Model::Main

AlertGenerator
-alertStates: boolean
+AlertGenerator(patientCount: int)
+generate(patientId: int, outputStrategy: OutputStrategy)

ConsoleOutputStrategy
+output(patientId: int, timestamp: long, label: String, data: String): void

ECGDataGenerator
-lastEcgValues: double
+ECGDataGenerator(patientCount: int)
+generate(patientId: int, outputStrategy: OutputStrategy): void
-simulateEcgWaveform(patientId: int, lastEcgValue: double): double

FileOutputStrategy
-baseDirectory: String
-fileMap: ConcurrentHashMap
+FileOutputStrategy(baseDirectory: String)
+output(patientId: int, timestamp: long, label: String, data: String)

HealthDataSimulator
-patientCount: int
-scheduler: ScheduledExecutorService
-outputStrategy: OutputStrategy
-random: Random
+main(args: String): void
-parseArguments(args: String): void
-printHelp(): void
-initializePatientIds(patientCount: int): List<Integer>
-scheduleTasksForPatients(patientIds: List<Integer>): void
-scheduleTask(task: Runnable, period: long, timeUnit: TimeUnit): void

OutputStrategy
+output(patientId: int, timestamp: long, eventType: String, status: String)

PatientDataGenerator
+generate(patientId: int, outputStrategy: OutputStrategy): void

BloodPressureDataGenerator
-lastSystolicValues: int
-lastDiastolicValues: int
+BloodPressureDataGenerator(patientCount: int)
+generate(patientId: int, outputStrategy: OutputStrategy)

TcpOutputStrategy
-serverSocket: ServerSocket
-clientSocket: Socket
-out: PrintWriter
+TcpOutputStrategy(port: int)
+output(patientId: int, timestamp: long, label: String, data: String)

BloodLevelsDataGenerator
-baselineCholesterol: double
-baselineWhiteCells: double
-baselineRedCells: double
+BloodLevelsDataGenerator(patientCount: int)
+generate(patientId: int, outputStrategy: OutputStrategy)

WebSocketOutputStrategy
-server: WebSocketServer
+WebSocketOutputStrategy(port: int)
+output(patientId: int, timestamp: long, label: String, data: String)

BloodSaturationDataGenerator
-lastSaturationValues: int
+BloodSaturationDataGenerator(patientCount: int)
+generate(patientId: int, outputStrategy: OutputStrategy)

0..+   0..1   1

1   0..1

1   0..+