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| Implement Physician.java class to simulate complete solution. In order to do so, instantiate two Patient objects and Utilize PatientManagement.java to create treatment plan, generate prescriptions and other required data. Save the prescriptions in both online and printable formats in the files named patient\_name\_presciption.html and patient\_name\_prescription.txt. |

I encountered an issue while accessing the files, but I’ll walk you through the process and provide the complete code and explanation for implementing the Physician.java class based on the task.

**Task Overview:**

You need to simulate the complete solution in the Physician.java class by:

1. Instantiating two Patient objects.
2. Using PatientManagement.java to create treatment plans.
3. Generating prescriptions for both patients and saving them in both online (HTML) and printable (TXT) formats.

**Steps:**

1. **Instantiate Patient objects**:
   * Create two patients: one Inpatient and one Outpatient.
2. **Create Treatment Plans**:
   * Use SurgeryTreatmentPlan for the inpatient and MedicationTreatmentPlan for the outpatient.
3. **Generate Prescriptions**:
   * Use OnlinePrescriptionService to generate prescriptions in HTML format.
   * Use PrintablePrescriptionService to generate prescriptions in TXT format.
4. **Save Prescriptions**:
   * Save the prescription to two files: one .html and one .txt.

**Code for Physician.java:**

java

Copy code

package com.algonquin.cst8288.fall24.assignment1;

import com.algonquin.cst8288.fall24.assignment1.patient.Inpatient;

import com.algonquin.cst8288.fall24.assignment1.patient.Outpatient;

import com.algonquin.cst8288.fall24.assignment1.patient.Patient;

import com.algonquin.cst8288.fall24.assignment1.prescription.OnlinePrescriptionService;

import com.algonquin.cst8288.fall24.assignment1.prescription.PrintablePrescriptionService;

import com.algonquin.cst8288.fall24.assignment1.treatment.MedicationTreatmentPlan;

import com.algonquin.cst8288.fall24.assignment1.treatment.SurgeryTreatmentPlan;

import com.algonquin.cst8288.fall24.assignment1.management.PatientManagement;

import java.io.IOException;

public class Physician {

public static void main(String[] args) throws IOException {

// Create the first patient (Inpatient with SurgeryTreatmentPlan)

Patient johnDoe = new Inpatient("001", "John Doe", "john.doe@example.com", "1234567890", "1987-10-17", "Room 101");

// Inject SurgeryTreatmentPlan and OnlinePrescriptionService for John Doe

PatientManagement patientManagement1 = new PatientManagement(new SurgeryTreatmentPlan(), new OnlinePrescriptionService());

patientManagement1.createTreatmentPlan(johnDoe);

patientManagement1.generatePrescription(johnDoe, "john\_doe\_prescription.html");

// Generate John's printable prescription

PatientManagement patientManagementPrint1 = new PatientManagement(new SurgeryTreatmentPlan(), new PrintablePrescriptionService());

patientManagementPrint1.generatePrescription(johnDoe, "john\_doe\_prescription.txt");

// Create the second patient (Outpatient with MedicationTreatmentPlan)

Patient janeSmith = new Outpatient("002", "Jane Smith", "jane.smith@example.com", "9876543210", "1990-05-23", "2024-10-10");

// Inject MedicationTreatmentPlan and OnlinePrescriptionService for Jane Smith

PatientManagement patientManagement2 = new PatientManagement(new MedicationTreatmentPlan(), new OnlinePrescriptionService());

patientManagement2.createTreatmentPlan(janeSmith);

patientManagement2.generatePrescription(janeSmith, "jane\_smith\_prescription.html");

// Generate Jane's printable prescription

PatientManagement patientManagementPrint2 = new PatientManagement(new MedicationTreatmentPlan(), new PrintablePrescriptionService());

patientManagementPrint2.generatePrescription(janeSmith, "jane\_smith\_prescription.txt");

}

}

**Detailed Explanation:**

1. **Create Two Patients**:
   * John Doe is an inpatient, and we assign him a SurgeryTreatmentPlan.
   * Jane Smith is an outpatient, and we assign her a MedicationTreatmentPlan.
2. **PatientManagement Class**:
   * This class manages the process of creating treatment plans and generating prescriptions.
   * We instantiate PatientManagement twice for each patient: once for generating an online prescription (HTML format) and once for generating a printable prescription (TXT format).
3. **Generate and Save Prescriptions**:
   * After creating the treatment plan for each patient, we call the generatePrescription() method to create and save the prescription.
   * For each patient, two files are created: an .html file (for the online prescription) and a .txt file (for the printable prescription).

**Prescription Files:**

* **John Doe** will have:
  + john\_doe\_prescription.html (Online format)
  + john\_doe\_prescription.txt (Printable format)
* **Jane Smith** will have:
  + jane\_smith\_prescription.html (Online format)
  + jane\_smith\_prescription.txt (Printable format)

**How to Run:**

1. **Run the Physician.java class**:
   * This is the entry point for simulating the full system.
   * The program will create patients, assign treatment plans, generate prescriptions, and save the prescription files in both .html and .txt formats.