CLAP PROCESSING SYSTEM

Phase 2 – Designing Behaviour

Software Engineering 2

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4. Use case 6: view patient's full previous treatments (done by: pane0023)
5. Use case7: View records of Details of patient's full treatment: (done by: grew0031)
6. Use Case 8. View Patients Full Prescriptions details (Done by grew0031)
7. Use case 11: View patient current and past conditions (done by: nguy1029)
8. Use case 12: Add a new prescription (done by: nguy1029)
9. Use case 13: Add new treatment (done by: vu0081)

Actors: Health provider, CLAP Processing System, MyHealthRecord System

Type: Primary, Essential

Description: This use case begins when the Health Provider wants to add a new treatment for a patient. The Health Provider chooses a treatment from the list of treatments and specifies treatment details, including treatment type, description and schedule. The Health Provider can choose to add one or more diagnostic tests and tests' descriptions if needed. The System askes for save confirmation before saving to database. On completion, the System generates the new treatment and saves it in MyHealthRecord database.

   a. **System Sequence Diagram**

Add New Treatment - System Sequence Diagram
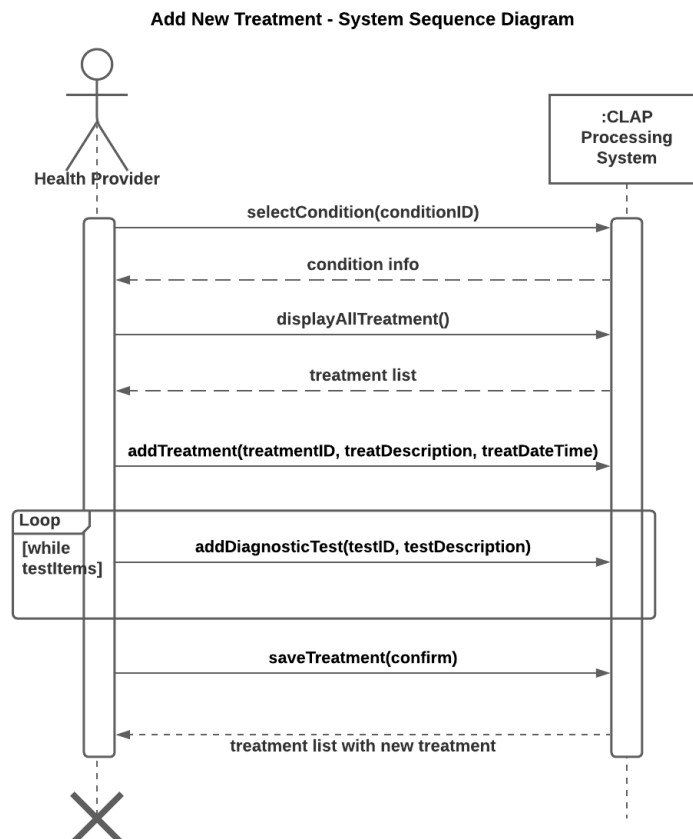
b. Sequence Diagram

Add New Treatment - Sequence Diagranm
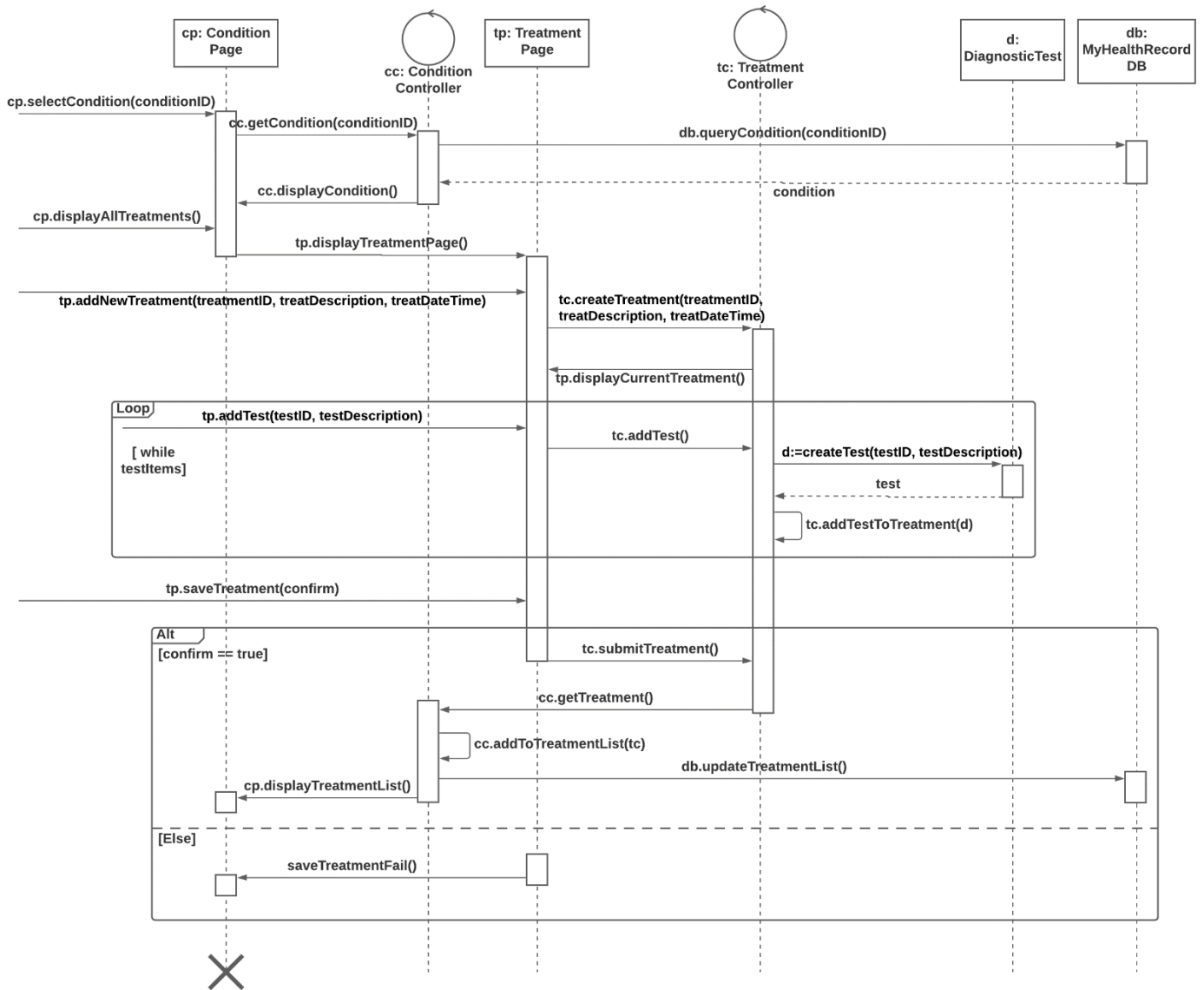
c. Partial Class Diagram

Add New Treatment - Partial Class Diagram

```
┌─────────────────────────────┐              1        links      0..1    ┌─────────────────────────────────────────┐
│         <<Boundary>>        │────────────────────────────────────────│            <<Boundary>>                 │
│        Condition Page       │                          ▶              │            Treatment Page               │
├─────────────────────────────┤                                         ├─────────────────────────────────────────┤
│ + condition: Label          │                                         │ + treatment: Textbox                    │
│ + conditionDescription: Label│                                        │ + treatmentDescription: Textbox         │
├─────────────────────────────┤                                         │ + treatmentDateTime: Textbox            │
│ + selectCondition(conditionID): void │                                │ + testType: Textbox                     │
│ + displayAllTreatment(): void│                                        │ + testDescription: Textbox              │
│ + displayCondition(): void   │                                        │ + confirm: boolean                      │
│ + displayTreatmentList(): void│                                       ├─────────────────────────────────────────┤
│ + saveTreatmentFail(): String│                                        │ + displayTreatmentPage(): void          │
└─────────────────────────────┘                                         │ + addNewTreatment(treatmentID, treatDescription, │
             1                                                          │ treatDateTime): void                    │
                                                                        │ + addTest(testID, testDescription): void │
           calls                                                        │ + saveTreatment(confirm): void          │
             ▼                                                          │ + displayNewTreatment(): void           │
             1                                                          └─────────────────────────────────────────┘
┌─────────────────────────────┐                                                          1
│         <<Control>>         │                                                        calls
│      ConditionController    │                                                          ▼
├─────────────────────────────┤                                                          1
│ + conditionID: String       │         1    interacts    0..1        ┌─────────────────────────────────────────┐
│ + conditionDescription: String│──────────────────────▶──────────────│            <<Control>>                  │
│ + conditionDate: String     │                                        │          TreatmentController            │
│ + treatmentList: Collection <Treatment>│                             ├─────────────────────────────────────────┤
├─────────────────────────────┤                                        │ + treatmentID: int                      │
│ + getCondition(conditionID): void│                                   │ + treatDesscription: String             │
│ + getTreatment(): Treatment │                                        │ + treatDateTime: String                 │
│ + addToTreatmentList(DiagnosticTest): void│                          │ + testList: Collection <DiagnosticTest> │
└─────────────────────────────┘                                        ├─────────────────────────────────────────┤
             1                                                          │ + createTreatment(treatmentID, treatDescription, │
                                                                        │ treatDateTime): void                    │
            has                                                         │ + addTest(): void                       │
             ▼                                                          │ + addTestToTreatment(DiagnosticTest): void │
             1                                                          │ + submitTreatment(): void               │
┌─────────────────────────────┐                                        └─────────────────────────────────────────┘
│       <<Information>>       │                                                          1
│          Condition          │
├─────────────────────────────┤                                                        has
│ + conditionID: Int          │                                                         ▼
│ + patientID: Int            │                                                          1
│ + conditionDescription: String│                                     ┌─────────────────────────────────────────┐
│ + conditionDate: Date       │                                       │           <<Information>>               │
├─────────────────────────────┤                                       │             Treatment                   │
│                             │                                        ├─────────────────────────────────────────┤
└─────────────────────────────┘              0..*   involves   1       │ + treatmentID: int                      │
┌─────────────────────────────┐             ┌──────────────────────────│ + treatDesscription: String             │
│       <<Information>>       │             ◀                          │ + treatDateTime: String                 │
│        DiagnosticTest       │                                        ├─────────────────────────────────────────┤
├─────────────────────────────┤                                        │                                         │
│ + testID: String            │                                        └─────────────────────────────────────────┘
│ + testDescription: String   │
│ + testDate: String          │
│ + testResult: String        │
├─────────────────────────────┤
│ + createTest(testID, testDescription): void │
└─────────────────────────────┘
```

d. Communication Diagram

Add New Treatment - Communication Diagram

10. Use case 15: Add new condition (done by: vu0081)

Actors: Health provider

Type: Primary, essential
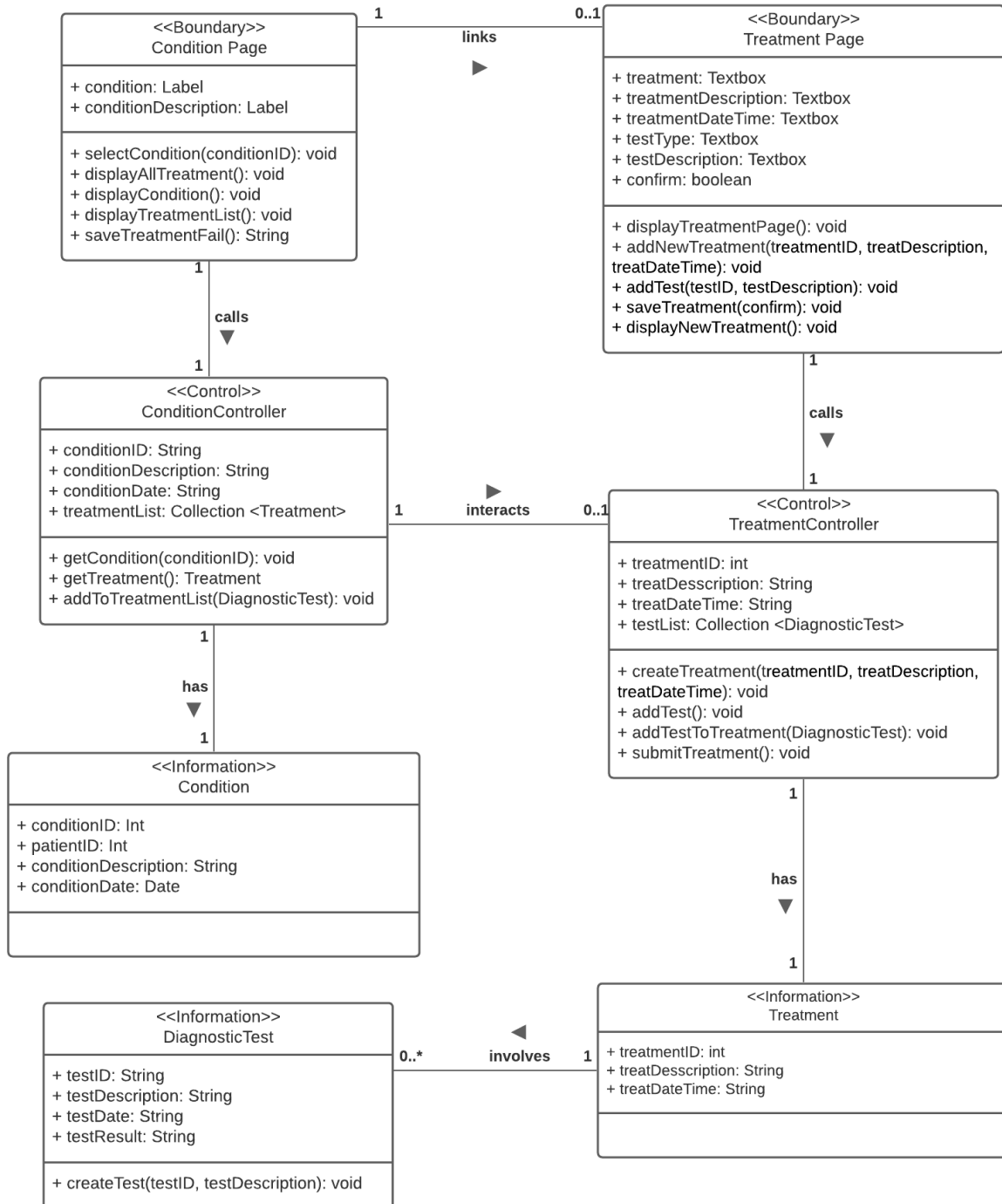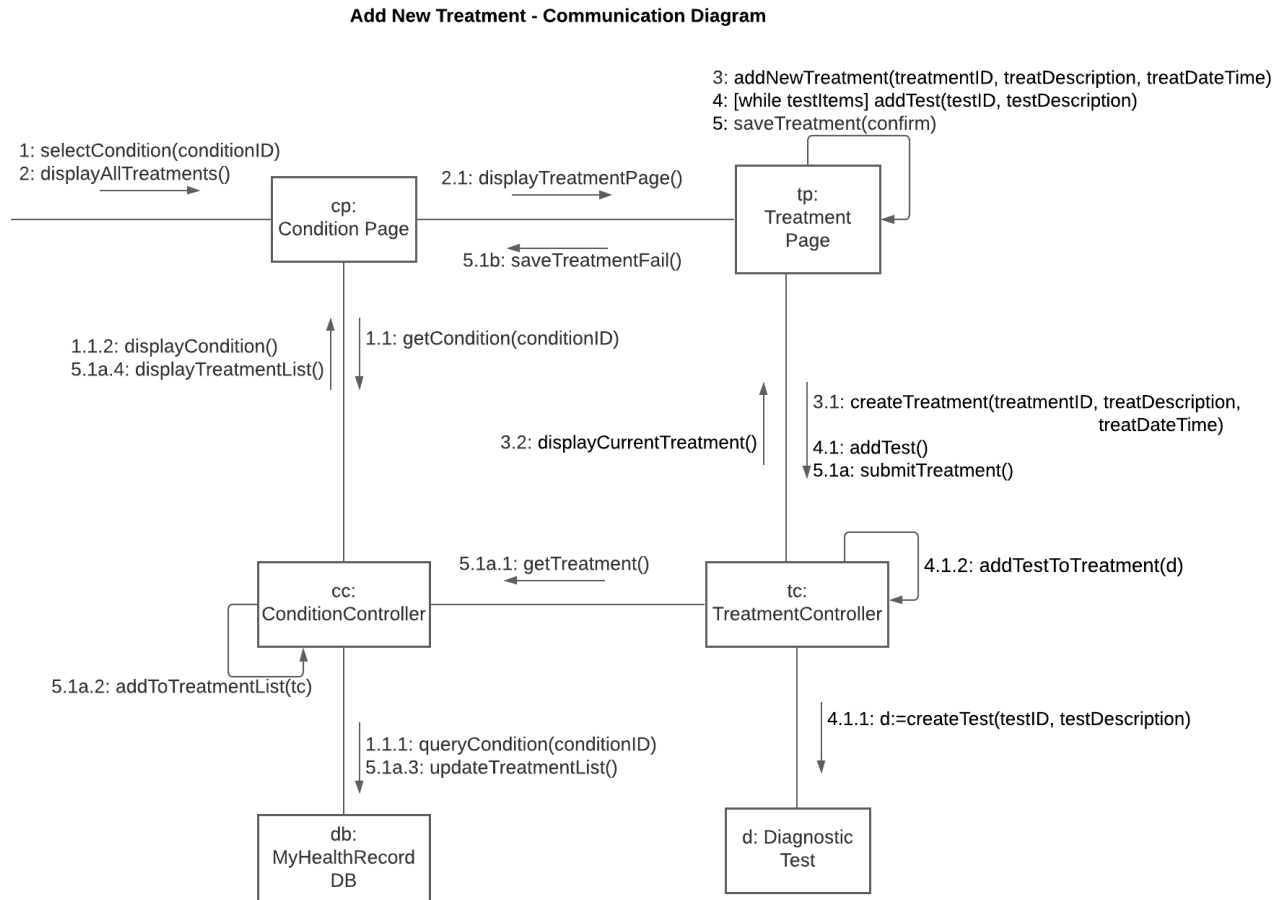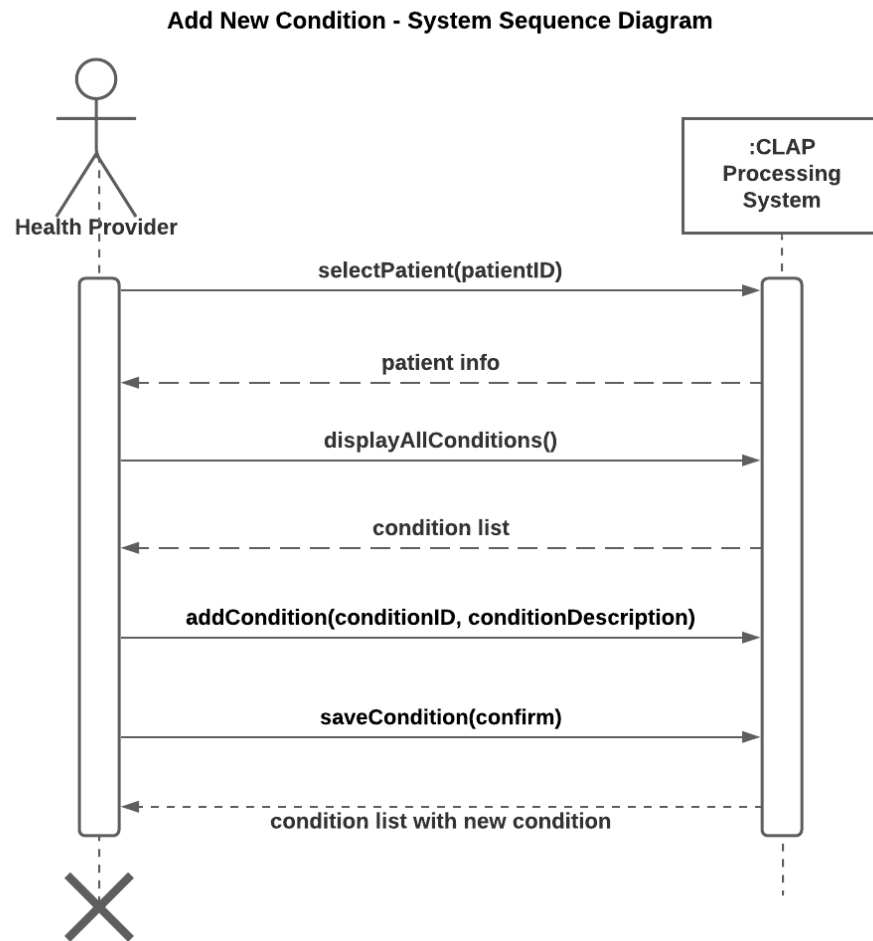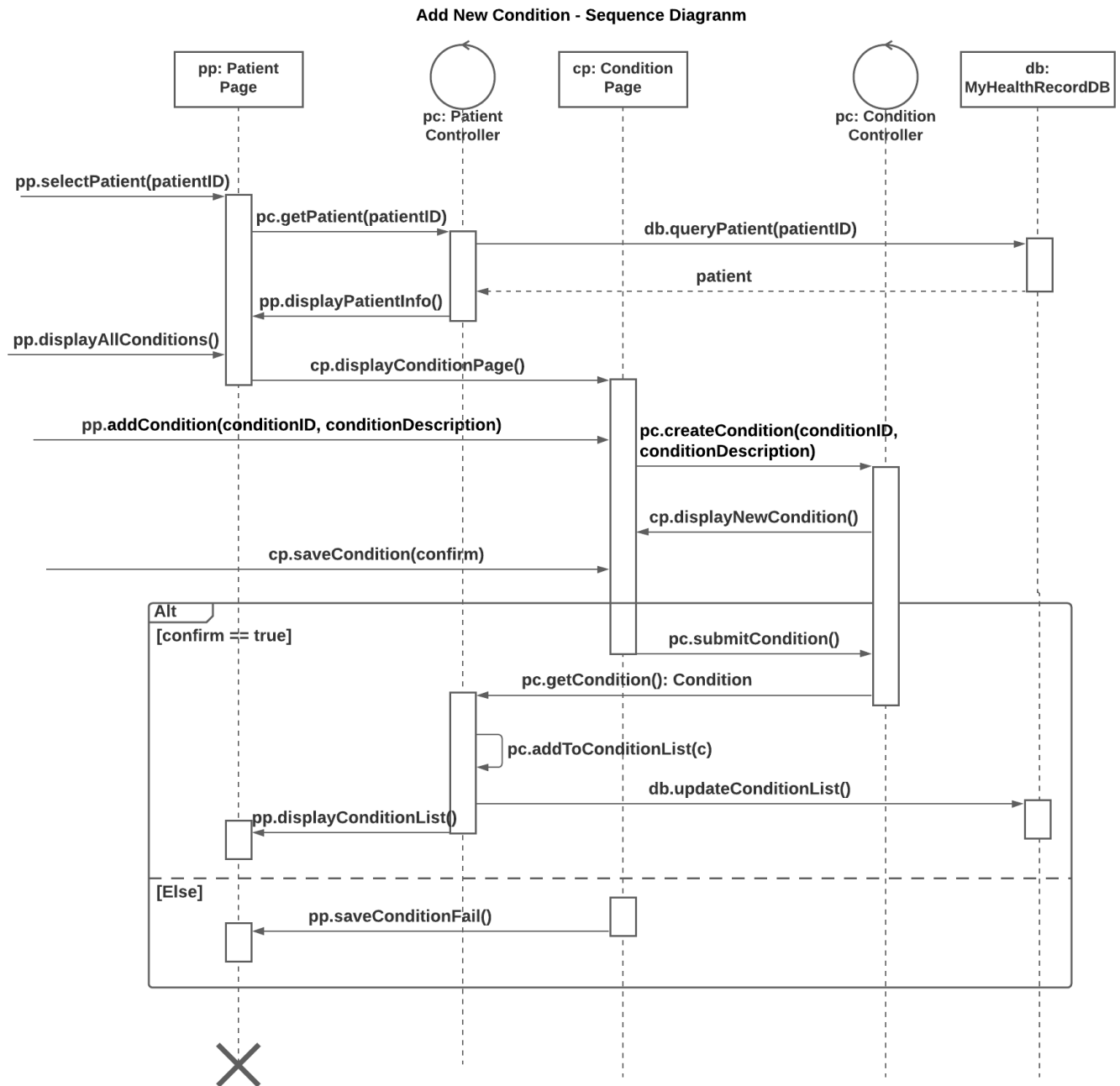
Description: This use case begins when the health provider wants to update patient's current condition. The Health Provider chooses a condition from the list of condition options and specifies condition description. On completion, the new patient condition is generated and saved in MyHealthRecord database.
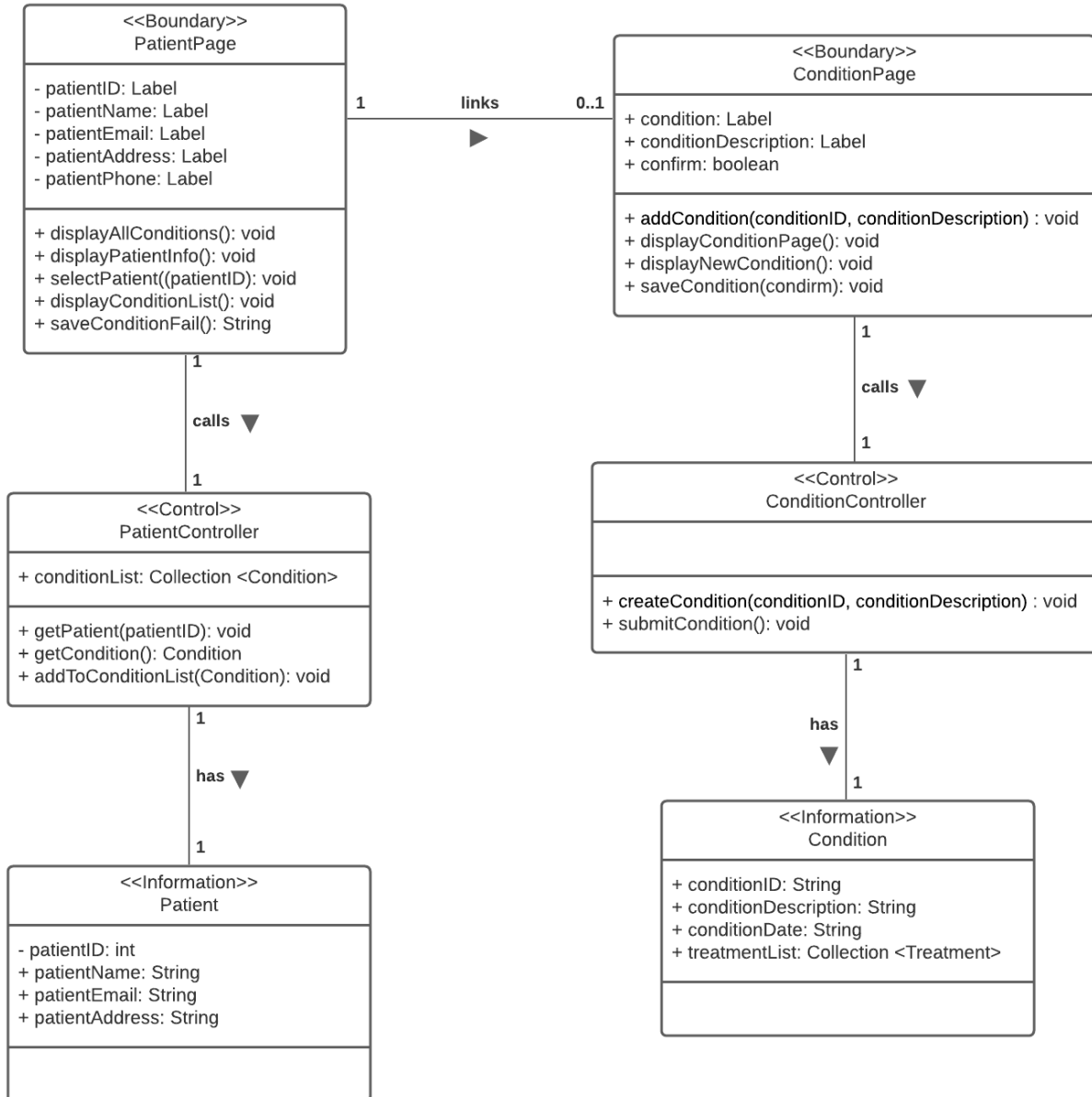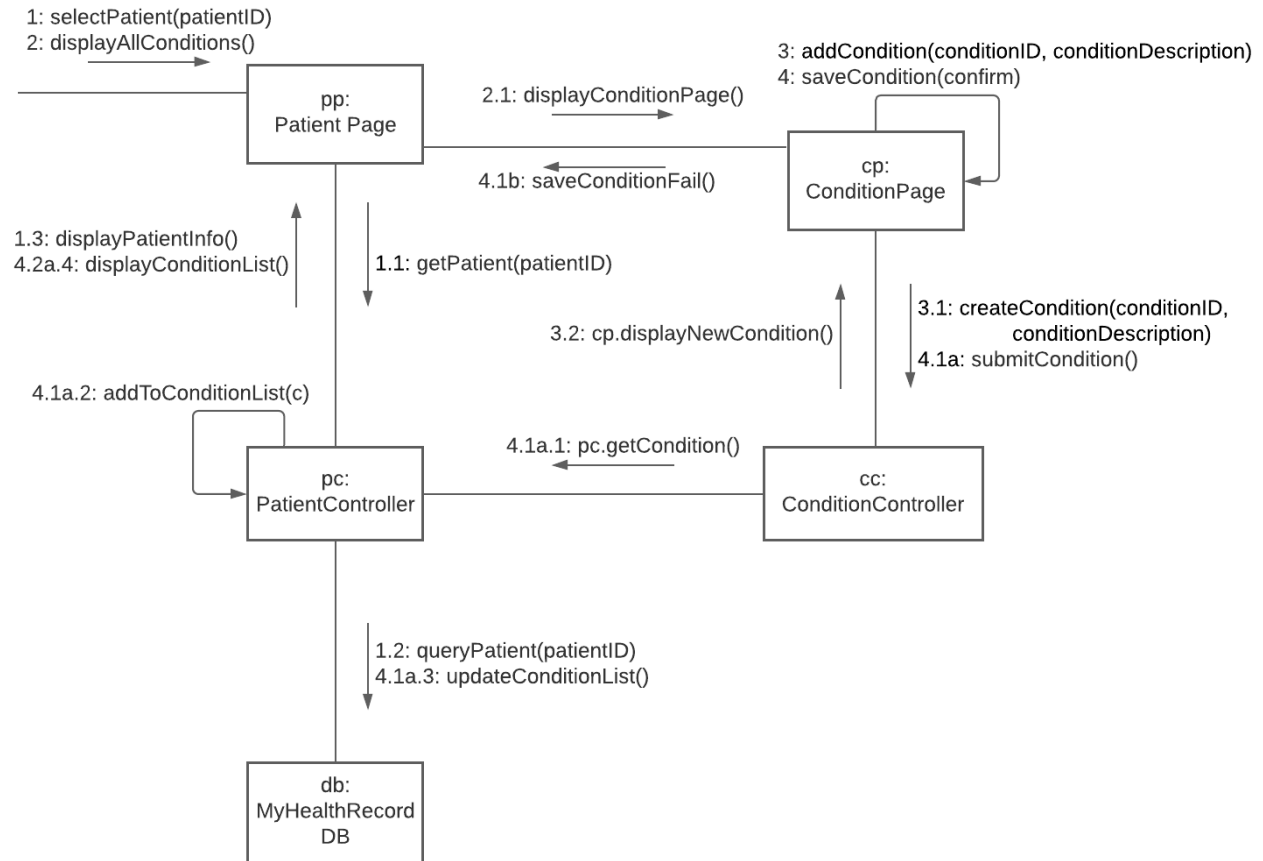
Add New Condition - System Sequence Diagram

b. Sequence Diagram

Add New Condition - Sequence Diagranm

Add New Condition - Partial Class Diagram

<<Boundary>>
PatientPage

- patientID: Label
- patientName: Label
- patientEmail: Label
- patientAddress: Label
- patientPhone: Label

+ displayAllConditions(): void
+ displayPatientInfo(): void
+ selectPatient((patientID): void
+ displayConditionList(): void
+ saveConditionFail(): String

<<Boundary>>
ConditionPage

+ condition: Label
+ conditionDescription: Label
+ confirm: boolean

+ addCondition(conditionID, conditionDescription) : void
+ displayConditionPage(): void
+ displayNewCondition(): void
+ saveCondition(condirm): void

---

1   links   0..1

<<Control>>
PatientController

+ conditionList: Collection <Condition>

+ getPatient(patientID): void
+ getCondition(): Condition
+ addToConditionList(Condition): void

<<Control>>
ConditionController

+ createCondition(conditionID, conditionDescription) : void
+ submitCondition(): void

---

calls ▼   has ▼

<<Information>>
Patient

- patientID: int
+ patientName: String
+ patientEmail: String
+ patientAddress: String

<<Information>>
Condition

+ conditionID: String
+ conditionDescription: String
+ conditionDate: String
+ treatmentList: Collection <Treatment>

---

d. Communication Diagram

Add New Condition - Communication Diagram

1: selectPatient(patientID)
2: displayAllConditions()

3: addCondition(conditionID, conditionDescription)
4: saveCondition(confirm)

2.1: displayConditionPage()

pp:
Patient Page

4.1b: saveConditionFail()

cp:
ConditionPage

1.3: displayPatientInfo()
4.2a.4: displayConditionList()

1.1: getPatient(patientID)

3.2: cp.displayNewCondition()

3.1: createCondition(conditionID,
            conditionDescription)
4.1a: submitCondition()

4.1a.2: addToConditionList(c)

4.1a.1: pc.getCondition()

pc:
PatientController

cc:
ConditionController

1.2: queryPatient(patientID)
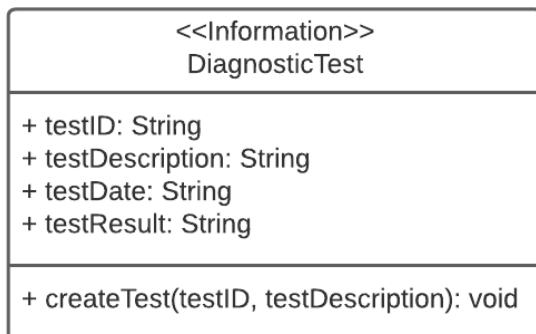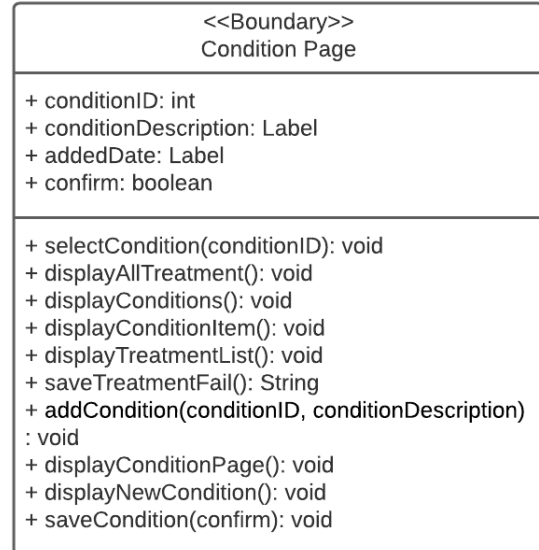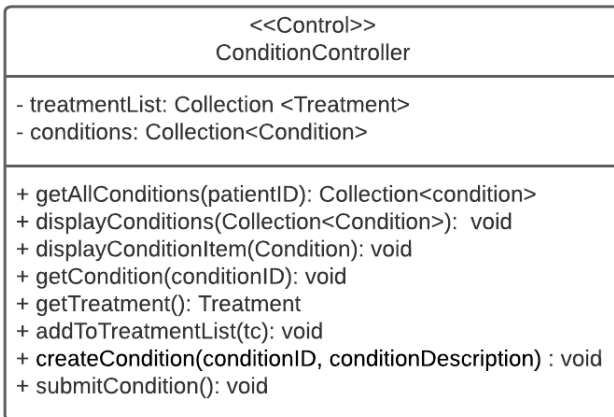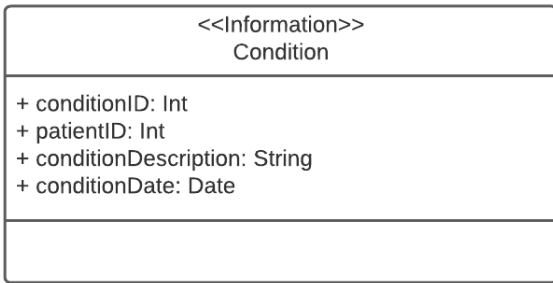4.1a.3: updateConditionList()

db:
MyHealthRecord
DB

11. Use case 16: Create update to patient's condition (done by: chan1065)
12. Use case17: Add prescription by editing a previous prescription (done by: chan1065)

Section B: Class Dictionary

| <<Information>> |
Authentication
- patientID: int - oldProvID: int - newProvID: int - IsAuth: bool
+ getAllAuthReq(newProvID): ArrayList<Authentication> + setIsAuth(patientID, oldProvID, newProvID, string): void

| <<Control>> |
AuthenticationController
- status: string
- setStatus(string): void + confirmAuthReq(patientID, oldProvID, newProvID): void + rejectAuthReq(patientID, oldProvID, newProvID): void + getAllAuthReq(newProvID): ArrayList<Authentication>

| <<Boundary>> |
Authentication Page
- Auth: ArrayList<Authentication>
+ UpdateDisplay(): void

```
               <<Information>>
                  Condition
─────────────────────────────────────
 + conditionID: Int
 + patientID: Int
 + conditionDescription: String
 + conditionDate: Date
─────────────────────────────────────



               <<Control>>
             ConditionController
─────────────────────────────────────
 - treatmentList: Collection <Treatment>
 - conditions: Collection<Condition>
─────────────────────────────────────
 + getAllConditions(patientID): Collection<condition>
 + displayConditions(Collection<Condition>):  void
 + displayConditionItem(Condition): void
 + getCondition(conditionID): void
 + getTreatment(): Treatment
 + addToTreatmentList(tc): void
 + createCondition(conditionID, conditionDescription) : void
 + submitCondition(): void
```

```
               <<Boundary>>
               Condition Page
─────────────────────────────────────
 + conditionID: int
 + conditionDescription: Label
 + addedDate: Label
 + confirm: boolean
─────────────────────────────────────
 + selectCondition(conditionID): void
 + displayAllTreatment(): void
 + displayConditions(): void
 + displayConditionItem(): void
 + displayTreatmentList(): void
 + saveTreatmentFail(): String
 + addCondition(conditionID, conditionDescription)
 : void
 + displayConditionPage(): void
 + displayNewCondition(): void
 + saveCondition(confirm): void
```

```
               <<Information>>
                DiagnosticTest
─────────────────────────────────────
 + testID: String
 + testDescription: String
 + testDate: String
 + testResult: String
─────────────────────────────────────
 + createTest(testID, testDescription): void
```

```
               <<Information>>
                    Drug
─────────────────────────────────────
 + drugName: String
 + drugDescription: String
 + dose: String
 + instruction: String
 + frequency: String
─────────────────────────────────────
```

<<Information>>
Patient

- patientID: int
+ lastVisit: date
+ previousCondition: string
+ patientName: String
+ patientEmail: String
+ patientAddress: String

+ getPatient(patientID): Patient
+ getPatientInfo(patientID): PatientInfo

<<Control>>
PatientController

- patientID: int
+ conditionList: Collection <Condition>
+ patients: Collection<Patient>

+ searchPatient(patientID): Patient
+ searchPatientInfo(patientID): PatientInfo
+ getCondition(): Condition
+ addToConditionList(Condition): void
+ getPatient(int): Patient
+ viewAllConditions(): void
+ displayPatientInfo(): void
+ searchAllTreatments(patientID): List<Treatment>

<<Boundary>>
PatientPage

- patientID: Label
- patientName: Label
- patientEmail: Label
- patientAddress: Label
- patientPhone: Label

+ UpdateDisplay(): void
+ displayAllConditions(): void
+ displayPatientInfo(): void
+ selectPatient(patientID): void
+ displayConditionList(): void
+ saveConditionFail(): String
+ viewPatientList(): void
+ viewAllConditions(): void

```
┌─────────────────────────────────────┐
│          <<Information>>            │
│            Prescription             │
├─────────────────────────────────────┤
│ + prescriptionID: int               │
│ + treatmentID: int                  │
│ + drugs: Collection<Drug>           │
│ + addedDate: Date                   │
├─────────────────────────────────────┤
│                                     │
└─────────────────────────────────────┘
```

```
┌──────────────────────────────────────────────────┐
│                  <<Boundary>>                      │
│                PrescriptionPage                    │
├──────────────────────────────────────────────────┤
│ + drugName: TextBox                                │
│ + instruction: TextBox                             │
│ + dose: TextBox                                    │
│ + frequency: TextBox                               │
│ + drugs: List                                      │
├──────────────────────────────────────────────────┤
│ + displayAddPrescriptionPage(patientID): void      │
│ + addDrugItemTextBoxes(): void                     │
│ + submit(treatmentID, drugItems): void             │
│ + confirmSave(): void                              │
│ + closeAddPresriptionPage(): void                  │
│ + displayPatientPage(): String                     │
└──────────────────────────────────────────────────┘
```

```
┌───────────────────────────────────────────────────┐
│                   <<Control>>                       │
│                PrescrptionController                │
├───────────────────────────────────────────────────┤
│ + prescription: Prescription                        │
├───────────────────────────────────────────────────┤
│ + savePrescription(treatmentID, drugItems): void    │
└───────────────────────────────────────────────────┘
```

```
┌─────────────────────────────────────┐
│          <<Information>>            │
│             Treatment               │
├─────────────────────────────────────┤
│ + treatmentID: int                  │
│ + treatDesscription: String         │
│ + treatDateTime: String             │
├─────────────────────────────────────┤
│                                     │
└─────────────────────────────────────┘
```

```
┌──────────────────────────────────────────────────────────────────┐
│                          <<Control>>                               │
│                       TreatmentController                          │
├──────────────────────────────────────────────────────────────────┤
│ + testList: Collection <DiagnosticTest>                            │
├──────────────────────────────────────────────────────────────────┤
│ + createTreatment(treatmentID, treatDescription, treatDateTime): void │
│ + addTest(): void                                                  │
│ + addTestToTreatment(DiagnosticTest): void                         │
│ + submitTreatment(): void                                          │
└──────────────────────────────────────────────────────────────────┘
```

```
┌──────────────────────────────────────────────────────────────────┐
│                          <<Boundary>>                              │
│                         Treatment Page                             │
├──────────────────────────────────────────────────────────────────┤
│ + treatment: Textbox                                               │
│ + treatmentDescription: Textbox                                    │
│ + treatmentDateTime: Textbox                                       │
│ + tests: List                                                      │
│ + testDescription: Textbox                                         │
│ + confirm: boolean                                                 │
├──────────────────────────────────────────────────────────────────┤
│ + displayTreatmentPage(): void                                     │
│ + addNewTreatment(treatmentID, treatDescription, treatDateTime): void │
│ + addTest(testID, testDescription): void                           │
│ + saveTreatment(confirm): void                                     │
│ + displayNewTreatment(): void                                      │
└──────────────────────────────────────────────────────────────────┘
```