Code Analysis Report

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This report provides an analysis of the Python code within the specified folder. The analysis includes various metrics that give insights into the code's quality, maintainability, and complexity. Below is a brief explanation of the key metrics included in this report:  
  
- \*\*Cyclomatic Complexity\*\*: Measures the complexity of the code.  
- \*\*Maintainability Index\*\*: Indicates how maintainable the code is.  
- \*\*PEP-8 Score\*\*: Represents adherence to Python's style guide.  
- \*\*Halstead Metrics\*\*: Provides insights into code volume, effort, and difficulty.

# Aggregated Project Metrics

|  |  |
| --- | --- |
| Metric | Value |
| Total Files | 34 |
| Average Cyclomatic Complexity | 1.01 |
| Maximum Cyclomatic Complexity | 4 |
| Average Halstead Volume | 7.61 |
| Average Halstead Effort | 7.30 |
| Average Halstead Difficulty | 0.29 |
| Total Lines of Code | 674 |
| Total Comments | 14 |
| Average Maintainability Index | 59.70 |
| Average PEP-8 Score | 0.72 |

# Individual File Metrics

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\main.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 55 |
| Comments | 7 |
| Maintainability Index | 0 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\\_\_init\_\_.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 0 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\\_\_init\_\_ .py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 0 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\api\_v1\routers.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 18 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\api\_v1\\_\_init\_\_.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 0 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\api\_v1\handlers\city.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1.80 |
| Cyclomatic Complexity (max) | 2 |
| Halstead Vocabulary | 5 |
| Halstead Length | 8 |
| Halstead Volume | 18.58 |
| Halstead Effort | 9.29 |
| Halstead Difficulty | 0.50 |
| Total Operators | 1 |
| Total Operands | 4 |
| Lines of Code | 43 |
| Comments | 2 |
| Maintainability Index | 0 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\api\_v1\handlers\hello.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 11 |
| Comments | 0 |
| Maintainability Index | 97.60 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\api\_v1\handlers\icd\_prov.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 2 |
| Cyclomatic Complexity (max) | 2 |
| Halstead Vocabulary | 2 |
| Halstead Length | 2 |
| Halstead Volume | 2.00 |
| Halstead Effort | 1.00 |
| Halstead Difficulty | 0.50 |
| Total Operators | 1 |
| Total Operands | 1 |
| Lines of Code | 22 |
| Comments | 0 |
| Maintainability Index | 23.74 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\api\_v1\handlers\province.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1.80 |
| Cyclomatic Complexity (max) | 2 |
| Halstead Vocabulary | 5 |
| Halstead Length | 8 |
| Halstead Volume | 18.58 |
| Halstead Effort | 9.29 |
| Halstead Difficulty | 0.50 |
| Total Operators | 1 |
| Total Operands | 4 |
| Lines of Code | 41 |
| Comments | 0 |
| Maintainability Index | 0 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\api\_v1\handlers\user.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1.67 |
| Cyclomatic Complexity (max) | 2 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 37 |
| Comments | 0 |
| Maintainability Index | 0 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\api\_v1\handlers\\_\_init\_\_.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 0 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\auth\jwt.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 2 |
| Cyclomatic Complexity (max) | 3 |
| Halstead Vocabulary | 3 |
| Halstead Length | 4 |
| Halstead Volume | 6.34 |
| Halstead Effort | 3.17 |
| Halstead Difficulty | 0.50 |
| Total Operators | 1 |
| Total Operands | 2 |
| Lines of Code | 61 |
| Comments | 0 |
| Maintainability Index | 0 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\auth\\_\_init\_\_.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 0 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\deps\user\_deps.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 4 |
| Cyclomatic Complexity (max) | 4 |
| Halstead Vocabulary | 5 |
| Halstead Length | 5 |
| Halstead Volume | 11.61 |
| Halstead Effort | 11.61 |
| Halstead Difficulty | 1.00 |
| Total Operators | 2 |
| Total Operands | 3 |
| Lines of Code | 45 |
| Comments | 0 |
| Maintainability Index | 0 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\api\deps\\_\_init\_\_.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 0 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\core\config.py

Summary: The code has moderate maintainability.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 5 |
| Halstead Length | 6 |
| Halstead Volume | 13.93 |
| Halstead Effort | 6.97 |
| Halstead Difficulty | 0.50 |
| Total Operators | 1 |
| Total Operands | 4 |
| Lines of Code | 19 |
| Comments | 1 |
| Maintainability Index | 52.80 |
| PEP-8 Score | 0.62 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\core\security.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1.50 |
| Cyclomatic Complexity (max) | 2 |
| Halstead Vocabulary | 12 |
| Halstead Length | 18 |
| Halstead Volume | 64.53 |
| Halstead Effort | 77.44 |
| Halstead Difficulty | 1.20 |
| Total Operators | 2 |
| Total Operands | 10 |
| Lines of Code | 36 |
| Comments | 0 |
| Maintainability Index | 0 |
| PEP-8 Score | 2.08 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\core\\_\_init\_\_.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 0 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\models\city\_model.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 10 |
| Comments | 1 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\models\icdprov\_model.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 12 |
| Comments | 0 |
| Maintainability Index | 92.40 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\models\province\_model.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 9 |
| Comments | 2 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\models\user\_model.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1.29 |
| Cyclomatic Complexity (max) | 2 |
| Halstead Vocabulary | 3 |
| Halstead Length | 6 |
| Halstead Volume | 9.51 |
| Halstead Effort | 9.51 |
| Halstead Difficulty | 1.00 |
| Total Operators | 1 |
| Total Operands | 2 |
| Lines of Code | 40 |
| Comments | 0 |
| Maintainability Index | 0 |
| PEP-8 Score | 2.76 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\models\\_\_init\_\_.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 0 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\schemas\auth\_schema.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 11 |
| Comments | 0 |
| Maintainability Index | 97.60 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\schemas\city\_schemas.py

Summary: The code has moderate maintainability.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 17 |
| Comments | 0 |
| Maintainability Index | 66.40 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\schemas\icdprov\_schemas.py

Summary: The code has moderate maintainability.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 15 |
| Comments | 1 |
| Maintainability Index | 76.80 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\schemas\province\_schemas.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 12 |
| Comments | 0 |
| Maintainability Index | 92.40 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\schemas\user\_schema.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1 |
| Cyclomatic Complexity (max) | 1 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 24 |
| Comments | 0 |
| Maintainability Index | 30.00 |
| PEP-8 Score | 1.67 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\schemas\\_\_init\_\_.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 0 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\services\city\_service.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 2 |
| Cyclomatic Complexity (max) | 3 |
| Halstead Vocabulary | 5 |
| Halstead Length | 12 |
| Halstead Volume | 27.86 |
| Halstead Effort | 27.86 |
| Halstead Difficulty | 1.00 |
| Total Operators | 1 |
| Total Operands | 4 |
| Lines of Code | 40 |
| Comments | 0 |
| Maintainability Index | 0 |
| PEP-8 Score | 6.90 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\services\icdprov\_service.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1.50 |
| Cyclomatic Complexity (max) | 2 |
| Halstead Vocabulary | 4 |
| Halstead Length | 9 |
| Halstead Volume | 18.00 |
| Halstead Effort | 18.00 |
| Halstead Difficulty | 1.00 |
| Total Operators | 1 |
| Total Operands | 3 |
| Lines of Code | 8 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\services\province\_service.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 2 |
| Cyclomatic Complexity (max) | 3 |
| Halstead Vocabulary | 4 |
| Halstead Length | 9 |
| Halstead Volume | 18.00 |
| Halstead Effort | 18.00 |
| Halstead Difficulty | 1.00 |
| Total Operators | 1 |
| Total Operands | 3 |
| Lines of Code | 39 |
| Comments | 0 |
| Maintainability Index | 0 |
| PEP-8 Score | 7.59 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\services\user\_service.py

Summary: The code has low maintainability and may need refactoring.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 1.67 |
| Cyclomatic Complexity (max) | 3 |
| Halstead Vocabulary | 10 |
| Halstead Length | 15 |
| Halstead Volume | 49.83 |
| Halstead Effort | 56.06 |
| Halstead Difficulty | 1.12 |
| Total Operators | 2 |
| Total Operands | 8 |
| Lines of Code | 49 |
| Comments | 0 |
| Maintainability Index | 0 |
| PEP-8 Score | 2.90 |

## File: D:\WORKSPACE\FASTAPI\farm-hajj\backend\app\services\\_\_init\_\_.py

Summary: The code is very maintainable.

|  |  |
| --- | --- |
| Metric | Value |
| Cyclomatic Complexity (avg) | 0 |
| Cyclomatic Complexity (max) | 0 |
| Halstead Vocabulary | 0 |
| Halstead Length | 0 |
| Halstead Volume | 0 |
| Halstead Effort | 0 |
| Halstead Difficulty | 0 |
| Total Operators | 0 |
| Total Operands | 0 |
| Lines of Code | 0 |
| Comments | 0 |
| Maintainability Index | 100 |
| PEP-8 Score | 0 |