EXERCISE-5

Sequence Diagram

User	ExpenseTrackerSystem	AuthService	ExpenseService	BudgetService	SummaryService	AlertService

User → ExpenseTrackerSystem: Enter email & password

ExpenseTrackerSystem → AuthService: validateLogin(email, password)

AuthService ⇠ ExpenseTrackerSystem: success/failure

ExpenseTrackerSystem ⇠ User: Redirect to dashboard

User → ExpenseTrackerSystem: Add expense (amount, category, date)

ExpenseTrackerSystem → ExpenseService: createExpense(data)

ExpenseService ⇠ ExpenseTrackerSystem: expenseSaved

ExpenseTrackerSystem → BudgetService: updateSpentAmount(expense)

BudgetService → AlertService: checkIfOverBudget()

⇠ ExpenseTrackerSystem: showAlert (if exceeded)

ExpenseTrackerSystem → SummaryService: refreshSummaryAndChart()

SummaryService ⇠ ExpenseTrackerSystem: updatedData

ExpenseTrackerSystem ⇠ User: Show updated list, chart, budget status