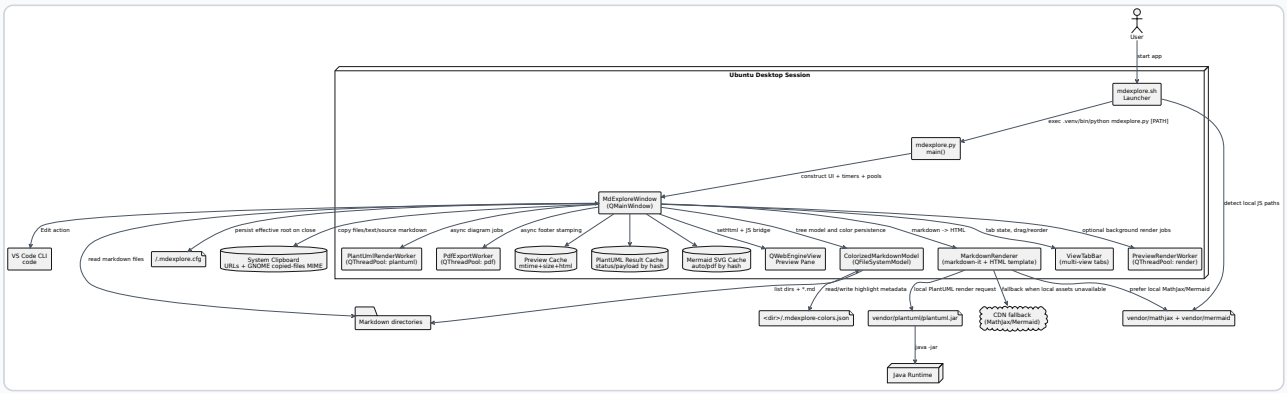
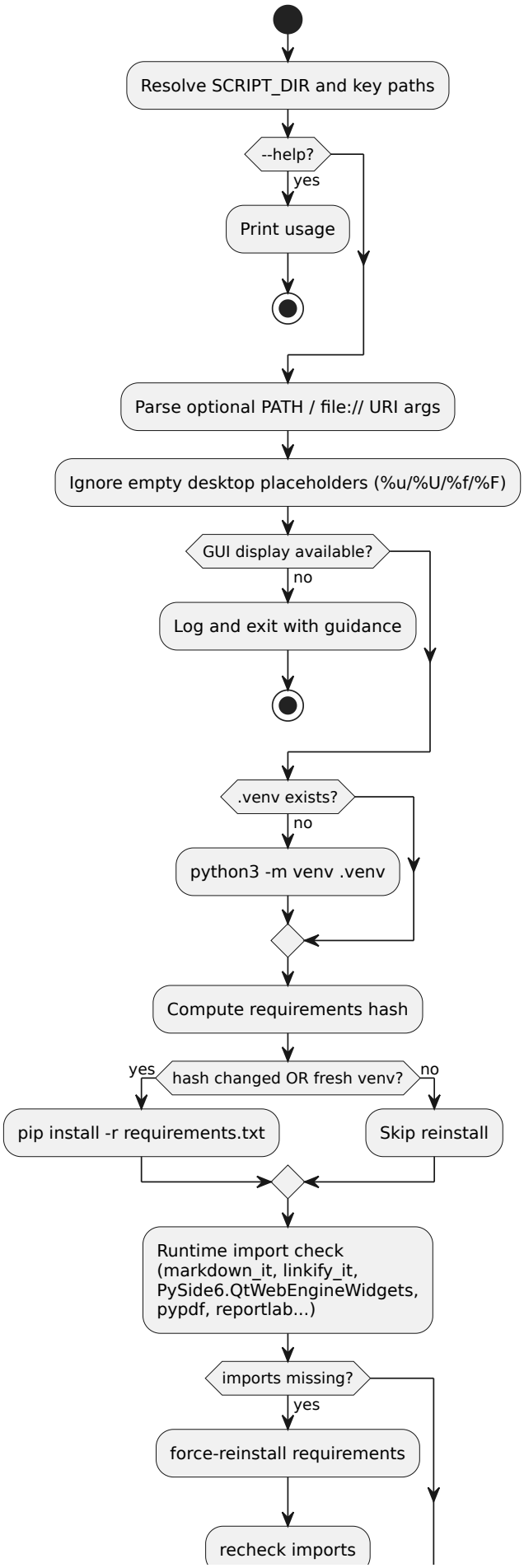
mdexplore UML

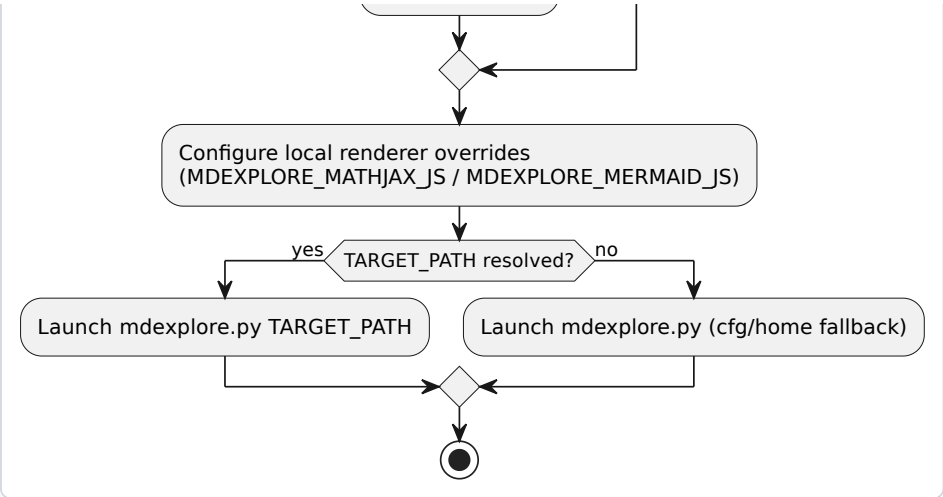
This document provides a comprehensive PlantUML view of the current `mdexplore` implementation. All diagrams are embedded so they can be rendered directly by mdexplore (or any Markdown viewer with PlantUML support).

1. System Architecture

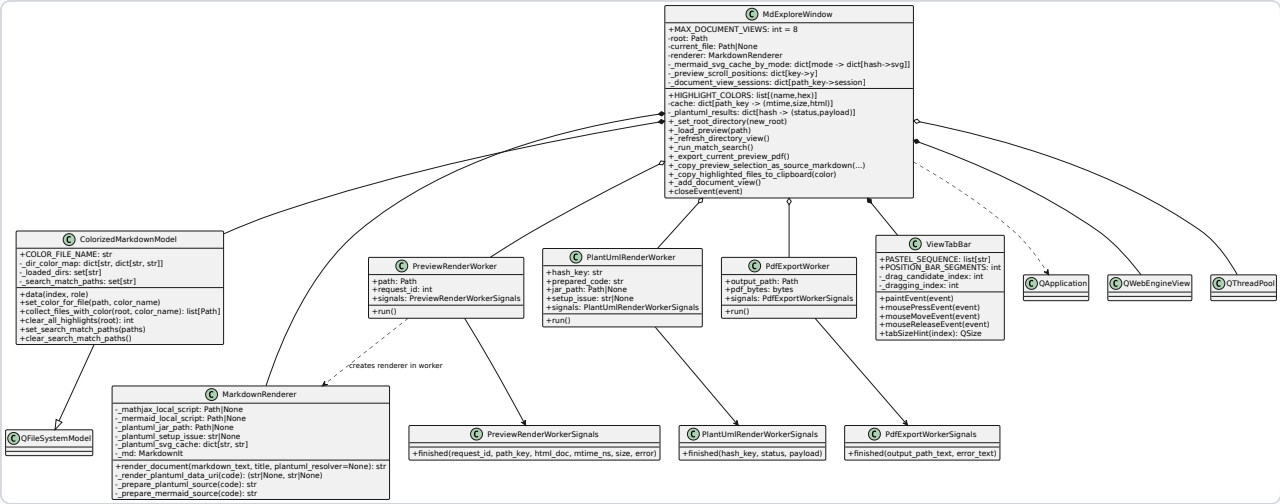


2. Launcher Runtime Activity (`mdexplore.sh`)

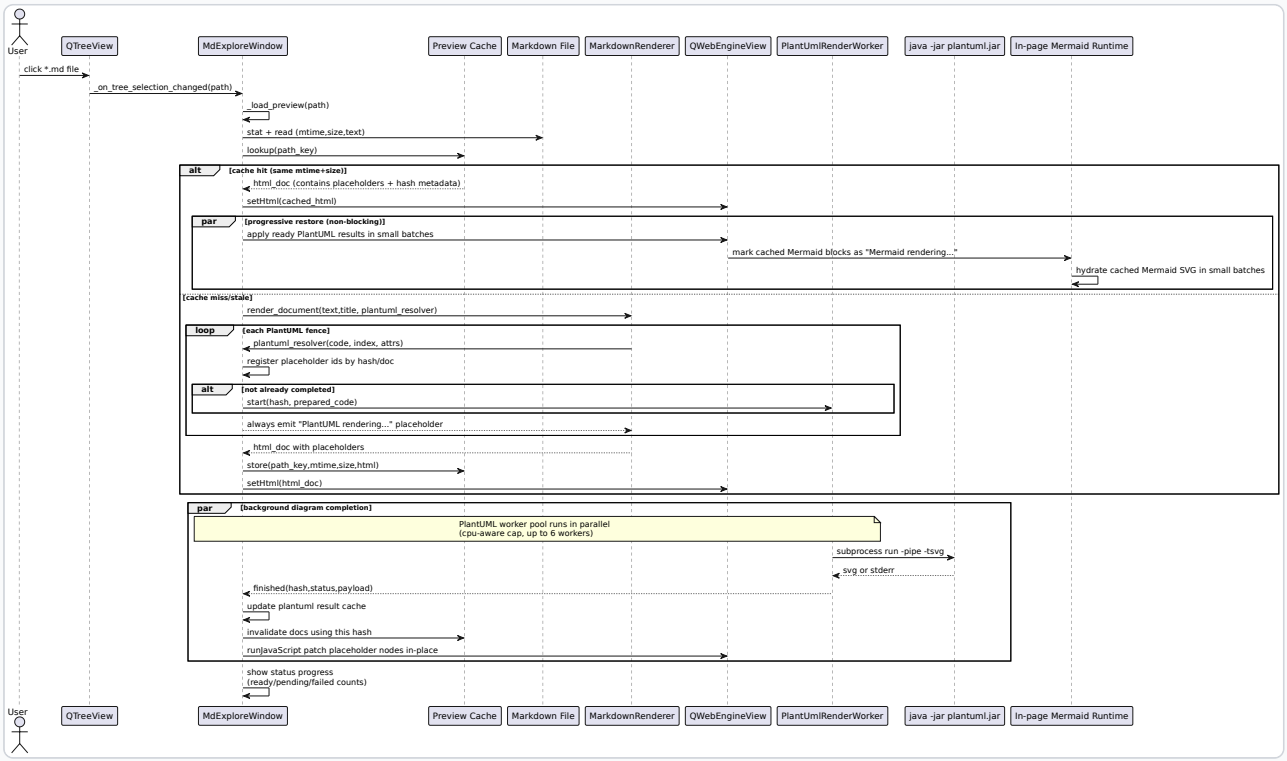

Resolve SCRIPT_DIR and key paths
--help?
yes
Print usage
Parse optional PATH / file:// URI args
Ignore empty desktop placeholders (%u/%U/%f/%F)
GUI display available?
no
Log and exit with guidance
.venv exists?
no
python3 -m venv .venv
Compute requirements hash
yes
hash changed OR fresh venv?
no
pip install -r requirements.txt
Skip reinstall
Runtime import check
(markdown_it, linkify_it,
PySide6.QtWebEngineWidgets,
pypdf, reportlab...)
imports missing?
yes
force-reinstall requirements
recheck imports



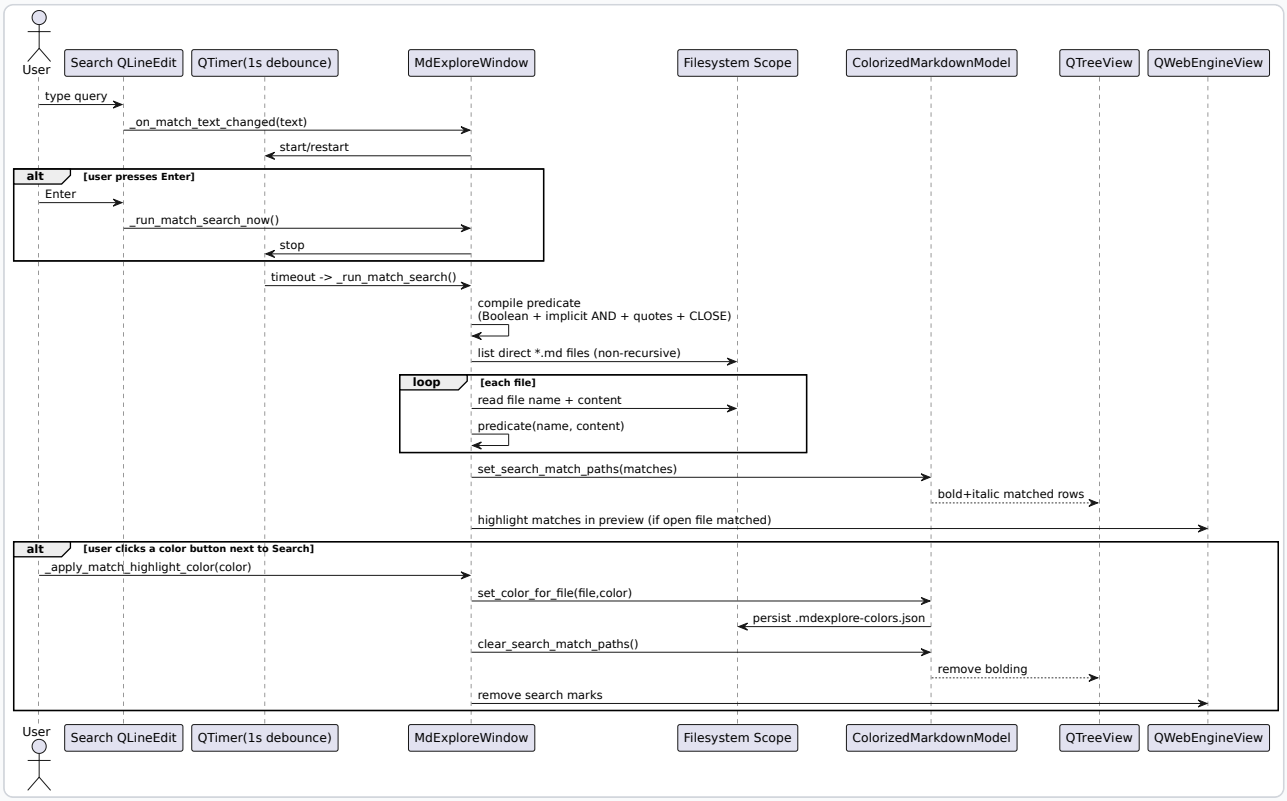
3. Core Class Diagram



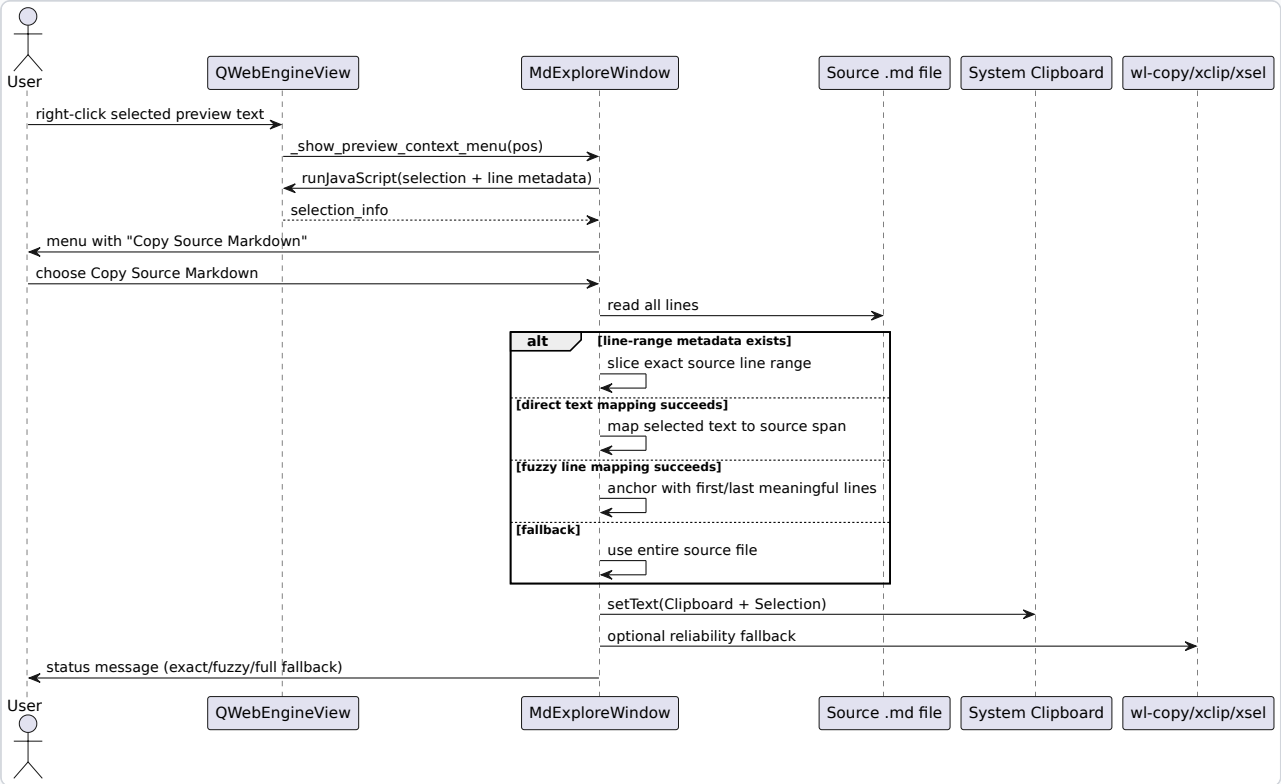
4. Preview Load + Progressive Diagram Restore



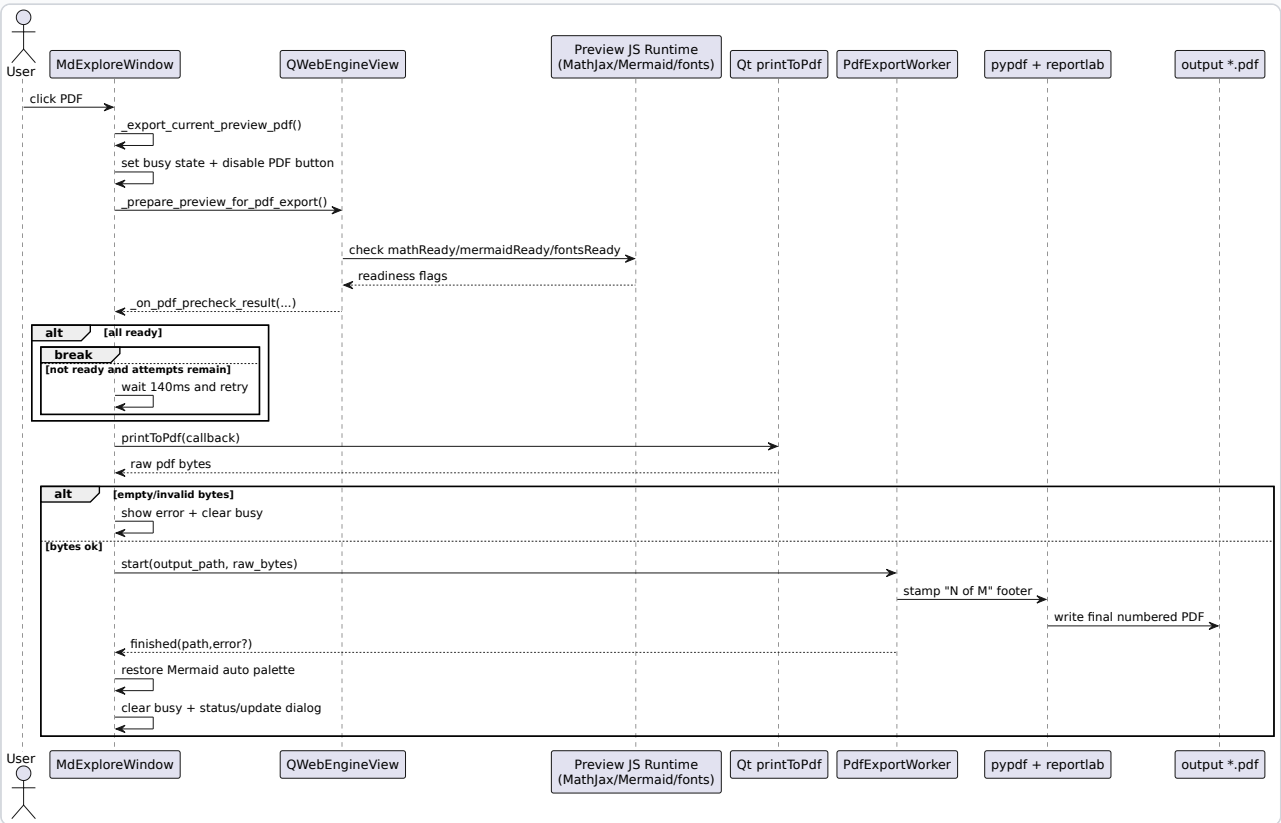
5. Search + Highlight + Apply Color Flow



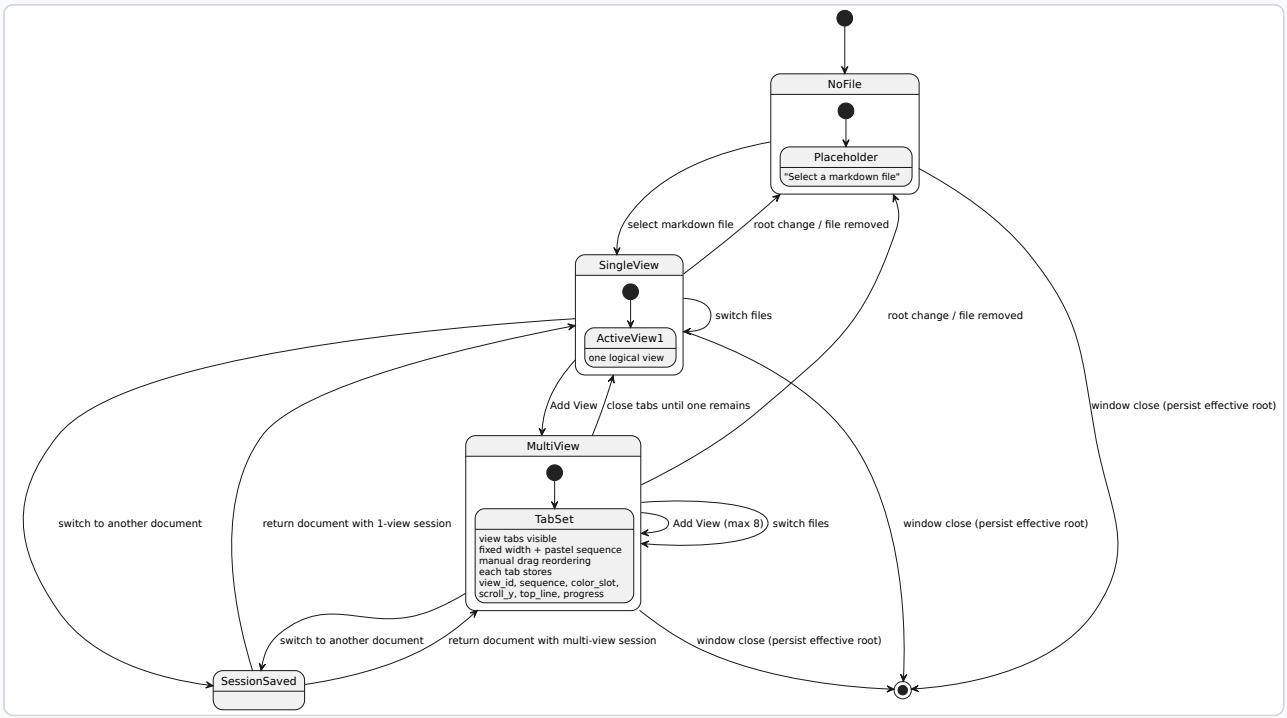
6. Preview Context Menu: Copy Source Markdown



7. PDF Export Pipeline



8. Document View/Tab Lifecycle



Notes

- Diagrams are based on current code in `mdexplore.py` and `mdexplore.sh`.
- Worker/threadpool usage is intentionally separated by concern:
  - render pool (preview HTML jobs),
  - PlantUML pool (diagram jobs),
  - PDF pool (post-processing/stamping).
- PlantUML rendering is non-blocking in UI flow: placeholders are rendered first, then patched in place as jobs finish.