

DeviceModel
Attributes - devices: List<Device>
Methods + getDevices(): List<Device> + addDevice(Device): void + updateDevice(Device): void + deleteDevice(int): void + getDeviceById(int): Device

DeviceView
Attributes - devices: List<Device>
Methods + displayDevices(List<Device>): void + showDeviceDetails(Device): void + showAddDeviceForm(): void + showUpdateDeviceForm(Device): void + showDeleteConfirmation(int): void

DeviceController
Attributes - deviceModel: DeviceModel - deviceView: DeviceView
Methods + loadDevices(): void + addDevice(Device): void + updateDevice(Device): void + deleteDevice(int): void + showDeviceDetails(int): void

NotificationModel
Attributes - notifications: List<Notification>
Methods + getNotifications(): List<Notification> + addNotification(Notification): void + markAsRead(int): void + deleteNotification(int): void

NotificationView
Attributes
Methods + displayNotifications(List<Notification>): void + showNotificationDetails(Notification): void + showNewNotification(Notification): void

NotificationController
Attributes - notificationModel: NotificationModel - notificationView: NotificationView
Methods + loadNotifications(): void + markAsRead(int): void + deleteNotification(int): void + sendNotification(Notification): void

TutorialModel
Attributes - tutorials: List<Tutorial>
Methods + getTutorials(): List<Tutorial> + addTutorial(Tutorial): void + updateTutorial(Tutorial): void + deleteTutorial(int): void + getTutorialById(int): Tutorial

TutorialView
Attributes
Methods + displayTutorials(List<Tutorial>): void + showTutorialDetails(Tutorial): void + showTutorialVideo(String): void + showRatingForm(int): void

TutorialController
Attributes - tutorialModel: TutorialModel - tutorialView: TutorialView
Methods + loadTutorials(): void + viewTutorial(int): void + rateTutorial(int, int): void + playTutorialVideo(int): void

ServiceRecordModel
Attributes
- serviceRecords: List<ServiceRecord>
Methods
+ getServiceRecords(): List<ServiceRecord>
+ addServiceRecord(ServiceRecord): void
+ updateServiceRecord(ServiceRecord): void
+ deleteServiceRecord(int): void
+ getServiceRecordById(int): ServiceRecord

ServiceRecordView
Attributes
Methods
+ displayServiceRecords(List<ServiceRecord>): void
+ showServiceRecordDetails(ServiceRecord): void
+ showAddServiceRecordForm(): void
+ showUpdateServiceRecordForm(ServiceRecord): void

ServiceRecordController
Attributes
- serviceRecordModel: ServiceRecordModel
- serviceRecordView: ServiceRecordView
Methods
+ loadServiceRecords(): void
+ addServiceRecord(ServiceRecord): void
+ updateServiceRecord(ServiceRecord): void
+ deleteServiceRecord(int): void
+ viewServiceRecordDetails(int): void

MainController
Attributes <ul style="list-style-type: none">- deviceController: DeviceController- notificationController: NotificationController- tutorialController: TutorialController- serviceRecordController: ServiceRecordController
Methods <ul style="list-style-type: none">+ MainController()+ start(): void+ navigateToDevices(): void+ navigateToNotifications(): void+ navigateToTutorials(): void+ navigateToServiceRecords(): void+ handleUserLogin(User): void+ handleUserLogout(): void+ initializeApplication(): void+ updateApplicationState(): void

User 1---* Device

User 1---* Notification

Device 1---* ServiceRecord

IDeviceModel <--- DeviceModel  --- Device

IDeviceView <--- DeviceView

IDeviceController <--- DeviceController --- DeviceModel

DeviceController --- DeviceView

INotificationModel <--- NotificationModel  --- Notification

INotificationView <--- NotificationView

INotificationController <--- NotificationController --- NotificationModel


NotificationController --- NotificationView

ITutorialModel <--- TutorialModel  --- Tutorial

ITutorialView <--- TutorialView

ITutorialController <--- TutorialController --- TutorialModel

TutorialController --- TutorialView

IServiceRecordModel <--- ServiceRecordModel  --- ServiceRecord

IServiceRecordView <--- ServiceRecordView

IServiceRecordController <--- ServiceRecordController --- ServiceRecordModel

ServiceRecordController --- ServiceRecordView

MainController --- DeviceController

MainController --- NotificationController

MainController --- TutorialController

MainController --- ServiceRecordController

UML notation:

For implementation relationships:

Use a dashed arrow (- -->) with an open arrowhead pointing from the implementing class to the interface. Example: DeviceModel --> IDeviceModel

For associations:

Use a solid line (---) with an open arrowhead pointing to the associated class. Example: MainController --
- DeviceController

For composition:

Use a solid line with a filled diamond (◆---) on the containing class end. Example: DeviceModel ◆---
Device

For one-to-many relationships:

Use a solid line with an open arrowhead, adding "1" on one end and "*" on the many end. Example:
User 1---* Device