagram for Authenticate Users



1. Class Diagram for Authenticate Users

### Sequence Diagram for Log-in



1. Sequence Diagram for Log-in

### Sequence Diagram for Log-out



1. Sequence Diagram for Log-out

## Design of Maintain Radio Programs

### Class Diagram for Maintain Radio Programs



1. Class Diagram for Maintain Radio Programs

### Sequence Diagram for Create/Modify Program



1. Sequence Diagram for Create/Modify Program

### Sequence Diagram for Delete Program



1. Sequence Diagram for Delete Program

## Design of Review/Select Radio Program

### Class Diagram for Review/Select Program



1. Class Diagram for Review/Select Program

### Sequence Diagram for Review/Select Program



1. Sequence Diagram for Review/Select Program

## Design of Maintain Schedule

### Class Diagram for Maintain Schedule



1. Class Diagram for Maintain Schedule

### Sequence Diagram for Create/Modify Program Slot



1. Sequence Diagram for Create/Modify Program Slot

### Sequence Diagram for Copy Schedule



1. Sequence Diagram for Copy Schedule

### Sequence Diagram for Create Annual Schedule



1. Sequence Diagram for Create Annual Schedule

### Sequence Diagram for Delete Program Slot



1. Sequence Diagram for Delete Program Slot

## Design of Maintain Users

### Class Diagram for Maintain Users



1. Class Diagram for Maintain Users

### Sequence Diagram for Create/Modify/AssignRole user



1. Sequence Diagram for Create/Modify/AssignRole user

### Sequence Diagram for Delete user



1. Sequence Diagram for Delete user

### Sequence Diagram for List/manage User



1. Sequence Diagram for List/manage User

### UserMaintenanceDAOImpl

The implementation of the DAO for users. Refer to the documentation of the interface for the details of the class.

##### boolean deleteUser()

It will take userId as input parameter and will return:

true - in case user is deleted successfully

false - In case any error occurred.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| String | userId |  |

##### List<Presenter> findPresenter()

Refer to the documentation of interface UserMaintenanceDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | Presenter |  |

##### List<Producer> findProducer()

Refer to the documentation of interface UserMaintenanceDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | Producer |  |

##### User getUserById()

It will fetch UserBy Id. Userid will be unique and only one matching result will be returned.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| String | userId |  |

##### List<User> loadAll()

Refer to the documentation of interface UserMaintenanceDAO.

##### User persistUser()

This method will be used to persist User. Input will be user object which will be in transient state.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User |  |

##### List<Presenter> retriveAllPresenters()

Refer to the documentation of interface UserMaintenanceDAO.

##### List<Producers> retriveAllProducers()

Refer to the documentation of interface UserMaintenanceDAO.

##### List<User> searchMatching()

Refer to the documentation of interface UserDAO.

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User |  |

##### User updateUser()

operation to update User

|  |  |  |
| --- | --- | --- |
| **Parameter Name** | **Type** | **Documentation** |
| input | User |  |

##### UserMaintenanceDAOImpl()

The constructor of the DAO implementation.

## Design of Review/Select Presenter/Producer

### Class Diagram for Review/Select Presenter/Producer



1. Class Diagram for Review/Select Presenter/Producer

### Sequence Diagram for Review/Select Presenter/Producer



1. Sequence Diagram for Review/Select Presenter/Producer

## Design of Review/Select Scheduled Program

### Class Diagram for Review/Select Scheduled Program



1. Class Diagram for Review/Select Scheduled Program

### Sequence Diagram for Review/Select Scheduled Program



1. Sequence Diagram for Review/Select Scheduled Program

### ProgramSlot\_child