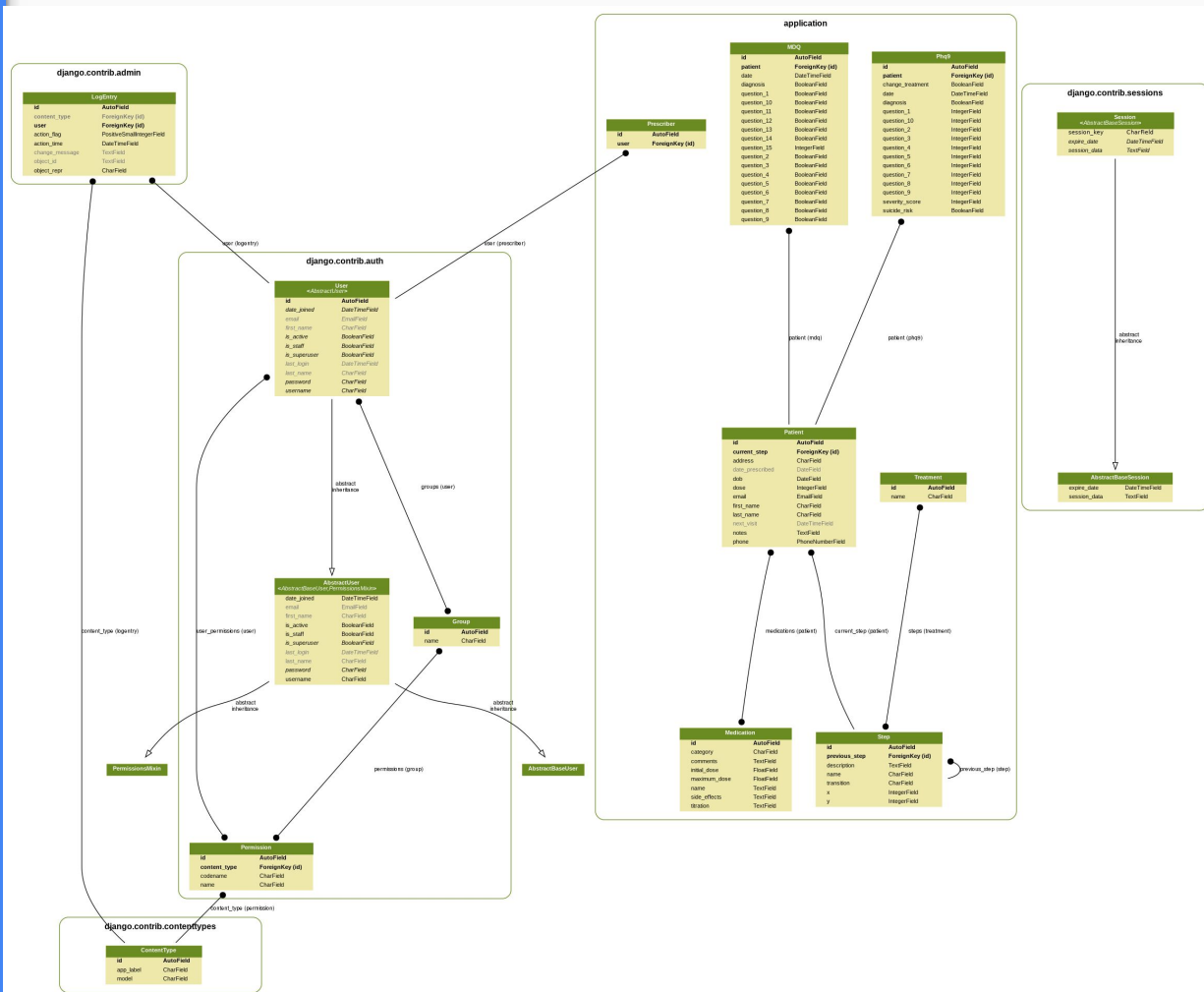


Psychiatric Prescribing Guide Application

Madison Fichtner, Alex Harry, Bryan Plant, Nate Tranel, Keely Weisbeck

System Design and UML Diagram

- Django controlled pattern
- Layers/separations
 - Admin site
 - Application/general functionality
 - Application database models
 - Authentication functionality



Design Choices

- Maintainable code
 - Layer separation allows things to be updated separately
 - Well documented process
- Extensible code
 - Django design helps; extensible from start
 - Documented classes to add features, functionality
- Quality Assurance and Validation
 - System tests (Selenium) help assure functionality
 - Python unit tests help assure backend correctness, data integrity
 - Selenium, Python testing are repudiated techniques

Testing

- Unit tests written in Python
 - White-box integrity testing
- TravisCI runs test suite every push
- Python coverage tool reports coverage
 - Lower coverage due to a lot of Django apps

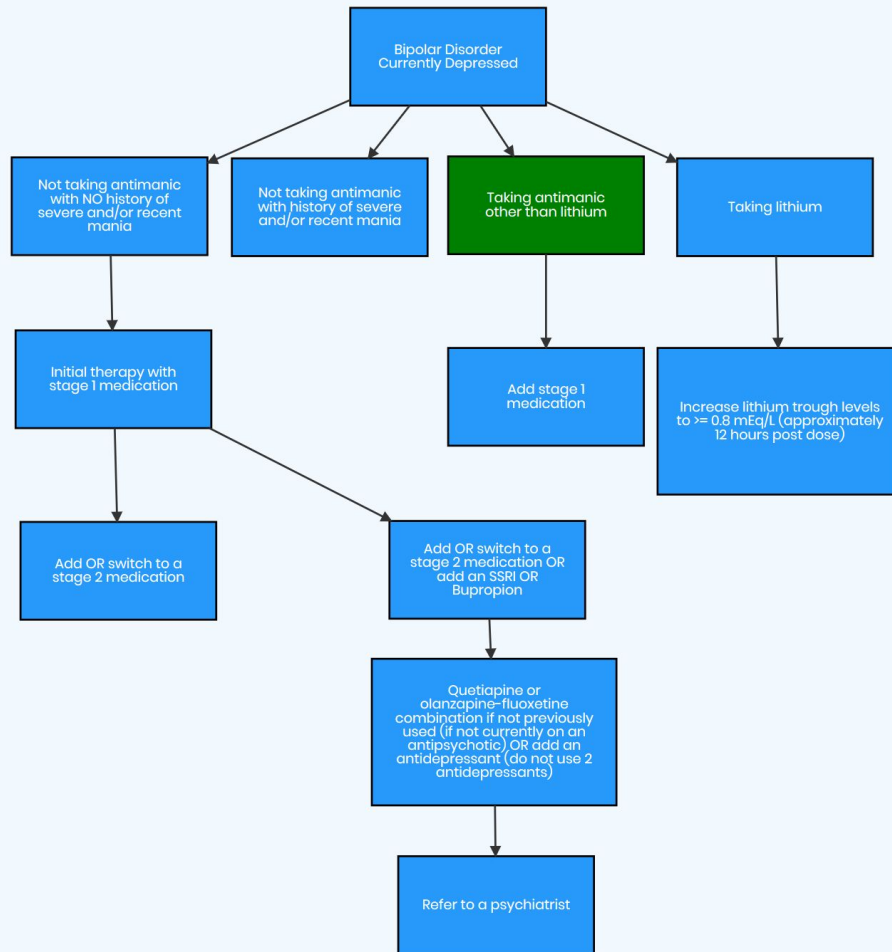
```
test_logout_url (tests.tests.UrlsWithCase) ... ok
test_medications_url (tests.tests.UrlsWithCase) ... ok
test_new_patient_url (tests.tests.UrlsWithCase) ... ok
test_patients_url (tests.tests.UrlsWithCase) ... ok
test_survey_url (tests.tests.UrlsWithCase) ... ok
test_treatment_overview_url (tests.tests.UrlsWithCase) ... ok
```

Name	Stmts	Miss	Branch	BrPart	Cover
-----	-----	-----	-----	-----	-----
application__init__.py	0	0	0	0	100%
application\admin.py	11	11	0	0	0%
application\apps.py	3	3	0	0	0%
application\migrations\0001_initial.py	9	0	0	0	100%
application\migrations\0002_auto_20190223_1141.py	4	0	0	0	100%
application\migrations\0003_auto_20190224_1551.py	5	0	0	0	100%
application\migrations\0004_auto_20190224_1626.py	5	0	0	0	100%
application\migrations\0005_auto_20190301_1733.py	4	0	0	0	100%
application\migrations\0006_auto_20190301_1810.py	4	0	0	0	100%
application\migrations\0007_auto_20190306_1234.py	4	0	0	0	100%
application\migrations\0007_auto_20190310_2254.py	4	0	0	0	100%
application\migrations\0008_auto_20190311_0903.py	5	0	0	0	100%
application\migrations\0009_mdq.py	6	0	0	0	100%
application\migrations\0010_merge_20190327_1826.py	4	0	0	0	100%
application\migrations\0011_auto_20190402_1848.py	5	0	0	0	100%
application\migrations\0012_auto_20190402_1904.py	5	0	0	0	100%
application\migrations\0013_auto_20190412_2258.py	6	0	0	0	100%
application\migrations__init__.py	0	0	0	0	100%
application\models.py	104	100	0	0	4%
application\questionnaire_evaluations.py	75	0	32	0	100%

Special Features

- Allows editing of site features through a frontend-backend integration interface
- Can easily view medications applicable to the treatments by group
- Algorithms are clearly displayed with current step (if accessed from patient page) and are changeable
- Developed with Cerner compatible practices - <https://fhir.cerner.com/millennium/dstu2/>

Bipolar Depressed



Demonstration

- Create new patient
- Take PHQ-9 or MDQ
- View different algorithms and edit flow

Psychiatric Guide App