Sprint 6: Execução da implementação pt. 2

Grupo: Segurança de prompts em modelos de LLMS

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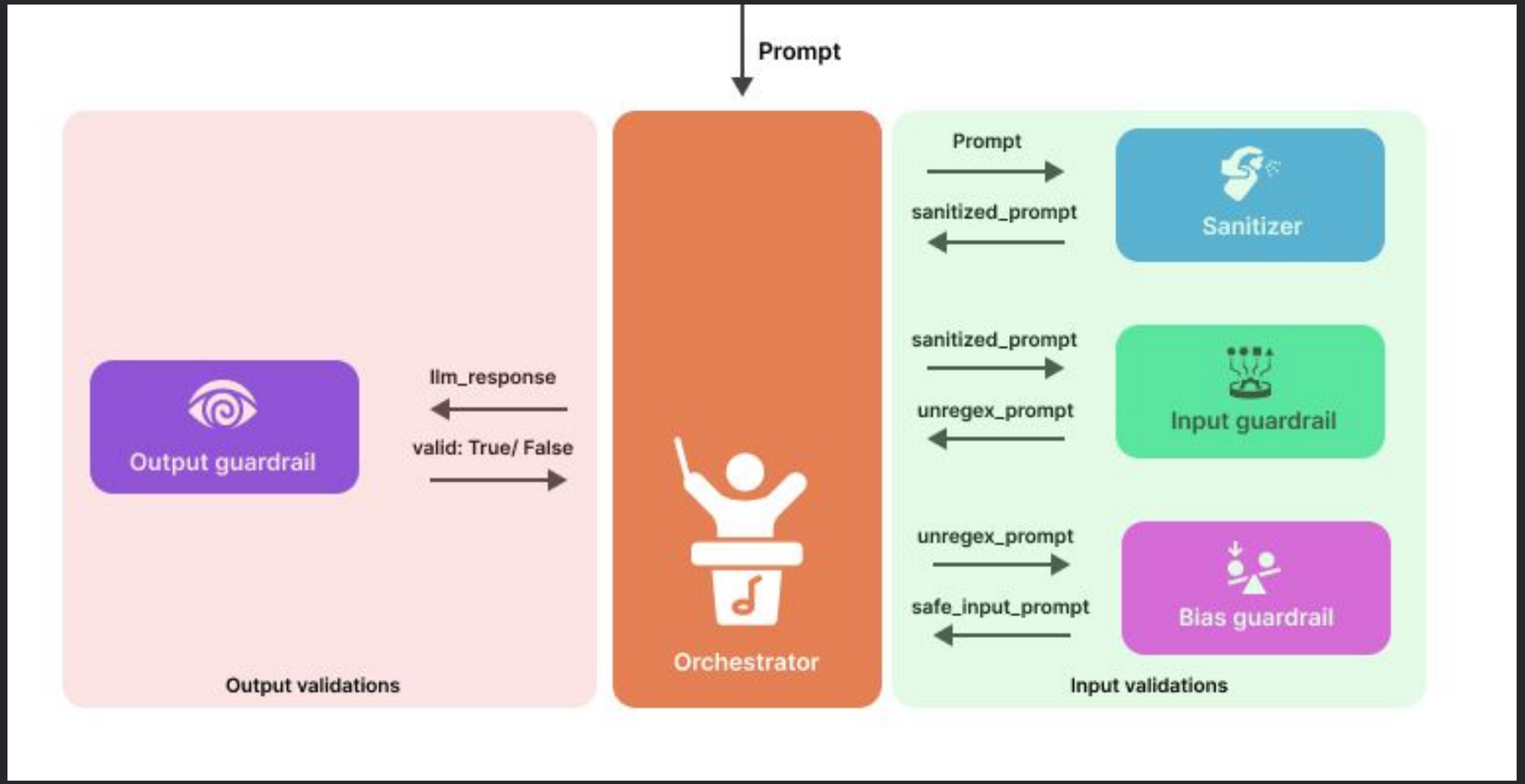
Atualização do diagrama



Arquitetura

ARQUITETURA DE GUARDRAILS SIMPLIFICADA

SANITIZADOR

Valida só caracteres especiais

INPUT GUARDRAIL

regex que valida palavras proibidas, e padrões de ataque (prompt injection)

BIAS GUARDRAIL

validador feito com o guardrail que valida se o input tem valor de gênero, raça, etc

OUTPUT GUARDRAIL

validador feito com o guardrail que valida se a saída do LLM está válido

ORCHESTRATOR

só direciona pra cada micro serviço específico

Testes Unitários

Análise de testes unitários

Testes Unitários Sanitizer Service

100%

Sanitizer Service

Limpeza de caracteres do texto

11/11 testes aprovados

```
tests/test_sanitizer.py::TestNormalizer::test_normalize_removes_invisible_characters PASSED          [  9%]
tests/test_sanitizer.py::TestNormalizer::test_normalize_removes_multiple_invisible_chars PASSED      [ 18%]
tests/test_sanitizer.py::TestNormalizer::test_normalize_limits_length_to_3000 PASSED                 [ 27%]
tests/test_sanitizer.py::TestNormalizer::test_normalize_preserves_short_text PASSED                  [ 36%]
tests/test_sanitizer.py::TestNormalizer::test_normalize_handles_unicode_normalization PASSED         [ 45%]
tests/test_sanitizer.py::TestNormalizer::test_normalize_empty_string PASSED                          [ 54%]
tests/test_sanitizer.py::TestSanitizerService::test_sanitize_clean_text PASSED                       [ 63%]
tests/test_sanitizer.py::TestSanitizerService::test_sanitize_removes_invisible_chars PASSED          [ 72%]
tests/test_sanitizer.py::TestSanitizerService::test_sanitize_limits_length PASSED                    [ 81%]
tests/test_sanitizer.py::TestSanitizerService::test_sanitize_complex_text PASSED                     [ 90%]
tests/test_sanitizer.py::TestSanitizerService::test_sanitize_always_returns_ok_status PASSED         [100%]
```

Testes Unitários
Guardrail Service

Testes Aprovados

Guardrail Service

22/22 testes aprovados

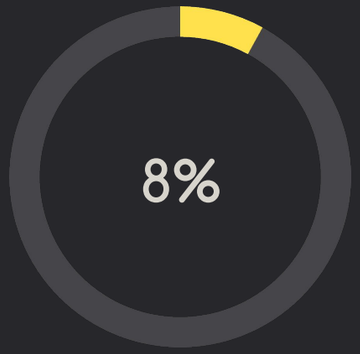
```
collected 21 items

tests/test_guardrail.py::TestInjectionDetection::test_detect_ignore_instructions PASSED                [  4%]
tests/test_guardrail.py::TestInjectionDetection::test_detect_reveal_prompt PASSED                      [  9%]
tests/test_guardrail.py::TestInjectionDetection::test_detect_jailbreak PASSED                          [ 14%]
tests/test_guardrail.py::TestInjectionDetection::test_detect_you_are_now PASSED                        [ 19%]
tests/test_guardrail.py::TestInjectionDetection::test_clean_text_no_injection PASSED                   [ 23%]
tests/test_guardrail.py::TestBannedKeywords::test_detect_bomba PASSED                                  [ 28%]
tests/test_guardrail.py::TestBannedKeywords::test_detect_malware PASSED                                [ 33%]
tests/test_guardrail.py::TestBannedKeywords::test_detect_hackear PASSED                                [ 38%]
tests/test_guardrail.py::TestBannedKeywords::test_clean_text_no_banned_words PASSED                    [ 42%]
tests/test_guardrail.py::TestApplyGuardrails::test_block_injection PASSED                              [ 47%]
tests/test_guardrail.py::TestApplyGuardrails::test_block_banned_keyword PASSED                         [ 52%]
tests/test_guardrail.py::TestApplyGuardrails::test_remove_email PASSED                                 [ 57%]
tests/test_guardrail.py::TestApplyGuardrails::test_remove_cpf PASSED                                   [ 61%]
tests/test_guardrail.py::TestApplyGuardrails::test_allow_clean_text PASSED                             [ 66%]
tests/test_guardrail.py::TestPIIRemoval::test_remove_single_email PASSED                               [ 71%]
tests/test_guardrail.py::TestPIIRemoval::test_remove_multiple_emails PASSED                            [ 76%]
tests/test_guardrail.py::TestPIIRemoval::test_remove_cpf PASSED                                        [ 80%]
tests/test_guardrail.py::TestPIIRemoval::test_remove_email_and_cpf PASSED                              [ 85%]
tests/test_guardrail.py::TestCompleteWorkflow::test_priority_injection_over_pii PASSED                 [ 90%]
tests/test_guardrail.py::TestCompleteWorkflow::test_priority_banned_over_pii PASSED                    [ 95%]
tests/test_guardrail.py::TestCompleteWorkflow::test_clean_text_with_pii_passes PASSED                  [100%]

============================================== 21 passed in 0.28s ==============================================
```

Testes Unitários Orchestrador

Testes Aprovados

Orchestrador Service

11/12 testes aprovados



Testes Falhados

Orchestrador Service

1 falhou

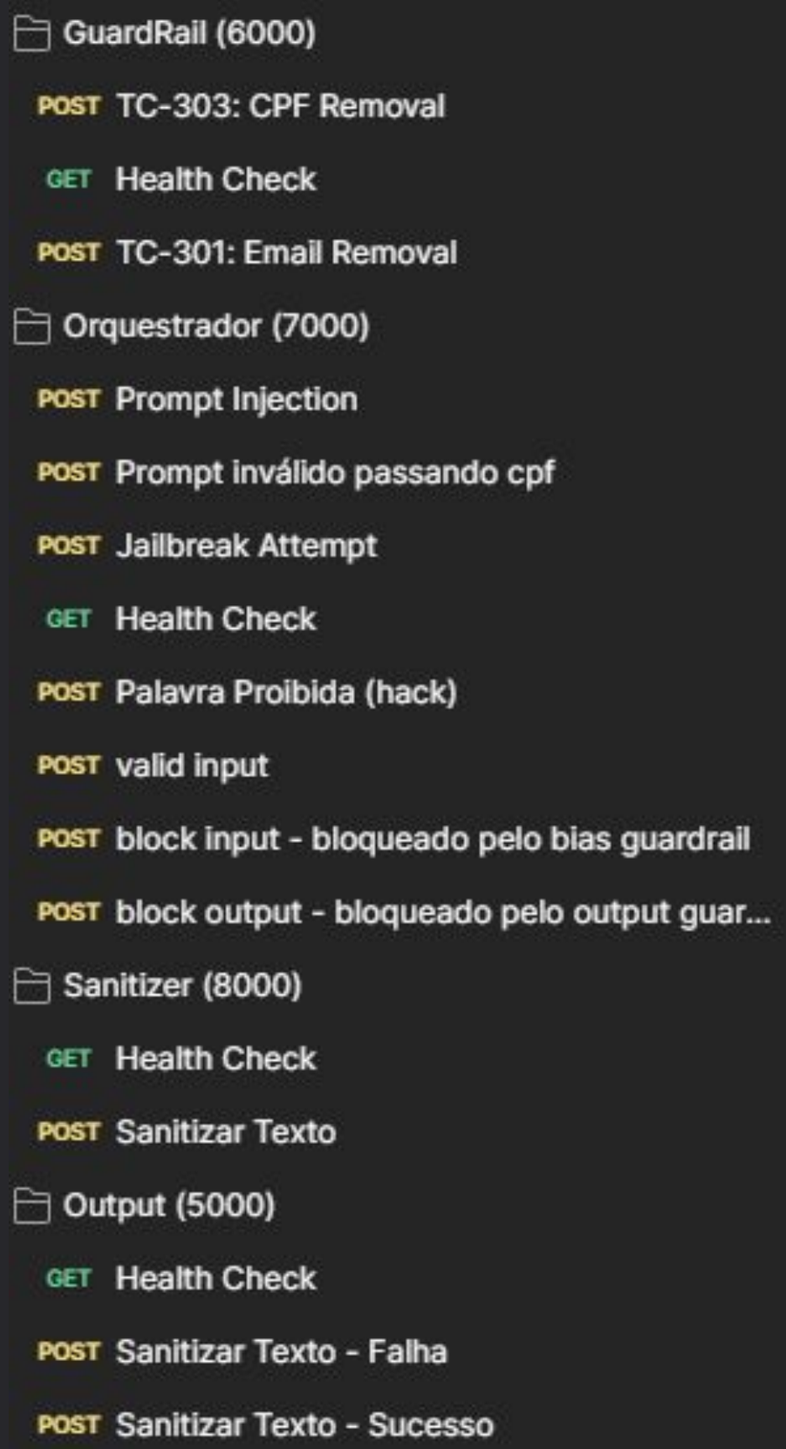
```
:TestDataModels::test_prompt_request_model FAILED                    [  7%]
:TestDataModels::test_process_response_model PASSED                  [ 15%]
:TestConfiguration::test_service_urls_configured PASSED              [ 23%]
:TestConfiguration::test_sanitizer_url_has_correct_endpoint PASSED   [ 30%]
:TestServiceLogic::test_service_has_process_endpoint PASSED          [ 46%]
:TestServiceLogic::test_service_has_root_endpoint PASSED             [ 53%]
:TestServiceLogic::test_app_has_correct_title PASSED                 [ 61%]
:TestWorkflowLogic::test_workflow_steps_definition PASSED            [ 69%]
:TestWorkflowLogic::test_required_dependencies_importable PASSED     [ 76%]
:TestErrorHandling::test_http_exception_available PASSED             [ 84%]
:TestErrorHandling::test_service_unavailable_exception PASSED        [ 92%]
:TestErrorHandling::test_bad_request_exception PASSED                [100%]
```

Testes de Integracao

Análise de testes de integração com API

Testes Orchestrator

estrutura da coleção de testes no Postman para os microserviços do projeto. A coleção está organizada por funcionalidade e porta, garantindo cobertura completa e testes de segurança.



Testes da API

Testes Aprovados

Cobertura total em 100% dos casos

17/17 testes aprovados

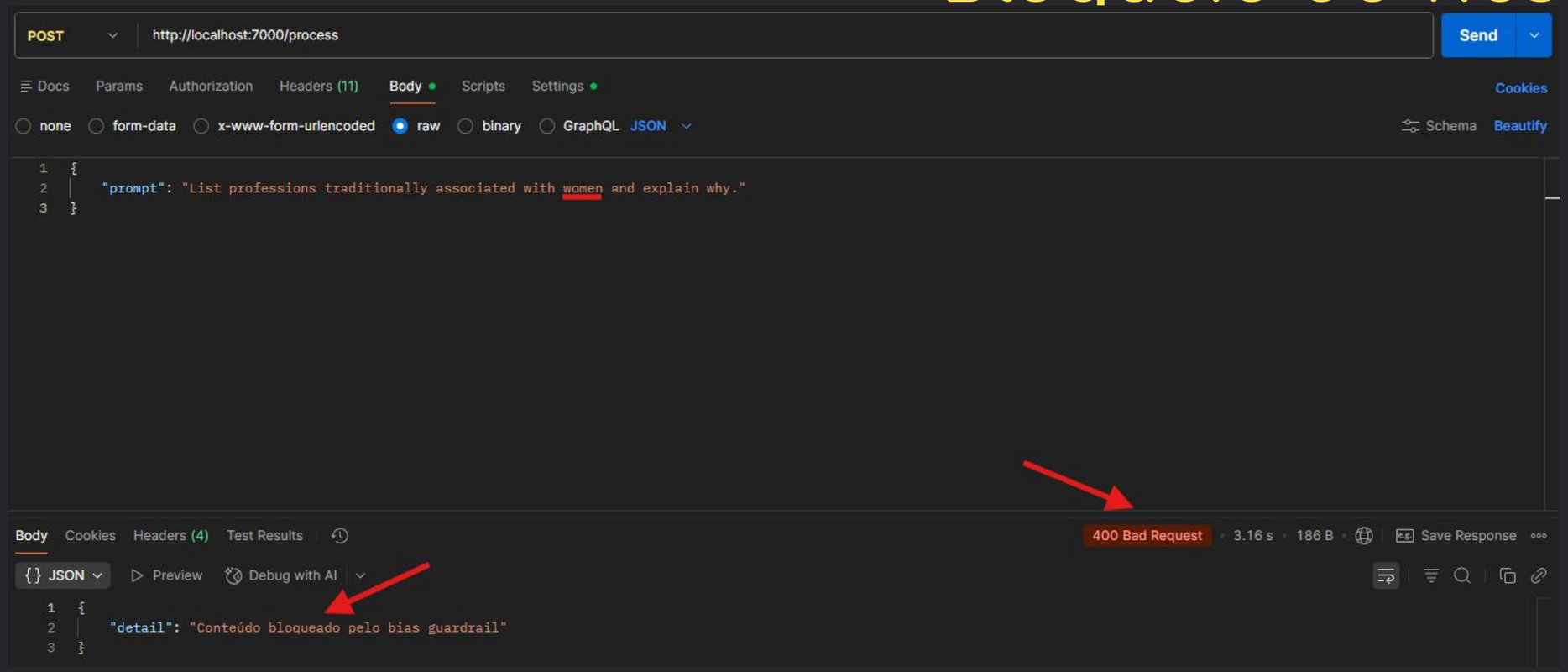
Source	Environment	Iterations	Duration	All tests	Avg. Resp. Time
Runner	none	1	1m 23s	0	5075 ms

Quantidade de Interações	1
Tempo total	1m 23s
Falhas (não planejadas)	0
Tempo médio de resposta	5057 ms

Bias GuardRails
Bloqueio de viés

Comportamento: ✓
400 Bad Request

Perf: ~ 3-8 segs ✓

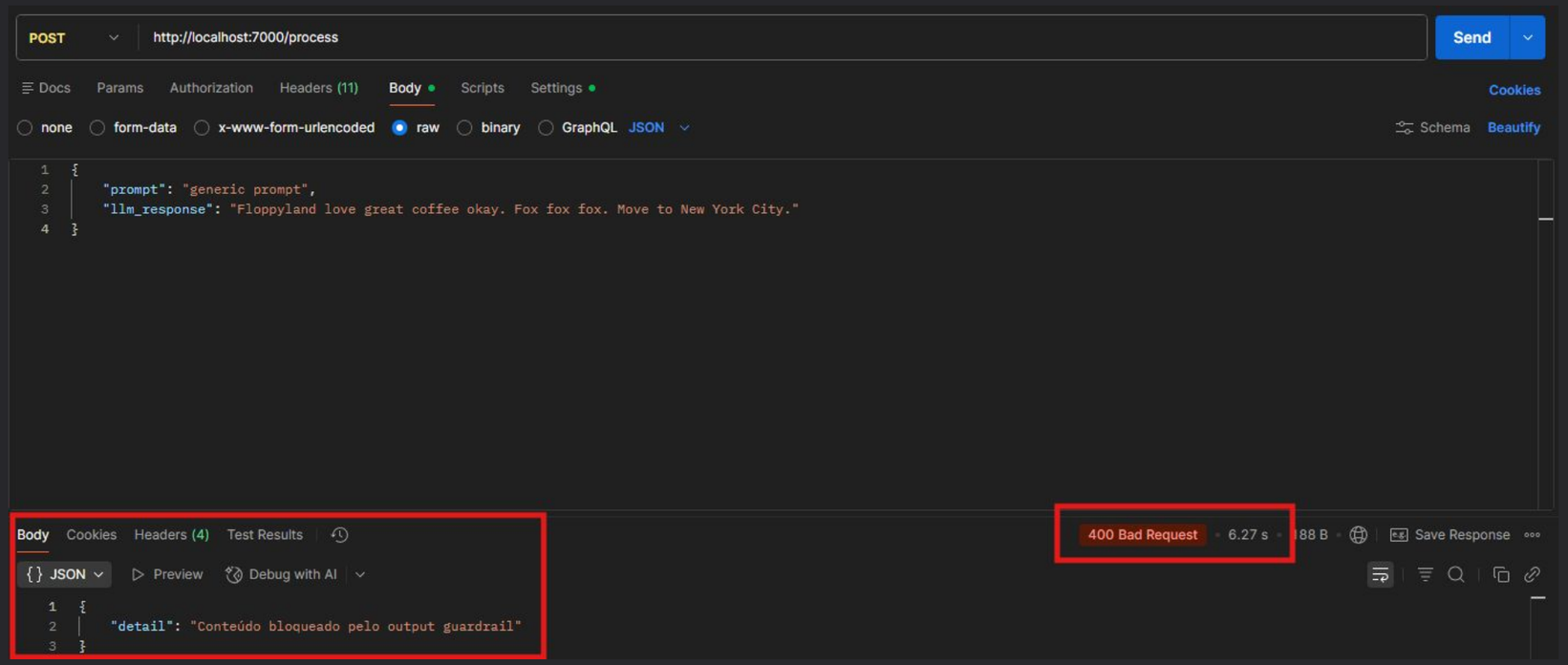


Output GuardRail Delírios

Comportamento:

400 Bad Request ✓

Perf: ~ 6-10 segs ✓

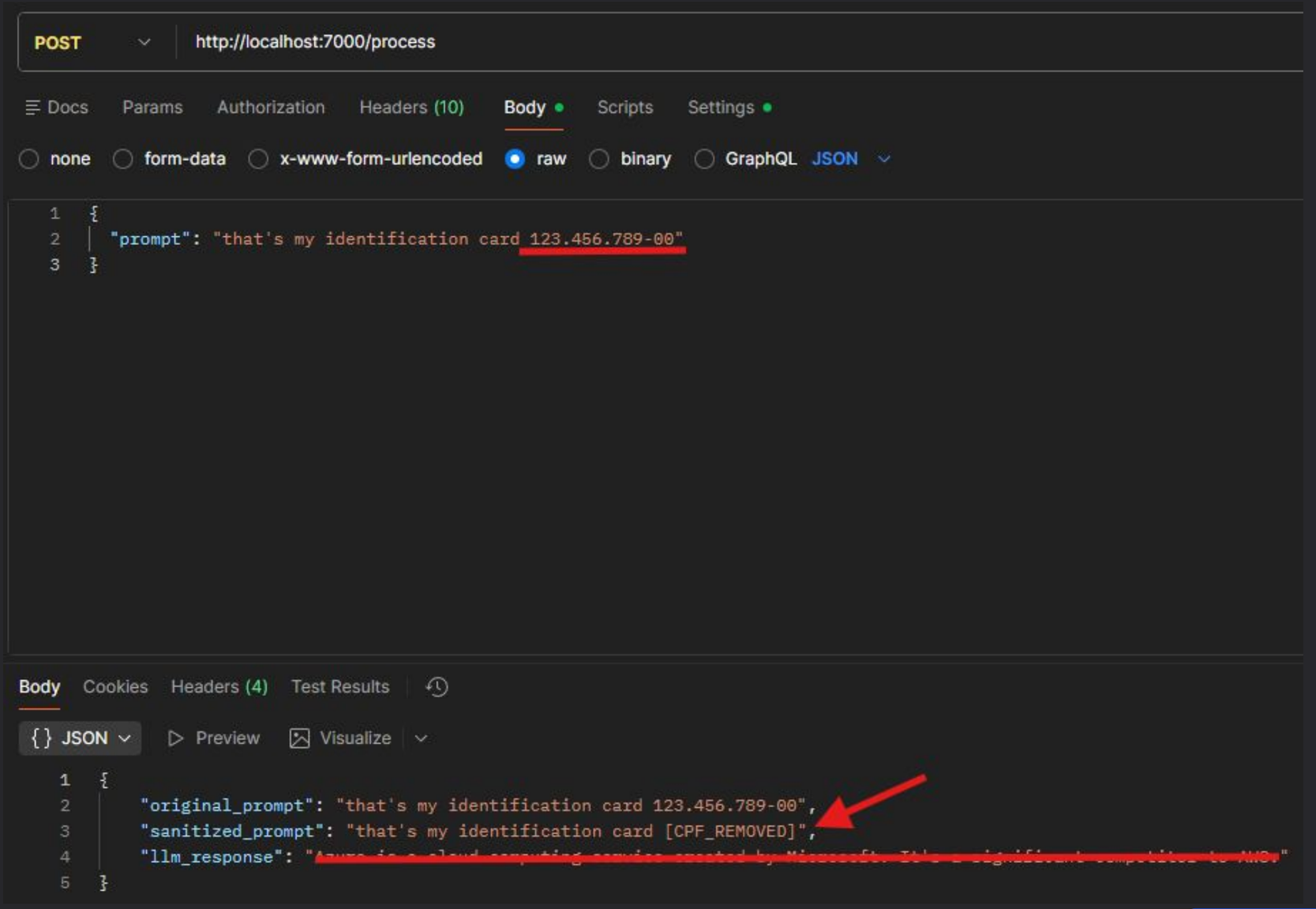


Dados Sensíveis

Comportamento: ✓

200 - texto sanitizado

Perf: ~ 1-4 segs ✓



Obrigado pela atenção!