Flowchart: Main RFP Execution Process

This Mermaid flowchart illustrates the startup and execution flow of the main_prd.py script, detailing the following key stages:

Initialization
- Script starts by importing necessary headers and packages
- Defines a list of required packages (logger, requests, pyserial, RPi.GPIO)
- Handles GPIO import with fallback to mock GPIO for non-Raspberry Pi environments

Logging Configuration
- Sets up log directories based on environment (Raspberry Pi or development)
- Configures logging levels and log file management
- Main log file: nvalex.log (daily rotation, 1-month retention)
- Error log file: errors.log (ERROR level, daily rotation)

Execution Flow
- Imports core modules and configuration manager
- Determines debug level based on DEBUG flag
- Defines main() function with error handling
- Calls nvalex_v7() as primary processing function
- Handles potential exceptions with logging

Program Termination
- Gracefully handles successful execution or error scenarios
- Ensures proper program exit