MainWindow

- + data manger: DataManager
- + sort context: SortContext
- + sort ascending: bool
- + current displayed ads: list
- + setup ui(): void
- + show main(): void
- + show login dialog(); void
- + show register dialog(): void
- + show create ad dialog(): void
- + show edit ad dialog(): void
- + apply filters(dict): void
- + toggle sort direction(): void
- + update sort strategy(): void
- + apply current sort(): void
- + display ads(list): void
- + logout(): void

DataManager

- instance: DataManager
- user manager: UserManager
- ad manager: AdManager
- # load(str): void
- + save(): void
- + users(): list
- + ads(): list + current user(): str
- + add ad(str, dict): void
- + update ad(str, dict): void
- + delete ad(str)
- + increment popularity(str): void
- + get user ads(str): list
- + get all ads(): list
- + register_user(dict): bool
- + authenticate user(str, str): bool

SortContext

- strategy: SortStrategy
- + set strategy(SortStrategy): void
- + sort ads(list): list