TPI Database Design

January 2025

1. agency - federal_account - program_activity - object_class

Overall Concept

- Level 1: A list of all Agencies
  `agencies.json`

- Level 2: All Federal Accounts under a specific Agency
  `agency_{agency_id}_federal_ids.json`

- Level 3: All Program Activities under a specific combination of Agency + Federal Account
  `agency_{agency_id}_federal_{federal_id}_program_activities.json`

- Level 4: All Object Classes under a specific combination of Agency + Federal Account + Program Activity
  `agency_{agency_id}_federal_{federal_id}_program_activity_{program_activity_id}_object_classes.json`

Level 1: agencies.json

```
{
  "agencies": [
    {
      "agency_id": "806",
      "agency_name": "Department of Health and Human Services",
      "total_amount": 23456784356,
      "percent": 45.6%
    },
    {
      "agency_id": "539",
      "agency_name": "Social Security Administration",
      "total_amount": 123456745623,
      "percent": 34.6%
    }
    // ... more agencies
  ]
}
```

Level 2: agency_{agency_id}_federal_ids.json

Example File Names: `agency_806_federal_ids.json`, `agency_539_federal_ids.json`

```json
{
  "agency_id": "806",
  "federal_ids": [
    {
      "federal_id": "5450",
      "federal_Account_name": "Grants to States for Medicaid, Centers for Medicare and Medicaid
          Services, Health and Hu man Services",
      "total_amount": 234784356,
      "percent": 23.6%
    },
    {
      "federal_id": "5598",
      "federal_account_name": "Federal Supplementary Medical Insurance Trust Fund-Treasury Managed,
          Health and Human Services",
      "total_amount": 234567843,
      "percent": 24.6%
    }
    // ... more federal IDs
  ]
}
```

Level 3: agency_{agency_id}_federal_{federal_id}_program_activities.json

Example File Names: `agency_806_federal_5450_program_activities.json`,
`agency_806_federal_5589_program_activities.json`

```json
{
  "agency_id": "806",
  "federal_id": "5450",
  "program_activities": [
    {
      "program_activity_ID": "168446",
      "program_activity_name": "BENEFIT PAYMENTS, SMI",
      "total_amount": 23456784,
      "percent": 24.6%
    },
    {
      "program_activity_ID": "15099",
      "program_activity_name": "ADMINISTRATION, SMI",
      "total_amount": 23457843,
      "percent": 14.6%
    }
    // ... more program activities
  ]
}
```

Level 4: agency_{agency_id}_federal_{federal_id}_program_activity_{program_activity_id}_object_classes.json

Example File Names: `agency_806_federal_5450_program_activity_168446_object_classes.json`,
`agency_806_federal_5450_program_activity_15099_object_classes.json`

```json
{
  "agency_id": "806",
```

```json
  "federal_id": "5450",
  "program_activity_id": "168446",
  "object_classes": [
    {
      "object_class_ID": "40",
      "object_class_name": "Grants and fixed charges",
      "total_amount": 1382604.62,
      "percent": 17.6%
    }
  },
    {
      "object_class_ID": "90",
      "object_class_name": "Other",
      "total_amount": 14382604.62,
      "percent": 23.6%
    }
    // ... more object classes
  ]
}
```