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class DentalCompany:
    def __init__(self):
        self.branches = []

    def add_branch(self, branch):
        self.branches.append(branch)

    def get_branches(self):
        return self.branches

class Branch:
    def __init__(self, name, address, phoneNumber, manager):
        self.__name = name
        self.__address = address
        self.__phoneNumber = phoneNumber
        self.__manager = manager
        self.__services = []
        self.__patients = []
        self.__staff = []

    def setName(self, name):
        self.__name = name
    def getName(self):
        return self.__name
    # Address
    def setAddress(self, address):
        self.__address = address
    def getAddress(self):
        return self.__address
    # Phone number
    def setPhoneNumber(self, phoneNumber):
        self.__phoneNumber = phoneNumber
    def getPhoneNumber(self):
        return self.__phoneNumber
    # Manager
    def setManager(self, manager):
        self.__manager = manager
    def getManager(self):
        return self.__manager
    # Dental services
    def addService(self, Service):
        self.__services.append(Service)
    def getServices(self):
        return self.__services
    # Staff member
    def addStaff(self, staff_member):
        self.__staff.append(staff_member)
    def getStaff(self):
        return self.__staff
    # Patients
    def addPatient(self, patient):
        self.__patients.append(patient)
    def getPatients(self):
        return self.__patients

class Service:
    def __init__(self, serviceName, cost):
        self.__serviceName = serviceName
        self.__cost = cost
    # Name
    def setServiceName(self, serviceName):
        self.__serviceName = serviceName
    def getServiceName(self):
        return self.__serviceName
    # Cost
    def setCost(self, cost):
        self.__cost = cost
    def getCost(self):
        return self.__cost

class Person:
    def __init__(self, firstName, lastName, phoneNumber):
        self.__firstName = firstName
        self.__lastName = lastName
        self.__phoneNumber = phoneNumber
    # First name
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        def setFirstName(self, firstName):
            self.__firstName = firstName
        def getFirstName(self):
            return self.__firstName
        # Last name
        def setLastName(self, lastName):
            self.__lastName = lastName
        def getLastName(self):
            return self.__lastName
        # Phone number
        def setPhoneNumber(self, phoneNumber):
            self.__phoneNumber = phoneNumber
        def getPhoneNumber(self):
            return self.__phoneNumber

    class Staff(Person):
        def __init__(self, firstName, lastName, phoneNumber, employeeID):
            super().__init__(firstName, lastName, phoneNumber)
            self.__employeeID = employeeID
        # Employee ID
        def setEmployeeID(self, employee_id: str):
            self.__employeeID = employee_id
        def getEmployeeID(self):
            return self.__employeeID

    class Manager(Staff):
        pass

    class Receptionist(Staff):
        pass

    class Hygienist(Staff):
        pass

    class Dentist(Staff):
        pass

    class Patient(Person):
        def __init__(self, firstName, lastName, phoneNumber, ID):
            super().__init__(firstName, lastName, phoneNumber)
            self.__ID = ID
            self.__appointments = []

        def getID(self):
            return self.__ID

        def setID(self, ID):
            self.__ID = ID

        def getAppointments(self):
            return self.__appointments

        def bookAppointment(self, appointment):
            self.__appointments.append(appointment)
```