



Course Project: Building a Chatbot

ANGELA ALAISA

Scope

The screenshot shows the official website of the South Carolina House of Representatives. The top navigation bar includes links for Home, Senate, House, Committee Postings and Reports, Legislative Council, Citizens' Interest, Publications, and a Staff Portal. Below this is a secondary menu with links for Members, Officers, Standing Comm., Joint Comm., Email, Meetings, Calendars, Journals, Introductions, Delegations, and Rules. The main content area is for Representative J. Todd Rutherford, a Democrat from District 74 in Richland County. It features a photo of the representative, his title as Minority Leader, and his contact information including his Columbia and home addresses, and business and home phone numbers. There are links for his video schedule, video archives, and a way to send a message. The page also lists his personal information, committee assignments, sponsored bills, voting record, and service in public office. A footer contains the address of the South Carolina Legislative Services Agency and links for disclaimer, policies, photo credits, and contact.

Home Senate **House** Committee Postings and Reports Legislative Council Citizens' Interest Publications Staff Portal

Members Officers Standing Comm. Joint Comm. Email Meetings Calendars Journals Introductions Delegations Rules

House > Officers of the House > Representative J. Todd Rutherford
House > Members of the House > Representative J. Todd Rutherford

Representative J. Todd Rutherford

Minority Leader
Democrat - Richland
District 74 - Richland County - [Map](#)

Columbia Address
335B Blatt Bldg.
Columbia 29201

Home Address
2113 Park Street
Columbia 29201

Business Phone (803) 734-9441

Home Phone (803) 799-8633
Business Phone (803) 256-3003

[Send message to Representative Rutherford](#)

Personal Information

- Attorney
- Residing at 2321 Lincoln St., Columbia
- Born October 10, 1970 in Columbia
- Son of Harry and Karen Rutherford
- Howard University, B.A., 1992
- University of South Carolina, J.D., 1996
- 2 children, J. Todd II "Ty" and Tripp Benjamin
- Legislative Assistant, Congressman Robin Tallon, 1992-93
- Owner, 3 Tech Integrated Systems, 1993
- Assistant Solicitor/Special Prosecutor of Narcotic and Drug Cases, Fifth Solicitor's Office, 1996-98
- The Rutherford Law Firm, LLC, 1998-11
- Owner, 803 Trucking, LLC
- WasteSouth, LLC
- T.I.S. Consulting and Auto
- National Board member, NAACP Special Contributions Fund
- Board Member, Brookland Baptist Church Community Credit Union, 1999
- Member, South Carolina Bar Association

Committee Assignments

- Ethics
- Ways and Means

Sponsored Bills in the House

- Primary Sponsor: ☒ Yes ☐ No
- Search Session: [Find Bills](#)

Voting Record

- Search Session: [Find Votes](#)

Service In Public Office

- House of Representatives, 1999 - Present

How do I...
Quick Search
Find Your Legislators
Contact Your Legislator
Legislation
Track Legislation
Multi-Criteria Search
Research
South Carolina Law
Legislative Manual
Student Connection
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- District 74
- All programs were written in Java
 - Most familiar program
 - Wanted to expand on my current knowledge

Data

- Types of data retrievable from the HTML code:
 - I1 – Contact information
 - I2 – Personal information
 - I3 – Committee Assignments
 - I6 – Service in Public Office
- Others that were not accessible (due to being on a separate page of the website)
 - I4 – Sponsored Bills
 - I5 – Voting Record

Code Organization

Assignment Highlights:

PA1 Reads contents directly from the website's URL

PA2 & PA3 Implementation of regex

- search through html file and read user queries

PA4 Doesn't use the suggested approach

- added functionality to search for more specific data when requested

PA5 Use of logger class and


PA6 Reused code from a peer, same peer reused my code as well

- had trouble figuring out how to obtain the number of files within a folder

Code Organization (continued)

Assignment Highlights:

- All programming assignments were written using only one Java file
 - Didn't feel necessary to have more than that
- Consisted of one class
 - Had variables to hold each data type, inputs, outputs, etc.
 - One instance of the class was made



Snapshots of Supported Queries

#1 – Program Exit

“Quit”, “quit”, or “q”

```
Enter query below
(type "Quit", "quit", or "q" to exit the program.)
Quit
Apr 19, 2022 2:10:26 AM Chatbot main
INFO: Quit
Files created:
    chat_statistics.csv
    2022-04-19_02-08-34.txt
    MyLogFile.log
Program will be terminated. Goodbye
```

#2 – Personal Info

“Tell me about the representative/rep”

```
Enter query below
(type "Quit", "quit", or "q" to exit the program.)
tell me about the rep
Apr 19, 2022 2:08:41 AM Chatbot main
INFO: tell me about the rep

Attorney
Residing at 2321 Lincoln St., Columbia
Born October 10, 1970 in Columbia
Son of Harry and Karen Rutherford
Howard University, B.A., 1992
University of South Carolina, J.D., 1996
2 children, J. Todd II "Ty" and Tripp Benjamin
Legislative Assistant, Congressman Robin Tallon, 1992-93
Owner, 3 Tech Integrated Systems, 1993
Assistant Solicitor/Special Prosecutor of Narcotic and Drug Cases, Fifth Solicitor's Office, 1996-98
The Rutherford Law Firm, LLC, 1998-11
Owner, 803 Trucking, LLC
WasteSouth, LLC
T.I.S. Consulting and Auto
National Board member, NAACP Special Contributions Fund
Board Member, Brookland Baptist Church Community Credit Union, 1999
Member, South Carolina Bar Association
House of Representatives, 1999 - Present
```

#3 – Contact Info: Home Address “Where does my rep live”

```
where does the rep live
Apr 19, 2022 2:08:51 AM Chatbot main
INFO: where does the rep live

2113 Park Street Columbia 29201

Apr 19, 2022 2:08:51 AM Chatbot answerQuery
INFO: 2113 Park Street Columbia 29201
```

#4 – Contact Info “How do I contact my rep”

```
Enter query below
(type "Quit", "quit", or "q" to exit the program.)
how do i contact my rep
Apr 19, 2022 2:09:03 AM Chatbot main
INFO: how do i contact my rep

Home Address:
2113 Park Street Columbia 29201
        Home Phone: (803) 799-8633
        Business Phone: (803) 256-3003
Columbia Address:
335B Blatt Bldg. Columbia 29201
        Business Phone: (803) 734-9441
```


#5 – Committee Assignments

“What committees is my rep on”

```
Enter query below
(type "Quit", "quit", or "q" to exit the program.)
what committees is my rep on
Apr 19, 2022 2:09:15 AM Chatbot main
INFO: what committees is my rep on
```

```
Ethics
Ways and Means
```

#6 – Give All Extracted Info

“Tell me everything”

```
tell me everything
Apr 19, 2022 2:09:26 AM Chatbot main
INFO: tell me everything

Name: J. Todd Rutherford
Party: Democrat
District: 74
County: Richland
Business Address: 335B Blatt Bldg. Columbia 29201
Home Address: 2113 Park Street Columbia 29201
Personal Info:
[Attorney, Residing at 2321 Lincoln St., Columbia, Born October 10, 1970 i
Committee Assignments:
[Ethics, Ways and Means]
Sponsored bills: in another webpage section, currently unavailable
Voting Record: in another webpage section, currently unavailable
Service in Public Office: House of Representatives, 1999 - Present
```

#7 – District Number and Name

“What district is supported for Q&A”

```
Enter query below
(type "Quit", "quit", or "q" to exit the program.)
what district is supported for Q&A
Apr 19, 2022 2:09:42 AM Chatbot main
INFO: what district is supported for Q&A

District 74, Richland
```

#8 – Any other query

```
some random question here
Apr 19, 2022 2:09:52 AM Chatbot main
INFO: some random question here
some random question here - I do not know this information
Please rephrase query
```

#9 – summary

```
Enter query below
(type "Quit", "quit", or "q" to exit the program.)
summary
Apr 19, 2022 3:03:49 AM Chatbot main
INFO: summary
There are 54 chats to date with user asking 76 times and system responding 76 times. The total duration is 986.0 seconds
Enter query below
(type "Quit", "quit", or "q" to exit the program.)
```

#10 – showchat summary <#>

“showchat-summary 6”

```
Enter query below
(type "Quit", "quit", or "q" to exit the program.)
showchat summary 6
Apr 19, 2022 3:05:22 AM Chatbot main
INFO: showchat summary 6
Chat 6 has user asking 7 times and system respond 7 times.
Total session duration: 96 seconds
```

#11 – showchat <#> “showchat 6”

```
Enter query below
(type "Quit", "quit", or "q" to exit the program.)
showchat 3
Apr 19, 2022 3:02:59 AM Chatbot main
INFO: showchat 3
Chat 3 chat is:

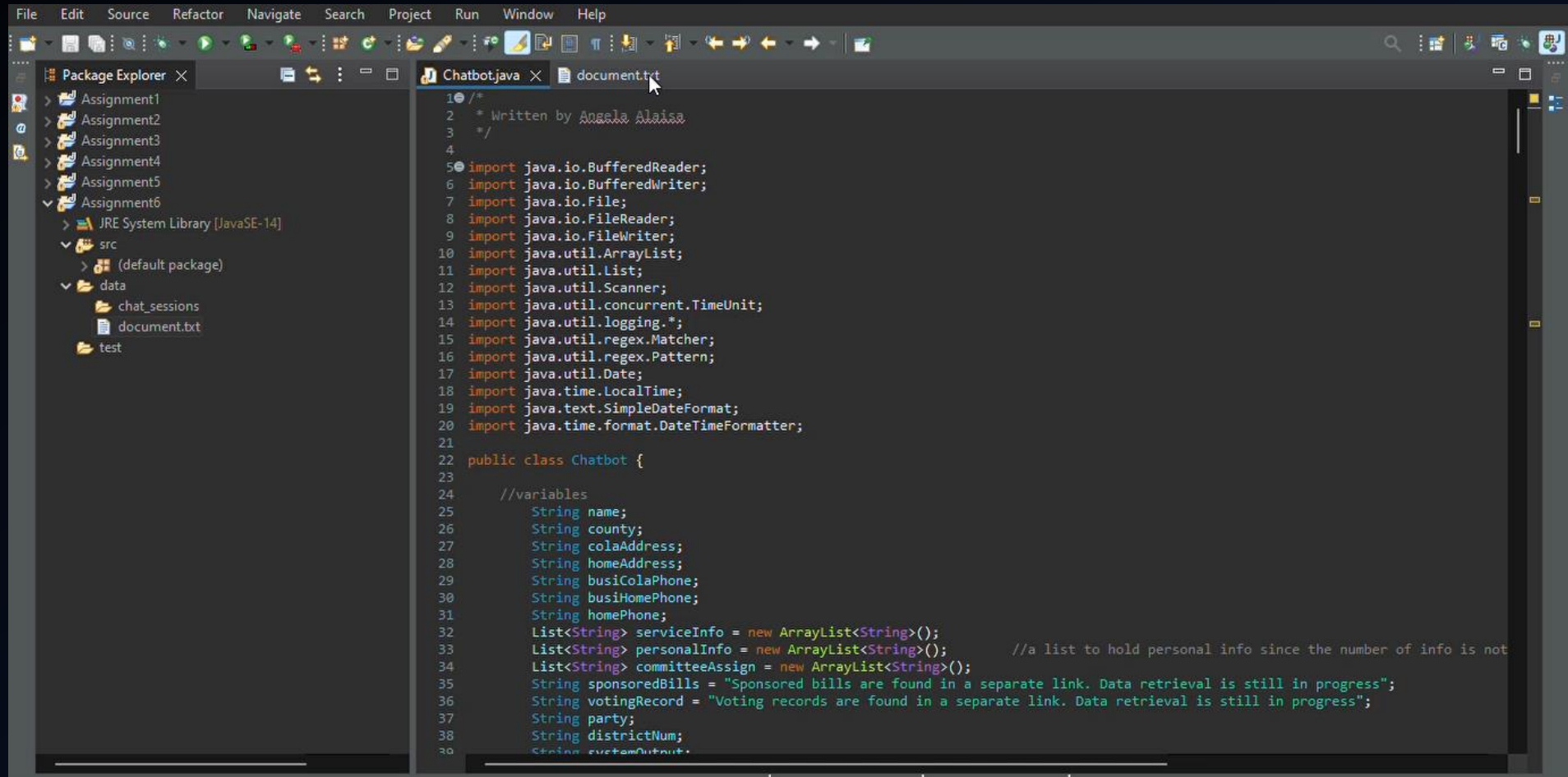
User Query:
    where does he work
System Response:
    335B Blatt Bldg. Columbia 29201
User Query:
    where does he live
System Response:
    2113 Park Street Columbia 29201
User Query:
    which district does he legisltate
System Response:
    74
```

#12 – showchat <invalid#> “showchat 200”

```
Enter query below
(type "Quit", "quit", or "q" to exit the program.)
showchat 50
Apr 19, 2022 3:02:11 AM Chatbot main
INFO: showchat 50
There are only 18 chat sessions. Please choose a valid number
```

Demo Video

<https://youtu.be/hqWdIP5EPCA>



Conclusion

- Experience implementing the chatbot
 - Project seemed a bit intimidating at first
 - Became easier to understand after PA3 when the main parts of the chatbot were starting to be put together
- Testing
 - Was not too difficult due to constant error checking to make sure the program was doing what it was intended to do
 - Outputting everything
 - Exceptions (try/catch block, throws exception)