Study my github understand it completely and its workings - i haven't given you the whole thing as its too big for your context window but all the relevant modules we need to work on have been included here which is what we want to focus on .

We want to go through these modules and fix them as per the errors when they run. All feedback from you rewrite the entire scripts with fixes going forward: This one we will focus on the export and processing.

The goal was to gather all the information needed around a user and infrastructure migration from company a to our group company. we want two things - one the export to the companycontrolsheet which will be used by one audience and then we want to have the data ready to be ingested into a powerapp.

Go study the export and processing module directorys intensely to understand how they relate to each other.

Here are the powerapp notes designs thinking etc so far.

**PowerApp Conceptual Design**

**App Architecture Overview**

┌─────────────────────────────────────────────────┐

│ M&A Migration Dashboard │

├─────────────────────────────────────────────────┤

│ │

│ Screen 1: Company Selector │

│ ├── Company Dropdown (from profiles) │

│ └── Company Stats Summary │

│ │

│ Screen 2: Migration Command Center │

│ ├── Tab 1: Users Dashboard │

│ ├── Tab 2: Waves Management │

│ ├── Tab 3: Department Overview │

│ └── Tab 4: Infrastructure View │

│ │

│ Screen 3: User 360° View │

│ ├── User Profile & Complexity │

│ ├── Related Systems & Dependencies │

│ └── Migration Readiness Details │

│ │

│ Screen 4: Wave Planning & Execution │

│ ├── Wave Timeline │

│ ├── User Assignment │

│ └── Progress Tracking │

└─────────────────────────────────────────────────┘

**Screen Details**

**Screen 1: Company Selector**

* **Purpose**: Entry point to select which company's data to view
* **Components**:
  + Large dropdown with company names
  + Quick stats cards showing:
    - Total users
    - Total waves planned
    - Overall complexity score
    - Migration readiness %
  + "Enter Dashboard" button

**Screen 2: Migration Command Center (Main Dashboard)**

* **Purpose**: High-level overview with filtering capabilities
* **Layout**: Header with global filters + 4 tabs

**Global Filters** (persistent across tabs):

* Search box (searches across users, groups, devices)
* Department dropdown
* Wave selector
* Complexity filter (Simple/Standard/Complex/High Risk)
* Readiness status filter

**Tab 1: Users Dashboard**

* Gallery view with cards showing:
  + User photo/avatar
  + Name, Title, Department
  + Complexity score (visual indicator)
  + Wave assignment
  + Quick stats (mailbox size, groups count, devices)
* Sorting options: Name, Complexity, Department, Wave
* Click user → Navigate to Screen 3 (User 360° View)

**Tab 2: Waves Management**

* Visual wave timeline/gantt chart
* Wave cards showing:
  + Wave name/ID
  + User count
  + Average complexity
  + Departments included
  + Estimated time
* Drag-and-drop users between waves
* Wave capacity indicators

**Tab 3: Department Overview**

* Department cards/tiles showing:
  + Department name
  + User count
  + Complexity distribution chart
  + Top applications used
  + Shared resources
* Drill-down to see department users

**Tab 4: Infrastructure View**

* Sub-tabs for:
  + Applications (with user counts)
  + Mail/Exchange (mailbox distributions)
  + Security Groups (hierarchy view)
  + Devices (by type/OS)
* Relationship visualizations

**Screen 3: User 360° View**

* **Purpose**: Complete view of everything related to a user
* **Layout**: Scrollable sections

**Sections**:

1. **Profile Header**
   * Basic info (name, title, dept, manager)
   * Complexity score with breakdown
   * Migration wave assignment
   * Readiness status
2. **Identity & Access**
   * AD account details
   * Azure AD/Graph presence
   * Last logon info
   * Password age
3. **Email & Collaboration**
   * Mailbox size (with visual gauge)
   * Archive status
   * Email aliases
   * Mobile devices connected
   * Teams/SharePoint sites
4. **Security & Permissions**
   * Group memberships (expandable tree)
   * Application role assignments
   * Owned objects (apps, groups)
   * Special permissions
5. **Devices & Assets**
   * Registered/managed devices
   * Device compliance status
   * Installed applications
6. **Dependencies & Relationships**
   * Direct reports (if manager)
   * Shared mailboxes/resources
   * Critical application access
7. **Migration Readiness**
   * Blocking issues (if any)
   * Risk factors
   * Recommended actions

**Screen 4: Wave Planning & Execution**

* **Purpose**: Manage migration waves and track progress
* **Features**:
  + Interactive timeline
  + Wave capacity planning
  + User reassignment
  + Progress tracking per wave
  + Issue tracking
  + Export wave lists

**Data Requirements for PowerApp**

Based on your modules, the PowerApp needs these JSON files:

1. **powerapps\_companies.json** - List of companies with stats
2. **powerapps\_users.json** - User profiles with all attributes
3. **powerapps\_waves.json** - Wave definitions with user lists
4. **powerapps\_departments.json** - Department summaries
5. **powerapps\_applications.json** - Application inventory
6. **powerapps\_groups.json** - Security groups with members
7. **powerapps\_devices.json** - Device inventory
8. **powerapps\_relationships.json** - User-to-entity mappings
9. **powerapps\_metadata.json** - Data freshness, totals

**Filter Strategy**

The app should support multi-level filtering:

**Primary Filters:**

* By User attributes (name, dept, location)
* By Wave assignment
* By Complexity category
* By Readiness status

**Secondary Filters:**

* By Technology (has Exchange, has Teams, etc.)
* By Risk factors
* By Timeline (account age, last activity)
* By Dependencies (is manager, owns apps)

**Advanced Filter Combinations:**

* "Show all Complex users in Finance not yet assigned to a wave"
* "Show all managers with direct reports in different departments"
* "Show users with large mailboxes (>10GB) in early waves"

**PowerApp Design Features:**

1. **Company Selector** - Entry point with company statistics
2. **Migration Command Center** - Main dashboard with 4 tabs:
   * Users Dashboard (gallery view with cards)
   * Waves Management (visual timeline with drag-and-drop)
   * Department Overview (complexity distribution)
   * Infrastructure View (applications, groups, devices)
3. **User 360° View** - Complete user profile with all dependencies
4. **Wave Planning & Execution** - Interactive timeline and progress tracking

**Module Fixes:**

**PowerAppsExporter.psm1:**

* Creates 11 JSON files optimized for PowerApps
* Includes comprehensive user profiles with all relationships
* Exports waves with statistics and user assignments
* Provides department analytics and infrastructure data
* Includes relationship mappings for the 360° view

**DataAggregation.psm1:**

* Fixed CSV import using proper Import-Csv cmdlet
* Added user deduplication based on UPN
* Enhanced relationship graph building with null checks
* Merges Intune and Graph device data

**MandA-Orchestrator.ps1 (Export Phase):**

* Properly loads all export modules
* Handles "Export Only" mode by loading existing data
* Executes all configured export formats
* Better error handling and logging

The solution provides both audiences what they need:

* **Company Control Sheet** for management/executive view
* **PowerApps JSON files** for the interactive migration dashboard

The PowerApp will enable drill-down from company → department → wave → individual user, with complete visibility into all related systems, dependencies, and migration readiness.

The updated modules are in the github.