

Class Diagram

Interfaces

Notifiable

+ SendNotification(): void

implemented by → Notification
— ReminderService

Rewardable

+ calculateReward(): void

implemented by — Task
and
Study Task, Exam Task,
Personal Task

Scheduable

+ schedule(): void

implemented by:

— Task → and its subclasses

interfaces
then
classes +
methods +
attributes

S

Storable

+ save(): void
+ load(): void

implemented by
Task + its subclasses
Reward and its
subclasses

Trackable

+ trackProgress(): void

implemented by: Task and its
subclasses
Reward and
its subclasses

Class Diagram

User

- name: String
- preference: String

Student

- task: List<Task>
- preference: Map<String, String>
+ customizePreferences(): void

Task

- title: String
- description: String
- dueDate: Date
- completed: boolean
- category: String

+ editTask(): void
+ deleteTask(): void
+ markCompleted(): void
+ filterByCategory(): List<Task>
+ organizeByDate(): List<Task>

↑
implements Rewardable, Schedulable,
Storable, Trackable

StudyTask

- subject: String
- topic: String
- studyDuration: int

ExamTask

- course: String
- examDate: Date
- location: String
- format: String

PersonalTask

- location: String
- isRecurring: boolean
- isOptional: boolean

Task Manager

- allTasks: List<Task>
- reminders: ReminderService

+ addTask (Task): void
+ deleteTask (Task): void
+ editTask (Task): void
+ mark Task As Completed (Task): void
+ filter Task By Category (String): List<Task>
+ viewTaskBy (String): List<Task>
+ searchTask (String): Task
+ organiseTask By Date (): List<Task>
+ prioritizeTasks (String): void
+ loadTaskFromFile (String): boolean

ReminderService

- upcomingTask: List<Task>

+ check DueTasks (): List<Task>
+ send Notifications (): void

↑ implements Notifiable

Notification

- message: String
- notifyTime: Date

+ sendNotification(): void

↑ implements Notifiable

Schedule Manager

- tasks: List<Task>

+ exportSchedule (String):
Boolean

+ importSchedule (String):
boolean

+ viewCalendar (String):
void

Reward

- points: int
- earned: boolean

+ grantReward(): void
+ trackProgress(): void

implements
Storable
Trackable

Points

- requiredPoints: int
- currentPoints: int

Badges

- BadgeName: String
- description: String

Levels

- levelNumber: int

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