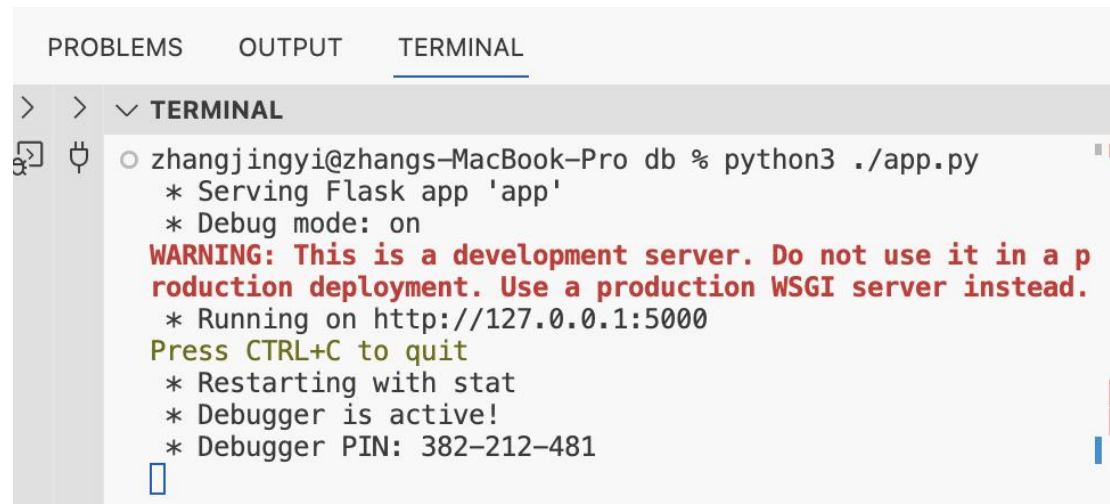


JINGYI ZHANG DEMO REPORT (jyz0328@bu.edu u26578499)

Usage Demonstration

Step 0: **download all code in main branch**

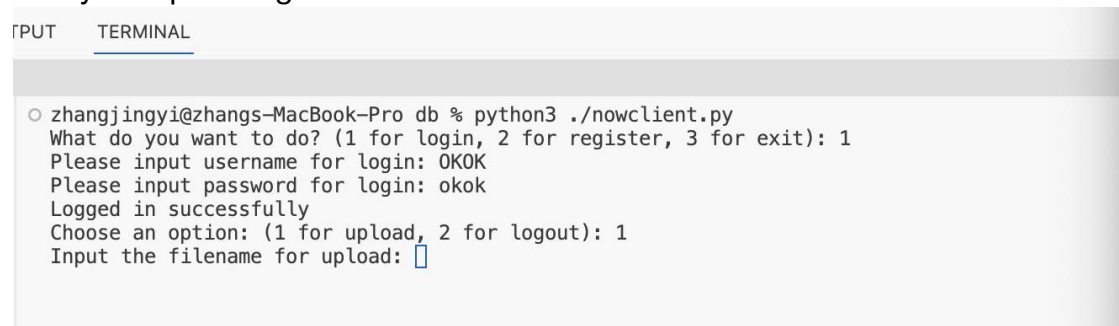
Step 1 open [[app.py](#)] : input `python3 ./app.py` in **terminal A** to run the app (the back end).



```
PROBLEMS OUTPUT TERMINAL
> > ▼ TERMINAL
○ zhangjingyi@zhangs-MacBook-Pro db % python3 ./app.py
  * Serving Flask app 'app'
  * Debug mode: on
  WARNING: This is a development server. Do not use it in a
  production deployment. Use a production WSGI server instead.
  * Running on http://127.0.0.1:5000
  Press CTRL+C to quit
  * Restarting with stat
  * Debugger is active!
  * Debugger PIN: 382-212-481
  □
```

Step 2 client 1 usage : input `python3 ./nowclient.py` in **terminal B** to run the app for client 1 (the front end).

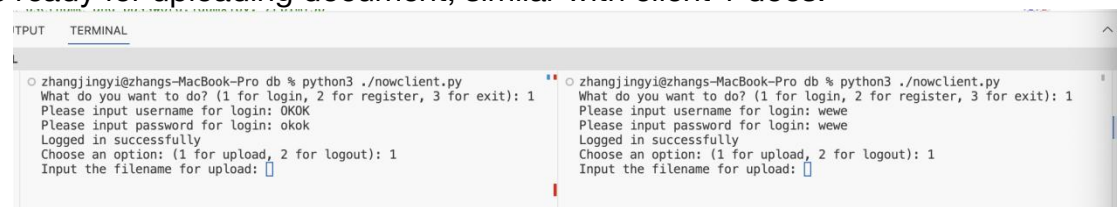
Then input 1 to login, then input username and password, then input 1 to be ready for uploading document.



```
INPUT TERMINAL
○ zhangjingyi@zhangs-MacBook-Pro db % python3 ./nowclient.py
  What do you want to do? (1 for login, 2 for register, 3 for exit): 1
  Please input username for login: OKOK
  Please input password for login: okok
  Logged in successfully
  Choose an option: (1 for upload, 2 for logout): 1
  Input the filename for upload: □
```

Step 3 client 2 usage : input `python3 ./nowclient.py` in **terminal C** to run the app for client 2 (the front end).

Then input 1 to login, then input username and password, then input 1 to be ready for uploading document, similar with client 1 does.



```
INPUT TERMINAL
○ zhangjingyi@zhangs-MacBook-Pro db % python3 ./nowclient.py
  What do you want to do? (1 for login, 2 for register, 3 for exit): 1
  Please input username for login: OKOK
  Please input password for login: okok
  Logged in successfully
  Choose an option: (1 for upload, 2 for logout): 1
  Input the filename for upload: □
```

Step 4 upload document for both clients: I upload [grade.pdf] for client 1, and upload [resume.pdf] for client2, so we see both analyzing report can be formed. The analyzing report is long , you can see [result_of_grade.txt] and [result_of_example.txt] since these documents print out the analyzing result of these two documents. You can use other pdf and txt documents to test.

```
ITPUT  TERMINAL

o zhangjingyi@zhangs-MacBook-Pro db % python3 ./nowclient.py
What do you want to do? (1 for login, 2 for register, 3 for exit): 1
Please input username for login: OKOK
Please input password for login: okok
Logged in successfully
Choose an option: (1 for upload, 2 for logout): 1
Input the filename for upload: grade.pdf
Document analyzed successfully with the following result:
Entities:
12/23/23, 10:04 AM (TIME); Boston University Office of the University Registrar
STUDENT GRADE REPORT FOR (ORG); December 23, (DATE); Jingyi Zhang (PERSON); 1st year (DATE); ENG EC504 (PRODUCT); ADV DATA (ORG); 14.8 4.0 (CARDINAL); ENG (ORG); 16.0 4.0 (CARDINAL); ENG EC602 (PRODUCT); 16.0 4.0 (CARDINAL); ENG EK690 A1 CAREER LAB M5 (PRODUCT); F 0.0 1.0 (PRODUCT); PDP (ORG); 0.0 1.0 (CARDINAL); 46.8 (CARDINAL); Total Credit Hours (EVENT); 14.0 (CARDINAL); Semester Grade Point (ORG); 3.60 (CARDINAL); Cum Grade Point (ORG); 3.60 (CARDINAL); December 23, 2023 (DATE); Boston University Grading System (ORG); Explanation Grade per Credit Hour (ORG); 4.0 (CARDINAL); 3.7 (CARDINAL); 3.3 (CARDINAL); 2.7 (CARDINAL); 2.3 (CARDINAL); 2.0 (CARDINAL); NC Not Applicable (WORK_OF_ART); Fx Not Applicable Fail (PRODUCT); J Not Applicable Registration (WORK_OF_ART); Grade (ORG); 1/1 (CARDINAL)

Keywords:
AM, STUDENT, FALL, Name, 1st, year, Hours, A-, B+, B, C+, C, D, Credit, Credit, degree, Credit, acceptable, degree, P, P, course, course, Additional, work, same, course, Applicable, Applicable, Unresolved, https://www.bu.edu/link/bin/uiscgi_studentlink.pl/HREF=https://www.bu.edu/link/bin/uiscgi_studentlink.pl/1703343829?app!path=grades_print.pl&StudentKe

Sentiment Polarity: 0.07727272727272726

Summary:
12/23/23, 10:04 AM Grades
Boston University Office of the University Registrar
STUDENT GRADE REPORT FOR FALL 2023
AS OF December 23, 2023
Name: Jingyi Zhang College of Registration: ENG
ID Number: U26-57-8499 Class Year: Graduate 1st year

o zhangjingyi@zhangs-MacBook-Pro db % python3 ./nowclient.py
What do you want to do? (1 for login, 2 for register, 3 for exit): 1
Please input username for login: weue
Please input password for login: weue
Logged in successfully
Choose an option: (1 for upload, 2 for logout): 1
Input the filename for upload: resume.pdf
Document analyzed successfully with the following result:
Entities:
JINGYIZHANG(ALISIAZHANG (PRODUCT); Github (GPE); jyz0328 Phone:765-746-9037(email (PERSON); jyz0328@bu.edu(Boston (GPE); MA (GPE); BOSTONUNIVERSITY (ORG); Sep2023-ExpectedJune2025 (PERSON); TaiChung (GPE); Taiwan (GPE); Data Structure, Probabilistic Methods (ORG); Digital System Design (ORG); Data Science (ORG); WORKINGEXPERIENCE (GPE); Shanghai (GPE); China (GPE); June2023 (GPE); Aug2023 (GPE); Performeddatacleaningusingpythononsummerweatherandirradiance(data (ORG); AppliedPearson (ORG); Spearman (GPE); andKendallcorrelationmethodfor correlationanalysis (ORG); Developedatimeseriesforecastingmodelbasedon LSTM(LongShort (PERSON); 75%to92% (PERCENT); Alsopresentedthetothetothewholecompanyforfuturereferenceandfeedback (PERSON); PROJECTSEXPRIENCE (TIME); AI (ORG); FerriMetric (ORG); Appliedrandomforestalgorithmtohedatato (PERSON); Sep2023-Dec2023 (PERSON); ISD-OCDDAILYDETAILApplication PurdueUniversity (ORG); DesignedandImplementedtheloginauthenticationfeatureusingC++ (PERSON); TikTokreminder (ORG); Designedanandroidappwhiche remindspeoplewhenshouldtheydowhat (PERSON); OtherProjects (ORG); GUARDTOURSUYSTEM (ORG); LASERHARPPROJECT (ORG); SQL (ORG); Git (GPE); AWS (ORG); AndroidStudio (ORG); Matlab (ORG); Critical Thinking (ORG); Data Science (ORG); Computer Engineering (ORG); Economics,Algorithm (ORG); Microsoftoffice (GPE)

Keywords:
ExpectedJune2025, Aug2020, May2023, [], Designedandimplementedapredictivemodelforphotovoltaicpanelpowerusagebasedonsummerweather, andirradiance dataattributes, includingtemperature, pressure, andhorizontal, vertical, scatterirradiance, prediction, model, implementation, power, usage, prediction, accuracy, %, Alsopresentedthetothetothewholecompanyforfuturereferenceandfeedback, Co, nutritional, deficiencies, detection, tool, order, [], IntegratedwithAPITocrawlandextractthenutritionalinformationof top5popularmealsfrom10countries, usingEnglish, Cleanedandprepareddataintojsonformat, predictpatient'sironbioavailabilityofironandblood transferrinsaturation, [], DesignedandimplementedaC++application, near
```

Step 5: input 2 and 3 to exit, or upload other document you want to test.

```
T  TERMINAL

Total Credit Hours 14.0
Semester Grade Point Index 3.60
Cum Grade Point Average 3.60 (As of December 23, 2023)
Boston University Grading System
Letter Honor Points
Explanation
Grade per Credit Hour
A 4.0 Excellent
A- 3.7
B+ 3.3
B 3.0 Good
B- 2.7
C+ 2.3
C 2.0 Satisfactory
C- 1.7
D 1.0 Low Pass
F 0.0 Fail; No Credit
AU Not Applicable Audit; No Credit Earned
CR Not Applicable Credit; Acceptable for degree
NC Not Applicable No Credit; Not acceptable for degree
H Not Applicable Honors
P Not Applicable Pass with Credit
P* Not Applicable Pass, P/F course
F* Not Applicable Fail, P/F course
I Not Applicable Incomplete; Additional work required
J Not Applicable Registration in the same or continuing course required
W Not Applicable Withdrew
MG Not Applicable Missing Grade; Grade not assigned
X Not Applicable Unresolved
https://www.bu.edu/link/bin/uiscgi_studentlink.pl/HREF=https://www.bu.edu/link/bin/uiscgi_studentlink.pl/1703343829?app!path=grades_print.pl&StudentKe... 1/1.

Choose an option: (1 for upload, 2 for logout): 2
Logging out successfully...
o zhangjingyi@zhangs-MacBook-Pro db %


calculatingtheneareststatefromthegiveninputlocation.
BikeTrafficpythonPredictionTool PurdueUniversity,May2022-August2022
[] Designedanddevelopedapredictiontoolusingpythonwhichhelpsinforecastingbike trafficindifferent timeperiodsandrecommendedpositionstoinstall sensorsforreal timesafety monitoring..
[] Developed the prediction model using multivariate linear regression model by analyzing relationships between daily weather forecast data(5 attributes including temperature, (low/high temperature and precipitation and bicycle traffic using sklearn.
[] Implemented R square algorithm on calculating positions with predicted maximum traffic flow for installing sensors..
ISD-OCDDAILYDETAILApplication PurdueUniversity,Jan2021-May2021
[] OCDDailyDetailisanappdesignedforISD(IndianaschoolfortheDeaf)forteachers giving parents prompt feedbackfor students on their engagement and activities at school.
[] Enhanced the ios front end features on formatting, displaying and aesthetics including using Canswift.
[] DesignedandImplementedtheloginauthenticationfeatureusingC++.
[] Implemented the app localization feature which translates the application between English and Spanish using C++ and java.
TikTokreminder Feng Chia University Sep2019-Dec2019
[] Designedan android app which reminds people when should they do what.
Other Projects: Beautiful "handwriting" machine, GUARDTOURSUYSTEM, LASERHARPPROJECT
SKILLS
Languages/Tools: C/C++,Java,Python,SQL,Git,AWS,AndroidStudio,Matlab,PCB design,web design
Other: Machine learning, Critical Thinking , Data Science, Data visualization, Computer Engineering, System design, Economics, Algorithm, data analysis, Microsoft office, statistics, computer science.

Choose an option: (1 for upload, 2 for logout): 2
Logging out successfully...
What do you want to do? (1 for login, 2 for register, 3 for exit): 3
Exiting...
o zhangjingyi@zhangs-MacBook-Pro db %
```

Test Part Demonstration

Step 0:download [tests] folder of this github

Step 1:open [test_upload] folder, then run [pytest test_upload.py] in terminal



```
zhangjingyi@zhangs-MacBook-Pro test % pytest test_upload.py
===== test session starts =====
platform darwin -- Python 3.10.5, pytest-7.4.4, pluggy-1.3.0
rootdir: /Users/zhangjingyi/Desktop/spring2024/ec530/project2/final/test
plugins: anyio-4.2.0
collected 4 items

test_upload.py .... [100%]

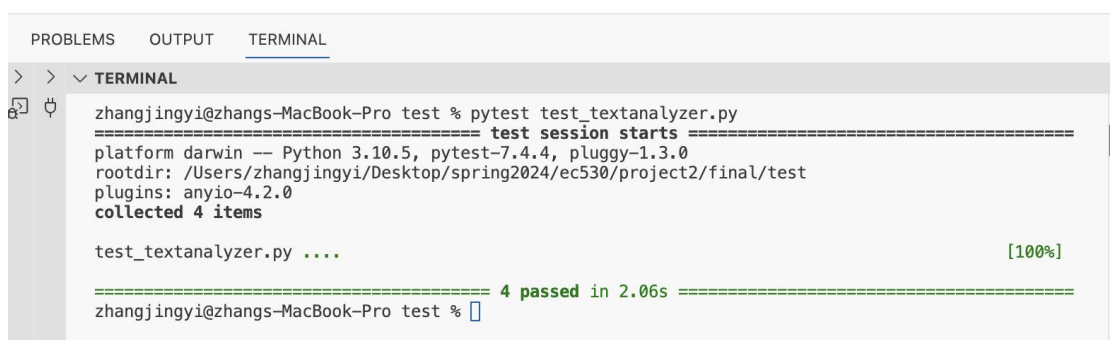
===== 4 passed in 2.74s =====
zhangjingyi@zhangs-MacBook-Pro test %
```

Code related to this step are [test_upload.py](#), [upload_separate.py](#) and [textanalyzer.py](#), in upload_separate.py we separate upload function from previous auth code parts. Also for [upload_separate.py](#):

if[python3 upload_separate.py]on terminal we can return 1
if[python3 upload_separate.py none.txt]on terminal we can return 2
if[python3 upload_separate.py sample.png]on terminal we can return 3
if[python3 upload_separate.py grade.pdf]on terminal we can return 4

Then we build unit test based on upload_separate.py and get the demo figure.

Step 2:open [test_textanalyzer] folder, then run [pytest test_textanalyzer.py] in terminal



```
zhangjingyi@zhangs-MacBook-Pro test % pytest test_textanalyzer.py
===== test session starts =====
platform darwin -- Python 3.10.5, pytest-7.4.4, pluggy-1.3.0
rootdir: /Users/zhangjingyi/Desktop/spring2024/ec530/project2/final/test
plugins: anyio-4.2.0
collected 4 items

test_textanalyzer.py .... [100%]

===== 4 passed in 2.06s =====
zhangjingyi@zhangs-MacBook-Pro test %
```

Code related to this step are [test_textanalyzer.py](#) and [textanalyzer_separate.py](#), in textanalyzer_separate.py we separate textanalyzer function from previous auth and upload code parts. Also for [textanalyzer_separate.py](#):

if[python3 textanalyzer_separate.py]on terminal we can return 1

if[python3 textanalyzer_separate.py none.txt]on terminal we can return
2

if[python3 textanalyzer_separate.py grade.pdf]on terminal we can return
3

if[python3 textanalyzer_separate.py test.txt]on terminal we can return
4

Then we build unit test based on textanalyzer_seperate.py and get the demo figure.