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import 'dart:io';

class Customer {
  int customerId;
  String name;
  int previousConsumption;
  int currentConsumption;

  Customer(this.customerId, this.name, this.previousConsumption,
    this.currentConsumption);

  int get totalConsumption => currentConsumption - previousConsumption;

  double get totalDue {
    if (totalConsumption <= 10) {
      return 100;
    } else {
      return 100 + (totalConsumption - 10) * 20;
    }
  }
}

class WaterBillingSystem {
  List<Customer> customers = [];

  void addCustomer(Customer customer) {
    customers.add(customer);
  }

  void updateCustomer(int id, Customer updatedCustomer) {
    for (var customer in customers) {
      if (customer.customerId == id) {
        customer.name = updatedCustomer.name;
        customer.previousConsumption = updatedCustomer.previousConsumption;
        customer.currentConsumption = updatedCustomer.currentConsumption;
        break;
      }
    }
  }

  void deleteCustomer(int id) {
    customers.removeWhere((customer) => customer.customerId == id);
  }

  void displayCustomers() {
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        print('customer ID\tname\tPrevious\tCurrent\tTotal Consumption\tTotal Due');
        for (var customer in customers) {
            print(
                '${customer.customerId}\t${customer.name}\t${customer.previousConsumpti
on}\t${customer.currentConsumption}\t${customer.totalConsumption}\t${customer.tot
alDue}');
        }
    }

void handlePayment(int id) {
    for (var customer in customers) {
        if (customer.customerId == id) {
            print('Total due: ${customer.totalDue}');
            stdout.write('Enter payment amount: ');
            var payment = double.parse(stdin.readLineSync(!));
            if (payment < customer.totalDue) {
                print('Insufficient payment');
            } else {
                print('Change: ${payment - customer.totalDue}');
            }

            break;
        }
    }
}

void main() {
    var system = WaterBillingSystem();
    while (true) {
        print('[a] Add customers');
        print('[u] update customer info');
        print('[d] delete customer info');
        print('[v] display customer info');
        print('[p] payment');
        print('[x] exit');
        stdout.write('Enter choice: ');
        var choice = stdin.readLineSync();

        if (choice == 'x') break;
        choice = choice?.toLowerCase();
        switch (choice) {
            case 'a':
                stdout.write('Enter customer ID: ');
                var id = int.parse(stdin.readLineSync(!));

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        stdout.write('Enter Customer name: ');
        var name = stdin.readLineSync()!;
        stdout.write('Enter previous consumption: ');
        var previous = int.parse(stdin.readLineSync()!);
        stdout.write('Enter current consumption: ');
        var current = int.parse(stdin.readLineSync()!);
        system.addCustomer(Customer(id, name, previous, current));
        print('Customer added');
        break;
    case 'u':
        stdout.write('Enter customer ID to update: ');
        var id = int.parse(stdin.readLineSync()!);
        stdout.write('Enter new Customer name: ');
        var name = stdin.readLineSync()!;
        stdout.write('Enter new previous consumption: ');
        var previous = int.parse(stdin.readLineSync()!);
        stdout.write('Enter new current consumption: ');
        var current = int.parse(stdin.readLineSync()!);
        system.updateCustomer(id, Customer(id, name, previous, current));
        print('Customer info updated');
        break;
    case 'd':
        stdout.write('Enter customer ID to delete: ');
        var id = int.parse(stdin.readLineSync()!);
        system.deleteCustomer(id);
        print('Customer info deleted');
        break;
    case 'v':
        system.displayCustomers();
        break;
    case 'p':
        stdout.write('Enter customer ID for payment: ');
        var id = int.parse(stdin.readLineSync()!);
        system.handlePayment(id);
        print('Thank you please come again!');
        break;
    default:
        print('Invalid choice');
    }
}
}
}

```