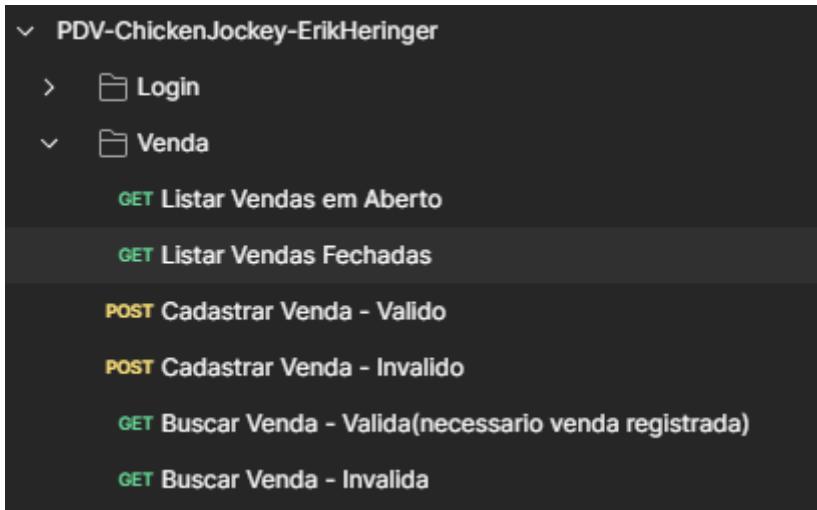


Entrega 2 - Erik Heringer

1. Testes Unitários e de Integração

- Melhorar e aumentar os casos de testes unitários, isolando suas dependências (**FEITO**)
- Implementar casos de teste de integração (**FEITO**)



2. Testes de Sistema e Requisitos Não Funcionais

- Implementar testes de sistema considerando requisitos funcionais (**FEITO**)
 - **Selenium:**
 - Login (**FEITO**)
 - Criar Título e Caixa - Pré-requisitos(**FEITO**)
 - Cadastrar Pedido, Adicionar Produto e Fechar Pedido (**FEITO**)
- Pelo menos um requisito não funcional (atributos de qualidade - Exemplo: desempenho, segurança) (**FEITO**)
 - Realizado teste de desempenho na listagem de vendas abertas

HTTP PDV-ChickenJockey-ErikHeringer / Venda / **Listar Vendas em Aberto**

GET http://localhost:8080/venda/status/ABERTA

Params Authorization Headers (7) Body **Scripts** Settings

Pre-request

Post-response

```
6 pm.expect(pm.response.text()).to.include("<h1 class='titulo-h1'>Pedidos</h1>");
7 };
8
9 pm.test("Contém botão 'Novo Pedido'", function () {
10   pm.expect(pm.response.text()).to.include("Novo Pedido");
11 });
12
13 pm.test("Contém texto 'Proxima'", function () {
14   pm.expect(pm.response.text()).to.include(">Proxima<");
15 });
16
17 pm.test("Contém status 'ABERTO'", function () {
18   pm.expect(pm.response.text()).to.include(">ABERTO<");
19 });
20
21 pm.test("Tempo de resposta menor que 500ms", function () {
22   pm.expect(pm.response.responseTime).to.be.below(500);
23 });
```

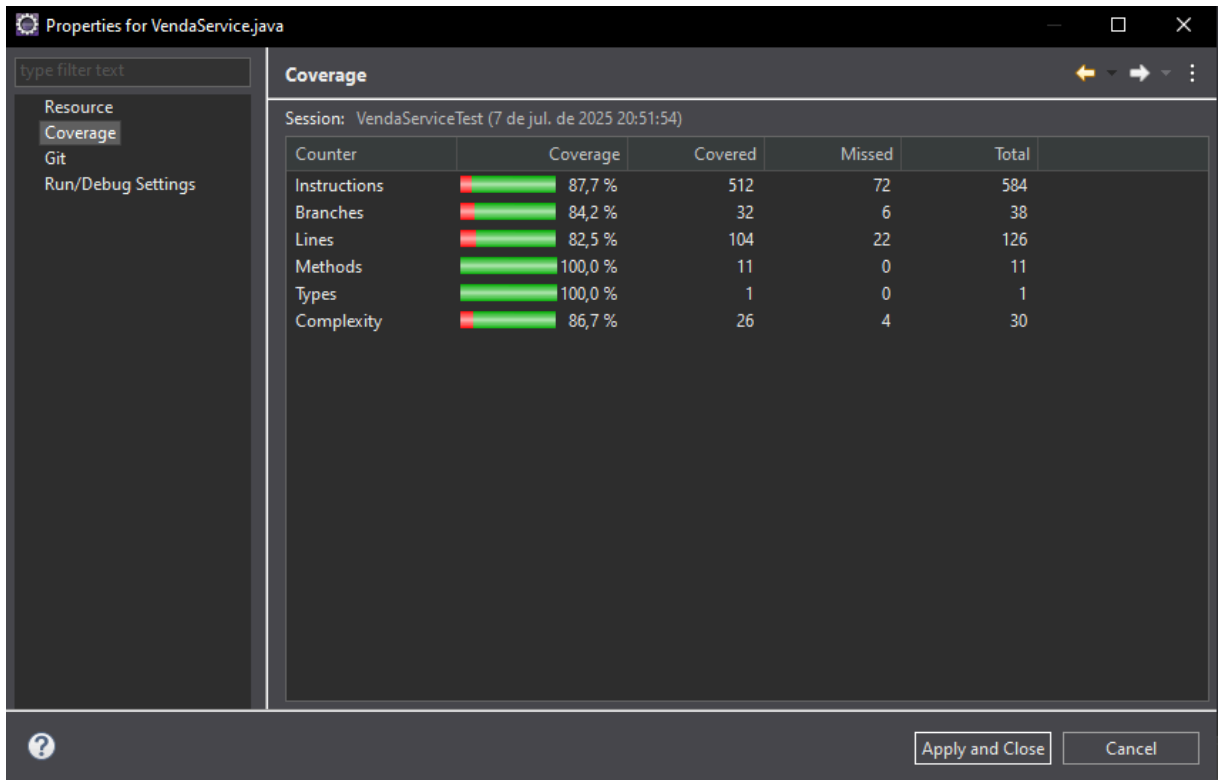
Body Cookies (1) Headers (10) **Test Results (6/6)** ↻

Filter Results ▾

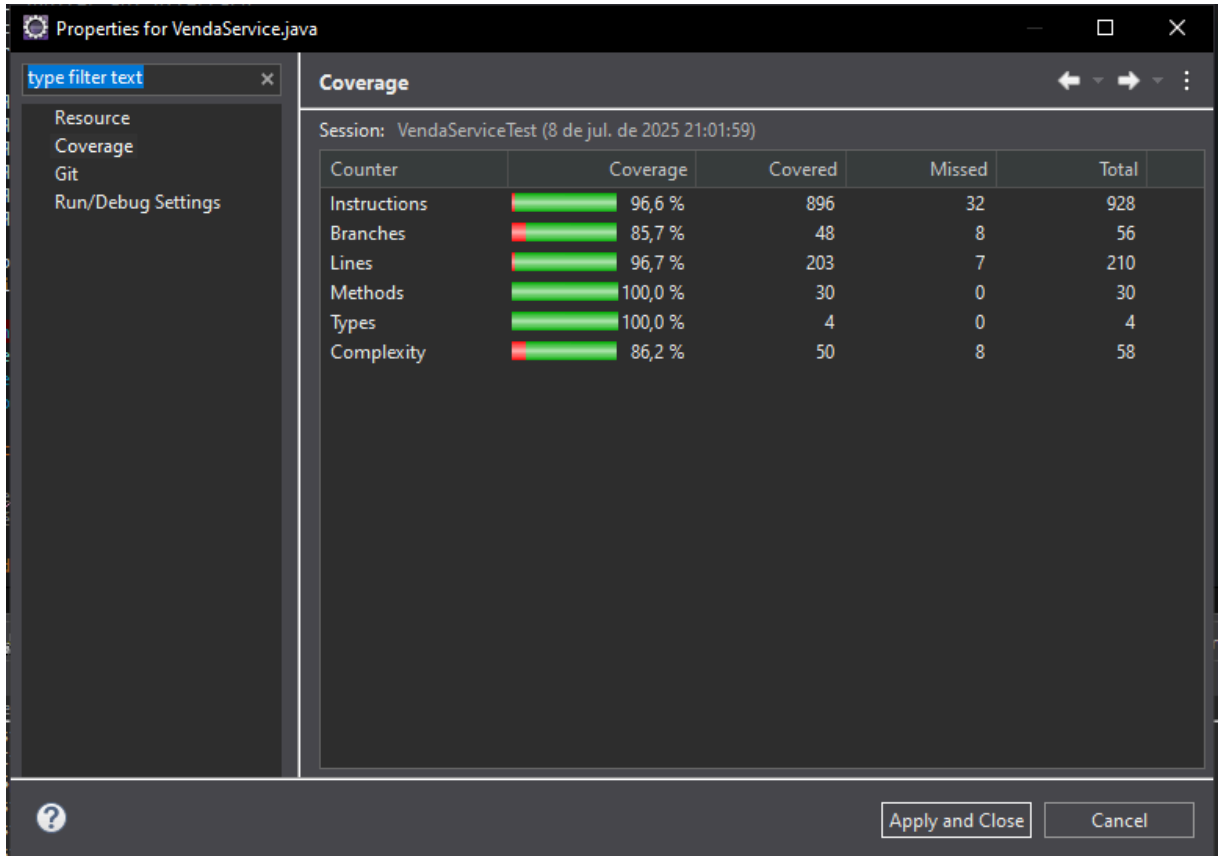
- PASSED** Status code é 200
- PASSED** Página contém título 'Pedidos'
- PASSED** Contém botão 'Novo Pedido'
- PASSED** Contém texto 'Proxima'
- PASSED** Contém status 'ABERTO'
- PASSED** Tempo de resposta menor que 500ms

3. Testes Estruturais (Cobertura de Código)(FEITO)

- Estrutural (ao menos 80% de cobertura no critério todas-arestas)
 - **Classe de VendaService:**
 - Coverage classe de teste - ENTREGA 1

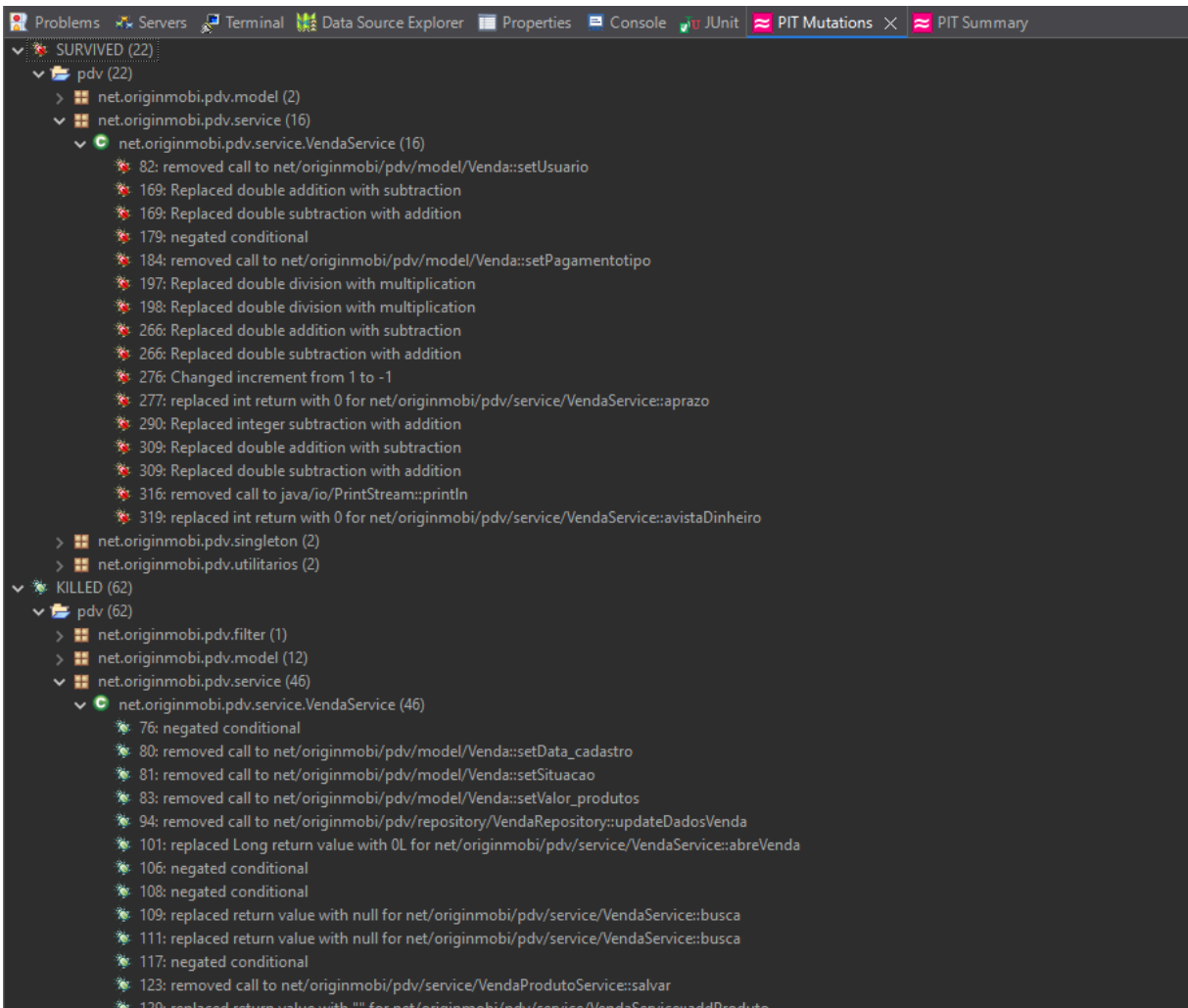


■ Coverage classe de teste - ENTREGA 2



4. Testes Baseados em Defeitos (Muta  o)(FEITO)

- Baseada em Defeitos (80% de escore de muta  o nas mesmas classes do teste estrutural)
 - **Classe de VendaService:**
 - PIT Mutation Test classe de teste - ENTREGA 1



| | | | | | | |
|--|-----|---------|-----|-------|-----|-------|
| TributacaoService.java | 0% | 0/14 | 0% | 0/7 | 0% | 0/0 |
| UsuarioService.java | 0% | 0/47 | 0% | 0/18 | 0% | 0/0 |
| VendaProdutoService.java | 0% | 0/12 | 0% | 0/7 | 0% | 0/0 |
| VendaService.java | 83% | 104/126 | 69% | 46/67 | 74% | 46/62 |

Mutations

| | |
|-----|---|
| 76 | 1. negated conditional → KILLED |
| 80 | 1. removed call to net/originmobi/pdv/model/Venda::setData_cadastro → KILLED |
| 81 | 1. removed call to net/originmobi/pdv/model/Venda::setSituacao → KILLED |
| 82 | 1. removed call to net/originmobi/pdv/model/Venda::setUsuario → SURVIVED |
| 83 | 1. removed call to net/originmobi/pdv/model/Venda::setValor_produtos → KILLED |
| 94 | 1. removed call to net/originmobi/pdv/repository/VendaRepository::updateDadosVenda → KILLED |
| 101 | 1. replaced Long return value with 0L for net/originmobi/pdv/service/VendaService::abreVenda → KILLED |
| 106 | 1. negated conditional → KILLED |
| 108 | 1. negated conditional → KILLED |
| 109 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService::busca → KILLED |
| 111 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService::busca → KILLED |
| 117 | 1. negated conditional → KILLED |
| 123 | 1. removed call to net/originmobi/pdv/service/VendaProdutoService::salvar → KILLED |
| 129 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::addProduto → KILLED |
| 132 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::addProduto → KILLED |
| 138 | 1. negated conditional → KILLED |
| 139 | 1. removed call to net/originmobi/pdv/service/VendaProdutoService::removeProduto → KILLED |
| 141 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::removeProduto → KILLED |
| 146 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::removeProduto → KILLED |
| 150 | 1. replaced return value with Collections.emptyList for net/originmobi/pdv/service/VendaService::lista → KILLED |
| 157 | 1. negated conditional → KILLED |
| 160 | 1. changed conditional boundary → KILLED 2. negated conditional → KILLED |
| 169 | 1. Replaced double addition with subtraction → SURVIVED 2. Replaced double subtraction with addition → SURVIVED |
| 179 | 1. changed conditional boundary → KILLED 2. negated conditional → SURVIVED |
| 184 | 1. removed call to net/originmobi/pdv/model/Venda::setPagamentotipo → SURVIVED |
| 191 | 1. removed call to net/originmobi/pdv/service/ReceberService::cadastrar → KILLED |
| 193 | 1. removed call to java/io/PrintStream::println → NO_COVERAGE |
| 197 | 1. Replaced double division with multiplication → SURVIVED |
| 198 | 1. Replaced double division with multiplication → SURVIVED |
| 201 | 1. changed conditional boundary → KILLED 2. Changed increment from 1 to -1 → KILLED 3. negated conditional → KILLED |
| 205 | 1. negated conditional → KILLED |
| 208 | 1. negated conditional → KILLED |
| 210 | 1. negated conditional → KILLED |
| 217 | 1. negated conditional → NO_COVERAGE |
| 218 | 1. negated conditional → NO_COVERAGE |
| 222 | 1. removed call to net/originmobi/pdv/service/cartao/CartaoLancamentoService::lancamento → NO_COVERAGE |
| 228 | 1. negated conditional → KILLED |
| 237 | 1. Replaced double addition with subtraction → KILLED 2. Replaced double subtraction with addition → KILLED |
| 239 | 1. removed call to net/originmobi/pdv/repository/VendaRepository::fechaVenda → KILLED |
| 242 | 1. removed call to java/io/PrintStream::println → NO_COVERAGE |
| 249 | 1. removed call to net/originmobi/pdv/service/ProdutoService::movimentaEstoque → KILLED |
| 251 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::fechaVenda → KILLED |
| 261 | 1. negated conditional → KILLED |
| 266 | 1. Replaced double addition with subtraction → SURVIVED 2. Replaced double subtraction with addition → SURVIVED |
| 267 | 1. removed call to net/originmobi/pdv/service/ParcelaService::gerarParcela → KILLED |
| 276 | 1. Changed increment from 1 to -1 → SURVIVED |
| 277 | 1. replaced int return with 0 for net/originmobi/pdv/service/VendaService::aprazo → SURVIVED |
| 290 | 1. Replaced integer subtraction with addition → SURVIVED |
| 292 | 1. negated conditional → KILLED |
| 298 | 1. changed conditional boundary → KILLED 2. negated conditional → KILLED |
| 299 | 1. Replaced double addition with subtraction → KILLED |
| 301 | 1. negated conditional → KILLED |
| 309 | 1. Replaced double addition with subtraction → SURVIVED 2. Replaced double subtraction with addition → SURVIVED |
| 316 | 1. removed call to java/io/PrintStream::println → SURVIVED |
| 319 | 1. replaced int return with 0 for net/originmobi/pdv/service/VendaService::avistaDinheiro → SURVIVED |
| 324 | 1. replaced Boolean return with False for net/originmobi/pdv/service/VendaService::vendaIsAberta → KILLED 2. replaced Boolean return with True for net/originmobi/pdv/service/VendaService::vendaIsAberta → KILLED |
| 328 | 1. replaced int return with 0 for net/originmobi/pdv/service/VendaService::qtdAbertos → KILLED |

■ PIT Mutation Test classe de teste - ENTREGA 2

Problems Servers Terminal Data Source Explorer Properties Console JUnit Coverage PIT Mutations

SURVIVED (19)

- pdv (19)
 - net.originmobi.pdv.model (2)
 - net.originmobi.pdv.service (14)
 - net.originmobi.pdv.service.VendaService (14)
 - 315: changed conditional boundary
 - 325: Replaced double addition with subtraction
 - 325: Replaced double subtraction with addition
 - 340: Replaced double division with multiplication
 - 341: Replaced double division with multiplication
 - 375: negated conditional
 - 376: negated conditional
 - 378: removed call to net/originmobi/pdv/service/cartao/CartaoLancamentoService::lancamento
 - 404: Replaced double addition with subtraction
 - 404: Replaced double subtraction with addition
 - 412: Changed increment from 1 to -1
 - 413: replaced int return with 0 for net/originmobi/pdv/service/VendaService::aprazo
 - 430: Replaced double addition with subtraction
 - 430: Replaced double subtraction with addition
 - net.originmobi.pdv.singleton (1)
 - net.originmobi.pdv.utilitarios (2)

KILLED (92)

- pdv (92)
 - net.originmobi.pdv.filter (1)
 - net.originmobi.pdv.model (14)
 - net.originmobi.pdv.service (73)
 - net.originmobi.pdv.service.VendaService (59)
 - 208: negated conditional
 - 212: removed call to net/originmobi/pdv/model/Venda::setData_cadastro
 - 213: removed call to net/originmobi/pdv/model/Venda::setSituacao
 - 214: removed call to net/originmobi/pdv/model/Venda::setUsuario
 - 215: removed call to net/originmobi/pdv/model/Venda::setValor_produtos
 - 227: removed call to net/originmobi/pdv/repository/VendaRepository::updateDadosVenda
 - 235: replaced Long return value with 0L for net/originmobi/pdv/service/VendaService::abreVenda
 - 240: negated conditional
 - 241: negated conditional
 - 242: replaced return value with null for net/originmobi/pdv/service/VendaService::busca
 - 244: replaced return value with null for net/originmobi/pdv/service/VendaService::busca
 - 250: negated conditional
 - 256: removed call to net/originmobi/pdv/service/VendaProdutoService::salvar
 - 260: replaced return value with "" for net/originmobi/pdv/service/VendaService::addProduto
 - 264: replaced return value with "" for net/originmobi/pdv/service/VendaService::addProduto
 - 267: replaced return value with "" for net/originmobi/pdv/service/VendaService::addProduto
 - 273: negated conditional
 - 274: replaced return value with "" for net/originmobi/pdv/service/VendaService::removeProduto
 - 276: negated conditional

| | | | | | | |
|---|-----|---------|-----|-------|-----|-------|
| TransferenciaService.java | 0% | 0/21 | 0% | 0/8 | 0% | 0/0 |
| TributacaoRegraService.java | 0% | 0/22 | 0% | 0/15 | 0% | 0/0 |
| TributacaoService.java | 0% | 0/13 | 0% | 0/7 | 0% | 0/0 |
| UsuarioService.java | 0% | 0/46 | 0% | 0/18 | 0% | 0/0 |
| VendaProdutoService.java | 0% | 0/12 | 0% | 0/7 | 0% | 0/0 |
| VendaService.java | 97% | 197/203 | 84% | 73/87 | 84% | 73/87 |

Mutations

| | |
|-----|---|
| 106 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::info → KILLED |
| 111 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::vlParcelas → KILLED |
| 116 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::desc → KILLED |
| 121 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::acre → KILLED |
| 126 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::dadosVenda → KILLED |
| 131 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::receber → KILLED |
| 136 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::dataAtual → KILLED |
| 141 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::vendaId → KILLED |
| 146 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::vlprodutos → KILLED |
| 151 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::desconto → KILLED |
| 156 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::acrescimo → KILLED |
| 161 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::formaPagamentoObj → KILLED |
| 166 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::sequencia → KILLED |
| 170 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService\$PagamentoContext\$Builder::build → KILLED |
| 208 | 1. negated conditional → KILLED |
| 212 | 1. removed call to net/originmobi/pdv/model/Venda::setData_cadastro → KILLED |
| 213 | 1. removed call to net/originmobi/pdv/model/Venda::setSituacao → KILLED |
| 214 | 1. removed call to net/originmobi/pdv/model/Venda::setUsuario → KILLED |
| 215 | 1. removed call to net/originmobi/pdv/model/Venda::setValor_produtos → KILLED |
| 227 | 1. removed call to net/originmobi/pdv/repository/VendaRepository::updateDadosVenda → KILLED |
| 235 | 1. replaced Long return value with 0L for net/originmobi/pdv/service/VendaService::abreVenda → KILLED |
| 240 | 1. negated conditional → KILLED |
| 241 | 1. negated conditional → KILLED |
| 242 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService::busca → KILLED |
| 244 | 1. replaced return value with null for net/originmobi/pdv/service/VendaService::busca → KILLED |
| 250 | 1. negated conditional → KILLED |
| 256 | 1. removed call to net/originmobi/pdv/service/VendaProdutoService::salvar → KILLED |
| 260 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::addProduto → KILLED |
| 264 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::addProduto → KILLED |
| 267 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::addProduto → KILLED |
| 273 | 1. negated conditional → KILLED |
| 274 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::removeProduto → KILLED |
| 276 | 1. negated conditional → KILLED |
| 277 | 1. removed call to net/originmobi/pdv/service/VendaProdutoService::removeProduto → KILLED |
| 279 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::removeProduto → KILLED |
| 283 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::removeProduto → KILLED |
| 286 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::removeProduto → KILLED |
| 290 | 1. replaced return value with Collections.emptyList for net/originmobi/pdv/service/VendaService::lista → KILLED |
| 298 | 1. negated conditional → KILLED |
| 302 | 1. negated conditional → KILLED |
| 312 | 2. negated conditional → KILLED |
| 312 | 1. Replaced double addition with subtraction → KILLED |
| 314 | 1. Replaced double addition with subtraction → KILLED |
| 314 | 2. Replaced double subtraction with addition → KILLED |
| 315 | 1. changed conditional boundary → SURVIVED |
| 315 | 2. Replaced double subtraction with addition → KILLED |
| 318 | 3. negated conditional → KILLED |
| 318 | 1. negated conditional → KILLED |
| 320 | 1. changed conditional boundary → KILLED |
| 320 | 2. negated conditional → KILLED |
| 325 | 1. Replaced double addition with subtraction → SURVIVED |
| 325 | 2. Replaced double subtraction with addition → SURVIVED |
| 331 | 1. removed call to net/originmobi/pdv/model/Venda::setPagamentotipo → KILLED |
| 335 | 1. removed call to net/originmobi/pdv/service/ReceberService::cadastrar → KILLED |
| 340 | 1. Replaced double division with multiplication → SURVIVED |
| 341 | 1. Replaced double division with multiplication → SURVIVED |
| 343 | 1. changed conditional boundary → KILLED |
| 343 | 2. negated conditional → KILLED |
| 359 | 1. removed call to net/originmobi/pdv/service/VendaService::processaFormaPagamento → KILLED |
| 361 | 1. removed call to net/originmobi/pdv/service/ProdutoService::movimentaEstoque → KILLED |
| 362 | 1. replaced return value with "" for net/originmobi/pdv/service/VendaService::fechaVenda → KILLED |
| 367 | 1. negated conditional → KILLED |
| 370 | 1. negated conditional → KILLED |
| 371 | 1. negated conditional → KILLED |
| 372 | 1. negated conditional → KILLED |
| 375 | 1. negated conditional → SURVIVED |
| 376 | 1. negated conditional → SURVIVED |
| 378 | 1. removed call to net/originmobi/pdv/service/cartao/CartaoLancamentoService::lancamento → SURVIVED |
| 381 | 1. negated conditional → KILLED |
| 386 | 1. Replaced double addition with subtraction → KILLED |
| 386 | 2. Replaced double subtraction with addition → KILLED |
| 387 | 1. removed call to net/originmobi/pdv/repository/VendaRepository::fechaVenda → KILLED |
| 400 | 1. negated conditional → KILLED |
| 404 | 1. Replaced double addition with subtraction → SURVIVED |
| 404 | 2. Replaced double subtraction with addition → SURVIVED |
| 405 | 1. removed call to net/originmobi/pdv/service/ParcelaService::gerarParcela → KILLED |
| 412 | 1. Changed increment from 1 to -1 → SURVIVED |
| 413 | 1. replaced int return with 0 for net/originmobi/pdv/service/VendaService::aprazo → SURVIVED |
| 422 | 1. negated conditional → KILLED |
| 425 | 1. negated conditional → KILLED |
| 430 | 1. Replaced double addition with subtraction → SURVIVED |
| 430 | 2. Replaced double subtraction with addition → SURVIVED |
| 444 | 1. replaced boolean return with false for net/originmobi/pdv/service/VendaService::vendaIsAberta → KILLED |
| 444 | 2. replaced boolean return with true for net/originmobi/pdv/service/VendaService::vendaIsAberta → KILLED |
| 444 | 3. negated conditional → KILLED |
| 444 | 4. negated conditional → KILLED |
| 448 | 1. replaced int return with 0 for net/originmobi/pdv/service/VendaService::qtdAbertos → KILLED |

- Criação de exceções dedicadas
- Redução da complexidade de métodos
- Ajuste na ordem e nomes de parâmetros
- Remoção de `@Autowired` e uso de injeção via construtor
- Renomeação de variáveis para seguir padrão
- Substituição de `System.out` por logger
- Limpeza de variáveis e parâmetros não utilizados
- Ajuste no uso de `Optional` para evitar acesso inseguro