## UML for Schedule part

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#### <<abstract>> Schedule

- *iterator: int = 10000*
- # events HashMap<String, List<List<Date>>>
- # scheduleName: String
- # scheduleDate: Stirng
- # author: int
- status: String
- # scheduleID: int - type: String="Default"(final)
- + Schedule(scheduleName: String, scheduleDate: String, author: int, status: String)
- + setIterator(iterator: int): void
- + checkDateFormat(String startTimeString, String endTimeString): boolean
- + getEvents(): HashMap<String, List<List<Date>>> + setScheduleName(scheduleName: Sring): void
- + getScheduleDate(): String
- + setScheduleDate(scheduleDate: String): void
- + getAuthor(): int + getStatus(): String
- + getScheduleID(): int
- + setStatus(status: String): void
- + setEvents(events: HashMap<String, List<List<Date>>>): void
- + getType(): String
- + toString(): String

#### DailySchedule

- type: String = "Daily"(final)

- + DailySchedule(scheduleName: String, scheduleDate: String, author: int, status: String) + getType(): String
- + checkDateFormat(startTimeString: String, endTimeString: String): boolean + toString(): String

### MonthlySchedule

- type: String = "Monthly"(final)

- + MonthlySchedule(scheduleName: String, scheduleDate: String, author: int, status: String) + getType(): String
- + checkDateFormat(startTimeString: String, endTimeString: String): boolean
- + toString(): String

#### ScheduleSystem

- sm: ScheduleManager
- um: UserManager

- tm: TemplateManager

- + ScheduleSystem(sm: ScheduleManager, um: UserManager, tm: TemplateManager)
- + createSchedule(userID: int, status: String, scheduleName: String, scheduleDate: String, templateID: Integer): boolean
- + deleteSchedule(scheduleID: Integer, userId: Integer): boolean
- + addEvent(userID: int, scheduleID: int, eventName: String, startTimeString: String, endTimeString: String): boolean
- + displayPublicSchedule(): void
- + displayUserSchedule(userID: int): void
- + displayScheduleEvents(scheduleID: Integer, userID: Integer): void
- + deleteEvent(userID: int, scheduleID: int, eventName: String, startTimeString: String, endTimeString: String): boolean

# ScheduleManager

- schedulesList: HashMap<Integer, List<Schedule>> - scheduleTempMap: HashMap<Integer, Integer>

- + ScheduleManager(schedulesList: HashMap<Integer, List<Schedule>>, scheduleTempMap: HashMap<Integer, Integer> )
- setIterator(iterator: int) : void
- + getSchedulesList(): HashMap<Integer, List<Schedule>>
- + getScheduleTempMap(): HashMap<Integer, Integer>
- + deleteSchedule(scheduleID: Integer, userID: Integer): boolean
- + changeStatus(scheduleID: Integer, userID: Integer, status: String): void
- + addEvent(scheduleID: int, eventName: String, startTimeString: String, endTimeString: String, t: TemplateManager): boolean
- + validEvent(s: Schedule, t: TemplateManager, DateList: List<Date>): boolean
- + deleteEvent (int scheduleID, String EventName, String startTimeString, String endTimeString): boolean + createSchedule(String status, String scheduleName, String scheduleDate, int author, TemplateManager t, Integer templateId): void
- getAllUserSchedule(int userID): List<Schedule>
- + getScheduleEvents(Integer scheduleID, Integer userID): HashMap<String, List<List<Date>>>
- getAllPublicSchedule(): List<Schedule> + checkScheduleBelongs(int userID, int scheduleID): boolean
- + isPublic(int scheduleID): boolean
- getScheduleByID(int scheduleID): Schedule
- isDateValid(String date, String dateFormat): void

### ScheduleReadWriter

+ saveScheduleToFile(schedulesList: HashMap<Integer, List<Schedule>>, scheduleTempMap: HashMap<Integer, Integer>): void

- + readScheduleListFromFile(): HashMap<Integer, List<Schedule>>
- + readScheduleTempFromFile(): HashMap<Integer, Integer>