Program 1 Report

UML Diagram, Efficiency, References, and Assumptions

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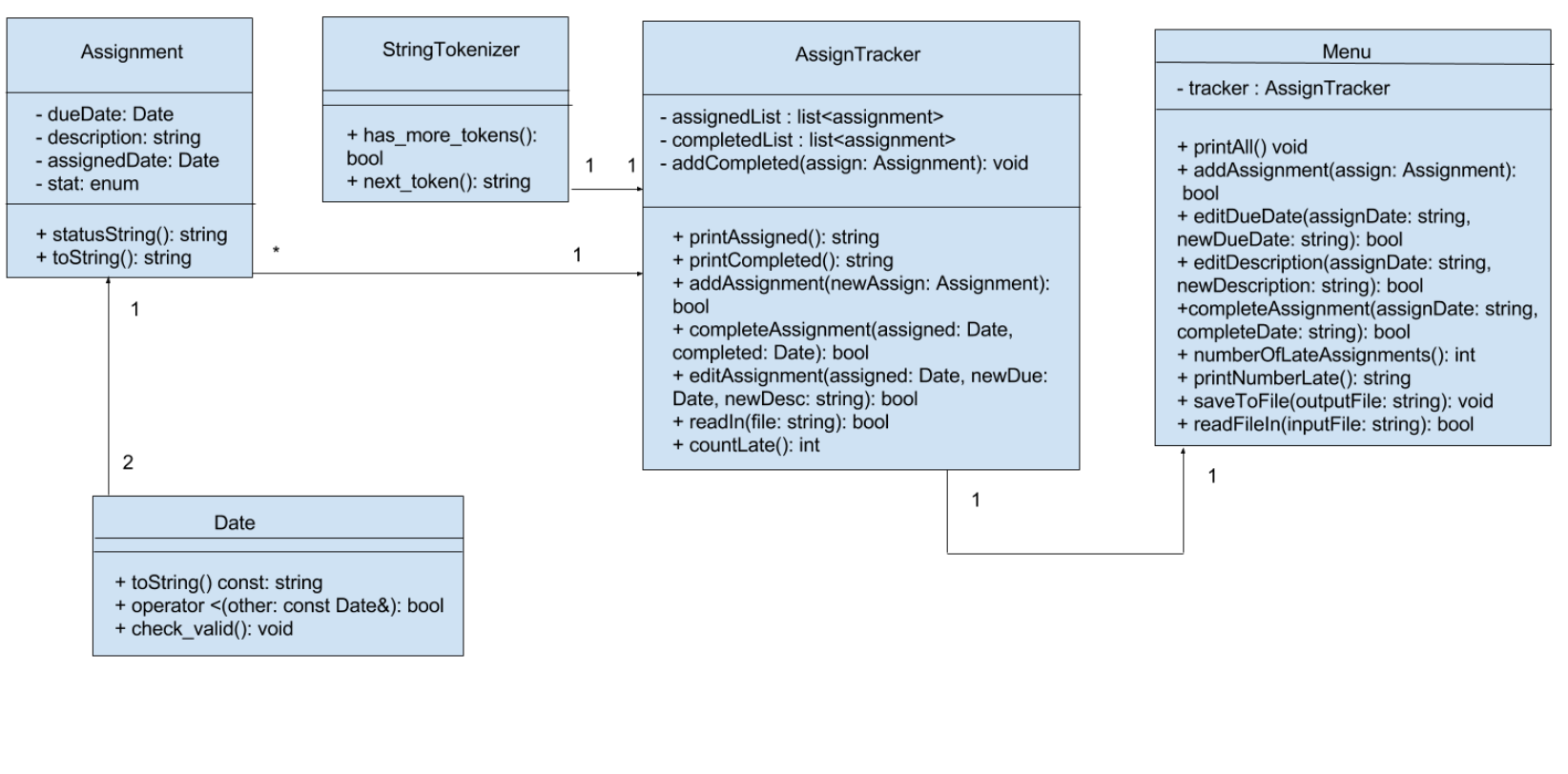
Assignment
- dueDate: Date
- description: string
- assignedDate: Date
- stat: enum
+ statusString(): string
+ toString(): string
StringTokenizer
+ has_more_tokens(): bool
+ next_token(): string
AssignTracker
- assignedList : list<assignment>
- completedList : list<assignment>
- addCompleted(assign: Assignment): void
+ printAssigned(): string
+ printCompleted(): string
+ addAssignment(newAssign: Assignment): bool
+ completeAssignment(assigned: Date, completed: Date): bool
+ editAssignment(assigned: Date, newDue: Date, newDesc: string): bool
+ readIn(file: string): bool
+ countLate(): int
Menu
- tracker : AssignTracker
+ printAll() void
+ addAssignment(assign: Assignment): bool
+ editDueDate(assignDate: string, newDueDate: string): bool
+ editDescription(assignDate: string, newDescription: string): bool
+completeAssignment(assignDate: string, completeDate: string): bool
+ numberOfLateAssignments(): int
+ printNumberLate(): string
+ saveToFile(outputFile: string): void
+ readFileIn(inputFile: string): bool
Date
+ toString() const: string
+ operator <(other: const Date&): bool
+ check_valid(): void
1
1
*
1
1
2
1
1

Efficiency of Algorithms

Assignment class:

statusString() – O(1)

toString() – O(1)

StringTokenizer class:

has_more_tokens() – O(1)

next_token() – O(1)

Date class:

toString() – O(1)

operator <() – O(1)

check_valid() – O(1)

AssignTracker class:

addCompleted() – O(n)

printAssigned() – O(n)

printCompleted() – O(n)

addAssignment() – O(n)

completeAssignment() – O(n)

editAssignment() – O(n)

readIn() – O(n)

countLate() – O(n)

These are O(n) because we had to iterate through the lists.

Menu class:

printAll() – O(n)

addAssignment() – O(n)

editDueDate() – O(n)

editDescription() – O(n)

completeAssignment() – O(n)

numberOfLateAssignments() – O(n)

printNumberLate() – O(n)

saveToFile() – O(n)

readFileIn() – O(n)

These are O(n) because we had to iterate through the lists.

References

- Used Professor Kuhail's Date class

- Used Professor Kuhail's StringTokenizer class

Assumptions

- Input would be in the exact format listed on the assignment pdf.

- When adding an assignment, description must be one word. When editing the description, it also must be one word.