Drexel Chatbot Test Cases

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Revision History

Name(s)	Date	Comment(s)	Version
All	4/16/17	Preliminary Document Structure	0.1
All	4/28/17	Update test cases	0.5
All	4/30/17	Review and finalize test cases	1.0
All	5/15/17	Revised a few test cases	1.1

1. API Test Cases

ID	TC 1.1
Description	Send a GET request to the Web API with the question as a URL parameter
Requirements(s)	R4.1.1.1
Precondition(s)	• Website, API, and database process are running • User is logged into the Drexel network or using the VPN
Action(s)	• Navigate to these address in a web browser: http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office
Result(s)	• The server replies with {"content":"Vokolos's office is University Crossings 131."}

ID	TC 1.2
Description	API responses are defined in JSON
Requirements(s)	R4.1.3.1
Precondition(s)	• Website, API, and database process are running • User is logged into the Drexel network or using the VPN
Action(s)	• Navigate to these address in a web browser: http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office”
Result(s)	• The response is in the form of a JSON object (starting and ending curly braces, with a dictionary of “key” : “pair” values)

ID	TC 1.3
Description	The server will respond with a 200 OK when a response can be returned and the user’s query is valid.
Requirements(s)	R4.1.3.2
Precondition(s)	• Website, API, and database process are running • User is logged into the Drexel network or using the VPN

Action(s)	• Navigate to these address in a web browser: http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office"
Result(s)	• The web browser not showing an error code means that Response status is 200 OK

ID	TC 1.4
Description	The JSON's response body contains the "content" member
Requirements(s)	R4.1.3.3
Precondition(s)	• Website, API, and database process are running • User is logged into the Drexel network or using the VPN
Action(s)	• Navigate to these address in a web browser: http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office"
Result(s)	• The response body contains the "data" member and is paired with the response to the query.

2. Database Test Cases

ID	TC 2.1
Description	The database "chatbotDB" exists
Requirements(s)	R.4.5.1.1
Precondition(s)	• User is logged into the Drexel network or using the VPN • Database process is running
Action(s)	• Navigate to the stardog web interface tool
Result(s)	• The web interface loads and shows the text box to run queries

ID	TC 2.2
Description	Database contains some data
Requirements(s)	R.4.5.1.2

Precondition(s)	● Database process is running ● “chatbotDB” exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface tool ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n where { ?s cb:name ?n}
Result(s)	● A list of names in the database is displayed

ID	TC 2.3
Description	Database contains data about facility locations
Requirements(s)	R.4.6.1.1
Precondition(s)	● Database process is running ● “chatbotDB” exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n ?f ?r where { ?s cb:room ?e . ?s cb:name ?n . ?s cb:property "building" . ?s cb:property ?f}
Result(s)	● Rows with facility names and locations are displayed

ID	TC 2.4
Description	Database contains data about facility schedules
Requirements(s)	R.4.6.1.2
Precondition(s)	● Database process is running ● “chatbotDB” exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/>

	select ?n ?f ?o ?c where { ?s cb:mStartTime ?o . ?s cb:mEndTime ?c . ?s cb:name ?n . ?s cb:property "building" . ?s cb:property ?f}
Result(s)	● Rows with facility names, open times, and close times are displayed

ID	TC 2.5
Description	Database contains data about faculty's office locations
Requirements(s)	R.4.6.1.3
Precondition(s)	● Database process is running ● "chatbotDB" exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n ?f ?r where { ?s cb:room ?r . ?s cb:name ?n . ?s cb:property "faculty" . ?s cb:property ?f}
Result(s)	● Rows with faculty names and office locations are displayed

ID	TC 2.6
Description	Database contains data about faculty's contact information
Requirements(s)	R.4.6.1.4
Precondition(s)	● Database process is running ● "chatbotDB" exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n ?f ?e ?p where { ?s cb:email ?e . ?s cb:phone ?p . ?s cb:name ?n . ?s cb:property "faculty" . ?s cb:property ?f}

Result(s)	● Rows with faculty names, email addresses, and phone numbers(if applicable) are displayed

ID	TC 2.7
Description	Database contains data about faculty positions
Requirements(s)	R.4.6.1.5
Precondition(s)	● Database process is running ● “chatbotDB” exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n ?f ?t where { ?s cb:title ?t . ?s cb:name ?n . ?s cb:property "faculty" . ?s cb:property ?f}
Result(s)	● Rows with faculty names and titles are displayed

ID	TC 2.8
Description	Database contains data about academics policies
Requirements(s)	R.4.6.1.6
Precondition(s)	● Database process is running ● “chatbotDB” exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n ?p ?t ?w where { ?s cb:title “academics” . ?s cb:title ?t . ?s cb:name ?n . ?s cb:property "policy" . ?s cb:property ?p . ?s cb:website ?w}
Result(s)	● Rows with academics policies are displayed

ID	TC 2.9

Description	Database contains data about admissions policies
Requirements(s)	R.4.6.1.7
Precondition(s)	● Database process is running ● “chatbotDB” exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n ?p ?t ?w where { ?s cb:title “admissions” . ?s cb:title ?t . ?s cb:name ?n . ?s cb:property "policy" . ?s cb:property ?p . ?s cb:website ?w}
Result(s)	● Rows with admissions policies are displayed

ID	TC 2.10
Description	Database contains data about technology policies
Requirements(s)	R.4.6.1.8
Precondition(s)	● Database process is running ● “chatbotDB” exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n ?p ?t ?w where { ?s cb:title “technology” . ?s cb:title ?t . ?s cb:name ?n . ?s cb:property "policy" . ?s cb:property ?p . ?s cb:website ?w}
Result(s)	● Rows with admissions policies are displayed

ID	TC 2.11
Description	Database contains data about on-campus dining locations
Requirements(s)	R.4.6.1.9
Precondition(s)	● Database process is running ● “chatbotDB” exists ● User is logged into the Drexel network or using the VPN

Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n ?p ?t ?l where { ?s cb:title “on-campus” . ?s cb:title ?t . ?s cb:name ?n . ?s cb:property "dining" . ?s cb:property ?p . ?s cb:location ?l}
Result(s)	● Rows with on-campus dining locations are displayed

ID	TC 2.12
Description	Database contains data about on-campus dining hours
Requirements(s)	R.4.6.1.10
Precondition(s)	● Database process is running ● “chatbotDB” exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n ?p ?t ?o ?c where { ?s cb:title “on-campus” . ?s cb:title ?t . ?s cb:name ?n . ?s cb:property "dining" . ?s cb:property ?p . ?s cb:opentime ?o . ?s cb:closetime ?c}
Result(s)	● Rows with on-campus dining hours are displayed

ID	TC 2.13
Description	Database contains data about on-campus dining food types
Requirements(s)	R.4.6.1.11
Precondition(s)	● Database process is running ● “chatbotDB” exists ● User is logged into the Drexel network or using the VPN
Action(s)	● Navigate to the Stardog web interface ● Execute the command below in the query panel: prefix cb: <http://drexelchatbot.com/rdf/> select ?n ?p ?t ?y where {

	?s cb:title “on-campus” . ?s cb:title ?t . ?s cb:name ?n . ?s cb:property "dining" . ?s cb:property ?p . ?s cb:type ?y}
Result(s)	● Rows with on-campus dining food types are displayed

3. Front-end application Test Cases

ID	TC 3.1
Description	The GUI will have a textbox that will accept inputs from a keyboard
Requirements(s)	R4.7.1.1
Precondition(s)	● Website, API, and database process are running ● User is logged into the Drexel network or using the VPN ● The user is on the website for the application
Action(s)	● User sees a textbox to type in ● User enters text into the text box
Result(s)	● Text is present in the textbox

ID	TC 3.2
Description	Text box will originally contain a suggestive text question, to guide the user to the format of an appropriate question
Requirements(s)	R4.7.1.2
Precondition(s)	● Website, API, and database process are running ● User is logged into the Drexel network or using the VPN ● The user is on the website for the application
Action(s)	● User sees a textbox to type in
Result(s)	● Contextual hint is present in the textbox when no text is entered.

ID	TC 3.3
Description	The GUI will have a “Send” button which sends text from the textbox to the API when clicked

Requirements(s)	R4.7.1.3
Precondition(s)	● Website, API, and database process are running ● User is logged into the Drexel network or using the VPN ● The user is on the website for the application
Action(s)	● User sees the send button and enters text into the text area
Result(s)	● Message is sent to the API for processing

ID	TC 3.4
Description	The GUI will have a chat window displaying questions sent to the system and responses from the API.
Requirements(s)	R4.7.1.4
Precondition(s)	● Website, API, and database process are running ● User is logged into the Drexel network or using the VPN ● The user is on the website for the application ● User has sent questions to the server previously
Action(s)	● User looks at the window above the textbox
Result(s)	● Chat log is present showing the interactions between user and service

ID	TC 3.5
Description	The chat window will contain all questions and answers from the current session, with a scroll bar if all messages can’t fit on the screen.
Requirements(s)	R4.7.1.5
Precondition(s)	● Website, API, and database process are running ● User is logged into the Drexel network or using the VPN ● The user is on the website for the application ● User has sent questions to the server previously
Action(s)	● User sees a scrollbar if the have sent enough messages ● User scrolls the scrollbar
Result(s)	● The chatlog scrolls

ID	TC 3.6
Description	If there is a network issue, the chat window will display an error message.
Requirements(s)	R4.7.1.6
Precondition(s)	● Website, API, and database process are running ● User is logged into the Drexel network or using the VPN ● The user is on the website for the application
Action(s)	● The user somehow encounters an error
Result(s)	● Chat log will display the error message to the user

4. Backend Test Cases

ID	TC 4.1
Description	Submitting a question to the website returns an appropriate answer
Requirements(s)	R4.7.1.1 - R4.7.1.6, R5.1.3.1
Precondition(s)	● Website, API, and database process are running ● User is logged into the Drexel network or using the VPN
Action(s)	● Use a web browser to navigate to the website ● Type “What is Mongan’s email?” in the text box ● Press enter to send the message
Result(s)	● Within 2 seconds: ● The response “Mongan's email address is wmm24@cs.drexel.edu” is displayed.

ID	TC 4.2
Description	Submitting a question to the mobile application returns an appropriate answer
Requirements(s)	R4.7.1.1 - R4.7.1.6, R5.1.3.1
Precondition(s)	● API, and database process are running ● Mobile application installed on a device ● Device is logged into the Drexel network or using the VPN

Action(s)	● Open the mobile application ● Type “What is Mongan’s email?” in the text box ● Press enter to send the message
Result(s)	● Within 2 seconds ● The response “Mongan's email address is wmm24@cs.drexel.edu” is displayed.

ID	TC 4.3
Description	Submitting a question via SMS message returns an appropriate answer
Requirements(s)	R4.7.2.1 - R4.7.2.3
Precondition(s)	● SMS server, API, and database process are running ● User has an SMS capable device
Action(s)	● Use SMS to send “What is Mongan’s email?” to the SMS server
Result(s)	● The response “Mongan's email address is wmm24@cs.drexel.edu” is sent.

ID	TC 4.4
Description	The web interface is easy to use
Requirements(s)	R5.2.1.1
Precondition(s)	● A user with no experience with the website ● This user is presented with the web interface
Action(s)	● User attempts to use the interface for 5 minutes ● Watch them and keep note of any mistakes they make or any confusions they have
Result(s)	● After 5 minutes the user has made 3 mistakes or fewer

ID	TC 4.5
Description	The mobile app is easy to use
Requirements(s)	R5.2.1.1
Precondition(s)	● A user with no experience with the mobile app

	● This user is presented with the mobile app
Action(s)	● User attempts to use the interface for 5 minutes ● Watch them and keep note of any mistakes they make or any confusions they have
Result(s)	● After 5 minutes the user has made 3 mistakes or fewer

ID	TC 4.6
Description	Questions about Drexel Facilities location should be answered by the system
Requirements(s)	R4.6.1.1
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● “Where is Rush building” is typed in the textbox ● Press Enter to send the question
Result(s)	● “Rush Building is at 30 N 33rd St” is displayed.

ID	TC 4.7
Description	Questions about Drexel Facilities schedules should be answered by the system
Requirements(s)	R4.6.1.2
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● “What is gym’s schedule today” is typed in the textbox ● Press Enter to send the question
Result(s)	● “Gym opens at 5:30 a.m. and closes at 12:00 a.m.” is outputted.

ID	TC 5.3
Description	Questions about Drexel faculty’s office location should be answered by the system

Requirements(s)	R4.6.1.3
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● “Where is Filippos Vokolos's office?” is typed in the textbox ● Press Enter to send the question
Result(s)	● “Filippos Vokolos's office is University Crossings 131” is displayed.

ID	TC 4.8
Description	Questions about Drexel faculty’s contact information should be answered by the system
Requirements(s)	R4.6.1.4
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● “What is professor Balduccini's email address?” is typed in the textbox ● Press Enter to send the question
Result(s)	● “Balduccini's email address is marcello.balduccini@drexel.edu.” is displayed.

ID	TC 4.9
Description	Questions about Drexel faculty positions should be answered by the system
Requirements(s)	R4.6.1.5
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● “Does Kurt Schmidt have a website?” is typed in the textbox ● Press Enter to send the question
Result(s)	● “https://www.cs.drexel.edu/~kschmidt is Kurt Schmidt's website.” is displayed.

ID	TC 4.10
Description	Questions about Drexel academics policies should be answered by the system
Requirements(s)	R4.6.1.6
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● “What is the “Absence from class” policy?” is typed in the textbox ● Press Enter to send the question
Result(s)	● The “Absence from Class” policy can be found here: http://drexel.edu/provost/policies/absence/ is displayed.

ID	TC 4.11
Description	Questions about Drexel admissions policies should be answered by the system
Requirements(s)	R4.6.1.7
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● “What is the “Admissions deadlines” policy?” is typed in the textbox ● Press Enter to send the question
Result(s)	● The “Admissions deadlines” policy can be found here: http://drexel.edu/undergrad/apply/deadlines/ is displayed.

ID	TC 4.12
Description	Questions about Drexel information technology policies should be answered by the system
Requirements(s)	R4.6.1.8
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser

Action(s)	● "What is the "Acceptable Use" policy?" is typed in the textbox ● Press Enter to send the question
Result(s)	● The "Acceptable Use" policy can be found here: http://drexel.edu/it/about/policies/policies/01-acceptable-use/ is displayed.

ID	TC 4.13
Description	Questions about on-campus dining locations should be answered by the system
Requirements(s)	R4.6.1.9
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● "Where is Urban Eatery?" is typed in the textbox ● Press Enter to send the question
Result(s)	● "Urban Eatery is located at 3400 Lancaster Ave." is displayed.

ID	TC 4.14
Description	Questions about on-campus dining hours should be answered by the system
Requirements(s)	R4.6.1.10
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● "When does Saxby's close on Sundays?" is typed in the textbox ● Press Enter to send the question
Result(s)	● "Saxby's closes at 9pm on Sundays." is displayed.

ID	TC 4.15
Description	Questions about on-campus dining food types should be answered by the system
Requirements(s)	R4.6.1.11

Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● “What food does Shake Shack have?“ is typed in the textbox ● Press Enter to send the question
Result(s)	● “Shake Shack is a modern day "roadside" burger stand serving the most delicious burgers, fries, hot dogs, and frozen custard.” is displayed.

ID	TC 4.16
Description	The system can handle nonsensical input
Requirements(s)	R4.2.3.1
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● Type the meaningless text “dkdcnk dkdaciad csdl” into the text box ● Click Enter
Result(s)	● Website show both the input string and the reply from the server. ● The reply says, among other things, “Sorry I did not understand your question…”

ID	TC 4.17
Description	The system can handle the case of having an answer format but no information for it, and the subject have no website.
Requirements(s)	R4.4.2.2
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browser
Action(s)	● Type “What is Bossone’s email?” into the text box ● Click Enter
Result(s)	● Website show both the input string and the reply from the server.

	● The reply says “Sorry I don't have an answer for that. I also could not find the website for Bossone”

ID	TC 4.18
Description	The system can handle the case of having an answer format but no information for it, and the subject has a website. .
Requirements(s)	R4.4.2.1
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browse
Action(s)	● Type “What is Moon’s research interests?” into the text box, ● Click Enter
Result(s)	● Website shows both the input string and the reply from the server. ● The reply says, among other things, “Sorry I don't have an answer for that. But I found Moon 's website: http://drexel.edu/medicine/faculty/profiles/Amanda-Moon/”

ID	TC 4.19
Description	The system can handle the case of not having an answer format
Requirements(s)	R4.3.2.1
Precondition(s)	● Website, API, and database server are running ● User is logged into the Drexel network or using the VPN ● User has opened Drexel Chatbot Website using web browse
Action(s)	● Type “What is Mongan’s favorite fruit?” into the text box. ● Click Enter
Result(s)	● Website shows both the input string and the reply from the server. ● The reply says “Sorry I don't have an answer for that. But I found Mongan 's website: http://www.cs.drexel.edu/~wmm24.”