

# 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

<b>ID</b>	TC 1.1
<b>Description</b>	Send a GET request to the Web API with the question as a URL parameter
<b>Requirements(s)</b>	R4.1.1.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"><li>• Website, API, and database process are running</li><li>• User is logged into the Drexel network or using the VPN</li></ul>
<b>Action(s)</b>	<ul style="list-style-type: none"><li>• Navigate to these address in a web browser: <a href="http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office">http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office</a></li></ul>
<b>Result(s)</b>	<ul style="list-style-type: none"><li>• The server replies with {"content": "Vokolos's office is University Crossings 131."}</li></ul>

<b>ID</b>	TC 1.2
<b>Description</b>	API responses are defined in JSON
<b>Requirements(s)</b>	R4.1.3.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"><li>• Website, API, and database process are running</li><li>• User is logged into the Drexel network or using the VPN</li></ul>
<b>Action(s)</b>	<ul style="list-style-type: none"><li>• Navigate to these address in a web browser: <a href="http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office">http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office</a></li></ul>
<b>Result(s)</b>	<ul style="list-style-type: none"><li>• The response is in the form of a JSON object (starting and ending curly braces, with a dictionary of “key” : “pair” values)</li></ul>

<b>ID</b>	TC 1.3
<b>Description</b>	The server will respond with a 200 OK when a response can be returned and the user’s query is valid.
<b>Requirements(s)</b>	R4.1.3.2
<b>Precondition(s)</b>	<ul style="list-style-type: none"><li>• Website, API, and database process are running</li><li>• User is logged into the Drexel network or using the VPN</li></ul>

<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Navigate to these address in a web browser:  <a href="http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office">http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office</a> </li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>The web browser not showing an error code means that Response status is 200 OK</li> </ul>

<b>ID</b>	TC 1.4
<b>Description</b>	The JSON's response body contains the "content" member
<b>Requirements(s)</b>	R4.1.3.3
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Website, API, and database process are running</li> <li>User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Navigate to these address in a web browser:  <a href="http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office">http://10.246.251.67:8080/chatbot/api?query=Where%20is%20Vokolos%27%20office</a> </li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>The response body contains the "data" member and is paired with the response to the query.</li> </ul>

## 2. Database Test Cases

<b>ID</b>	TC 2.1
<b>Description</b>	The database "chatbotDB" exists
<b>Requirements(s)</b>	R.4.5.1.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>User is logged into the Drexel network or using the VPN</li> <li>Database process is running</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Navigate to the stardog web interface tool</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>The web interface loads and shows the text box to run queries</li> </ul>

<b>ID</b>	TC 2.2
<b>Description</b>	Database contains some data
<b>Requirements(s)</b>	R.4.5.1.2

<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Database process is running</li> <li>• “chatbotDB” exists</li> <li>• User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Navigate to the Stardog web interface tool</li> <li>• Execute the command below in the query panel: prefix cb: &lt;http://drexelchatbot.com/rdf/&gt; select ?n where {   ?s cb:name ?n}</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• A list of names in the database is displayed</li> </ul>

<b>ID</b>	TC 2.3
<b>Description</b>	Database contains data about facility locations
<b>Requirements(s)</b>	R.4.6.1.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Database process is running</li> <li>• “chatbotDB” exists</li> <li>• User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Navigate to the Stardog web interface</li> <li>• Execute the command below in the query panel: prefix cb: &lt;http://drexelchatbot.com/rdf/&gt; select ?n ?f ?r where {   ?s cb:room ?e . ?s cb:name ?n . ?s cb:property "building" . ?s   cb:property ?f}</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• Rows with facility names and locations are displayed</li> </ul>

<b>ID</b>	TC 2.4
<b>Description</b>	Database contains data about facility schedules
<b>Requirements(s)</b>	R.4.6.1.2
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Database process is running</li> <li>• “chatbotDB” exists</li> <li>• User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Navigate to the Stardog web interface</li> <li>• Execute the command below in the query panel: prefix cb: &lt;http://drexelchatbot.com/rdf/&gt;</li> </ul>

	<pre>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}</pre>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Rows with facility names, open times, and close times are displayed</li> </ul>

<b>ID</b>	TC 2.5
<b>Description</b>	Database contains data about faculty's office locations
<b>Requirements(s)</b>	R.4.6.1.3
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Database process is running</li> <li>"chatbotDB" exists</li> <li>User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Navigate to the Stardog web interface</li> <li>Execute the command below in the query panel:  <pre>prefix cb: &lt;http://drexelchatbot.com/rdf/&gt; select ?n ?f ?r where { ?s cb:room ?r . ?s cb:name ?n . ?s cb:property "faculty" . ?s cb:property ?f}</pre> </li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Rows with faculty names and office locations are displayed</li> </ul>

<b>ID</b>	TC 2.6
<b>Description</b>	Database contains data about faculty's contact information
<b>Requirements(s)</b>	R.4.6.1.4
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Database process is running</li> <li>"chatbotDB" exists</li> <li>User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Navigate to the Stardog web interface</li> <li>Execute the command below in the query panel:  <pre>prefix cb: &lt;http://drexelchatbot.com/rdf/&gt; 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}</pre> </li> </ul>

<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Rows with faculty names, email addresses, and phone numbers(if applicable) are displayed</li> </ul>
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<b>ID</b>	TC 2.7
<b>Description</b>	Database contains data about faculty positions
<b>Requirements(s)</b>	R.4.6.1.5
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Database process is running</li> <li>“chatbotDB” exists</li> <li>User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Navigate to the Stardog web interface</li> <li>Execute the command below in the query panel:  prefix cb: &lt;http://drexelchatbot.com/rdf/&gt;  select ?n ?f ?t  where {  ?s cb:title ?t . ?s cb:name ?n . ?s cb:property "faculty" . ?s  cb:property ?f}  </li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Rows with faculty names and titles are displayed</li> </ul>

<b>ID</b>	TC 2.8
<b>Description</b>	Database contains data about academics policies
<b>Requirements(s)</b>	R.4.6.1.6
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Database process is running</li> <li>“chatbotDB” exists</li> <li>User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Navigate to the Stardog web interface</li> <li>Execute the command below in the query panel:  prefix cb: &lt;http://drexelchatbot.com/rdf/&gt;  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}  </li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Rows with academics policies are displayed</li> </ul>

<b>ID</b>	TC 2.9
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<b>Description</b>	Database contains data about admissions policies
<b>Requirements(s)</b>	R.4.6.1.7
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Database process is running</li> <li>• “chatbotDB” exists</li> <li>• User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Navigate to the Stardog web interface</li> <li>• Execute the command below in the query panel:  prefix cb: &lt;http://drexelchatbot.com/rdf/&gt;  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} </li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• Rows with admissions policies are displayed</li> </ul>

<b>ID</b>	TC 2.10
<b>Description</b>	Database contains data about technology policies
<b>Requirements(s)</b>	R.4.6.1.8
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Database process is running</li> <li>• “chatbotDB” exists</li> <li>• User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Navigate to the Stardog web interface</li> <li>• Execute the command below in the query panel:  prefix cb: &lt;http://drexelchatbot.com/rdf/&gt;  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} </li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• Rows with admissions policies are displayed</li> </ul>

<b>ID</b>	TC 2.11
<b>Description</b>	Database contains data about on-campus dining locations
<b>Requirements(s)</b>	R.4.6.1.9
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Database process is running</li> <li>• “chatbotDB” exists</li> <li>• User is logged into the Drexel network or using the VPN</li> </ul>

<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Navigate to the Stardog web interface</li> <li>• Execute the command below in the query panel:  prefix cb: &lt;http://drexelchatbot.com/rdf/&gt;  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}</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• Rows with on-campus dining locations are displayed</li> </ul>

<b>ID</b>	TC 2.12
<b>Description</b>	Database contains data about on-campus dining hours
<b>Requirements(s)</b>	R.4.6.1.10
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Database process is running</li> <li>• "chatbotDB" exists</li> <li>• User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Navigate to the Stardog web interface</li> <li>• Execute the command below in the query panel:  prefix cb: &lt;http://drexelchatbot.com/rdf/&gt;  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}</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• Rows with on-campus dining hours are displayed</li> </ul>

<b>ID</b>	TC 2.13
<b>Description</b>	Database contains data about on-campus dining food types
<b>Requirements(s)</b>	R.4.6.1.11
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Database process is running</li> <li>• "chatbotDB" exists</li> <li>• User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Navigate to the Stardog web interface</li> <li>• Execute the command below in the query panel:  prefix cb: &lt;http://drexelchatbot.com/rdf/&gt;  select ?n ?p ?t ?y  where {</li> </ul>

	?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}
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Rows with on-campus dining food types are displayed</li> </ul>

### 3. Front-end application Test Cases

<b>ID</b>	TC 3.1
<b>Description</b>	The GUI will have a textbox that will accept inputs from a keyboard
<b>Requirements(s)</b>	R4.7.1.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Website, API, and database process are running</li> <li>User is logged into the Drexel network or using the VPN</li> <li>The user is on the website for the application</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>User sees a textbox to type in</li> <li>User enters text into the text box</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Text is present in the textbox</li> </ul>

<b>ID</b>	TC 3.2
<b>Description</b>	Text box will originally contain a suggestive text question, to guide the user to the format of an appropriate question
<b>Requirements(s)</b>	R4.7.1.2
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Website, API, and database process are running</li> <li>User is logged into the Drexel network or using the VPN</li> <li>The user is on the website for the application</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>User sees a textbox to type in</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Contextual hint is present in the textbox when no text is entered.</li> </ul>

<b>ID</b>	TC 3.3
<b>Description</b>	The GUI will have a "Send" button which sends text from the textbox to the API when clicked

<b>Requirements(s)</b>	R4.7.1.3
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database process are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• The user is on the website for the application</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• User sees the send button and enters text into the text area</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• Message is sent to the API for processing</li> </ul>

<b>ID</b>	TC 3.4
<b>Description</b>	The GUI will have a chat window displaying questions sent to the system and responses from the API.
<b>Requirements(s)</b>	R4.7.1.4
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database process are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• The user is on the website for the application</li> <li>• User has sent questions to the server previously</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• User looks at the window above the textbox</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• Chat log is present showing the interactions between user and service</li> </ul>

<b>ID</b>	TC 3.5
<b>Description</b>	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.
<b>Requirements(s)</b>	R4.7.1.5
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database process are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• The user is on the website for the application</li> <li>• User has sent questions to the server previously</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• User sees a scrollbar if the have sent enough messages</li> <li>• User scrolls the scrollbar</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• The chatlog scrolls</li> </ul>

<b>ID</b>	TC 3.6
<b>Description</b>	If there is a network issue, the chat window will display an error message.
<b>Requirements(s)</b>	R4.7.1.6
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database process are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• The user is on the website for the application</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• The user somehow encounters an error</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• Chat log will display the error message to the user</li> </ul>

## 4. Backend Test Cases

<b>ID</b>	TC 4.1
<b>Description</b>	Submitting a question to the website returns an appropriate answer
<b>Requirements(s)</b>	R4.7.1.1 - R4.7.1.6, R5.1.3.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database process are running</li> <li>• User is logged into the Drexel network or using the VPN</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Use a web browser to navigate to the website</li> <li>• Type "What is Mongan's email?" in the text box</li> <li>• Press enter to send the message</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• Within 2 seconds:</li> <li>• The response "Mongan's email address is wmm24@cs.drexel.edu" is displayed.</li> </ul>

<b>ID</b>	TC 4.2
<b>Description</b>	Submitting a question to the mobile application returns an appropriate answer
<b>Requirements(s)</b>	R4.7.1.1 - R4.7.1.6, R5.1.3.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• API, and database process are running</li> <li>• Mobile application installed on a device</li> <li>• Device is logged into the Drexel network or using the VPN</li> </ul>

<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Open the mobile application</li> <li>• Type “What is Mongan’s email?” in the text box</li> <li>• Press enter to send the message</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• Within 2 seconds</li> <li>• The response “Mongan's email address is wmm24@cs.drexel.edu” is displayed.</li> </ul>

<b>ID</b>	TC 4.3
<b>Description</b>	Submitting a question via SMS message returns an appropriate answer
<b>Requirements(s)</b>	R4.7.2.1 - R4.7.2.3
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• SMS server, API, and database process are running</li> <li>• User has an SMS capable device</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• Use SMS to send “What is Mongan’s email?” to the SMS server</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• The response “Mongan's email address is wmm24@cs.drexel.edu” is sent.</li> </ul>

<b>ID</b>	TC 4.4
<b>Description</b>	The web interface is easy to use
<b>Requirements(s)</b>	R5.2.1.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• A user with no experience with the website</li> <li>• This user is presented with the web interface</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• User attempts to use the interface for 5 minutes</li> <li>• Watch them and keep note of any mistakes they make or any confusions they have</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• After 5 minutes the user has made 3 mistakes or fewer</li> </ul>

<b>ID</b>	TC 4.5
<b>Description</b>	The mobile app is easy to use
<b>Requirements(s)</b>	R5.2.1.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• A user with no experience with the mobile app</li> </ul>

	<ul style="list-style-type: none"> <li>• This user is presented with the mobile app</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• User attempts to use the interface for 5 minutes</li> <li>• Watch them and keep note of any mistakes they make or any confusions they have</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• After 5 minutes the user has made 3 mistakes or fewer</li> </ul>

<b>ID</b>	TC 4.6
<b>Description</b>	Questions about Drexel Facilities location should be answered by the system
<b>Requirements(s)</b>	R4.6.1.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database server are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• “Where is Rush building” is typed in the textbox</li> <li>• Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• “Rush Building is at 30 N 33rd St” is displayed.</li> </ul>

<b>ID</b>	TC 4.7
<b>Description</b>	Questions about Drexel Facilities schedules should be answered by the system
<b>Requirements(s)</b>	R4.6.1.2
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database server are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• “What is gym’s schedule today” is typed in the textbox</li> <li>• Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• “Gym opens at 5:30 a.m. and closes at 12:00 a.m.” is outputted.</li> </ul>

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

<b>Requirements(s)</b>	R4.6.1.3
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database server are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• “Where is Filippus Vokolos's office?” is typed in the textbox</li> <li>• Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• “Filippus Vokolos's office is University Crossings 131” is displayed.</li> </ul>

<b>ID</b>	TC 4.8
<b>Description</b>	Questions about Drexel faculty's contact information should be answered by the system
<b>Requirements(s)</b>	R4.6.1.4
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database server are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• “What is professor Balduccini's email address?” is typed in the textbox</li> <li>• Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• “Balduccini's email address is <a href="mailto:marcello.balduccini@drexel.edu">marcello.balduccini@drexel.edu</a>.” is displayed.</li> </ul>

<b>ID</b>	TC 4.9
<b>Description</b>	Questions about Drexel faculty positions should be answered by the system
<b>Requirements(s)</b>	R4.6.1.5
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database server are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• “Does Kurt Schmidt have a website?” is typed in the textbox</li> <li>• Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• “https://www.cs.drexel.edu/~kschmidt is Kurt Schmidt's website.” is displayed.</li> </ul>



<b>ID</b>	TC 4.10
<b>Description</b>	Questions about Drexel academics policies should be answered by the system
<b>Requirements(s)</b>	R4.6.1.6
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database server are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• “What is the “Absence from class” policy?” is typed in the textbox</li> <li>• Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• The “Absence from Class” policy can be found here: <a href="http://drexel.edu/provost/policies/absence/">http://drexel.edu/provost/policies/absence/</a> is displayed.</li> </ul>

<b>ID</b>	TC 4.11
<b>Description</b>	Questions about Drexel admissions policies should be answered by the system
<b>Requirements(s)</b>	R4.6.1.7
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database server are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• “What is the “Admissions deadlines” policy?” is typed in the textbox</li> <li>• Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• The “Admissions deadlines” policy can be found here: <a href="http://drexel.edu/undergrad/apply/deadlines/">http://drexel.edu/undergrad/apply/deadlines/</a> is displayed.</li> </ul>

<b>ID</b>	TC 4.12
<b>Description</b>	Questions about Drexel information technology policies should be answered by the system
<b>Requirements(s)</b>	R4.6.1.8
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database server are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• User has opened Drexel Chatbot Website using web browser</li> </ul>

<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• “What is the “Acceptable Use” policy?” is typed in the textbox</li> <li>• Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• The “Acceptable Use” policy can be found here:  <a href="http://drexel.edu/it/about/policies/policies/01-acceptable-use/">http://drexel.edu/it/about/policies/policies/01-acceptable-use/</a>  is displayed.</li> </ul>

<b>ID</b>	TC 4.13
<b>Description</b>	Questions about on-campus dining locations should be answered by the system
<b>Requirements(s)</b>	R4.6.1.9
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database server are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• “Where is Urban Eatery?” is typed in the textbox</li> <li>• Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• “Urban Eatery is located at 3400 Lancaster Ave.” is displayed.</li> </ul>

<b>ID</b>	TC 4.14
<b>Description</b>	Questions about on-campus dining hours should be answered by the system
<b>Requirements(s)</b>	R4.6.1.10
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>• Website, API, and database server are running</li> <li>• User is logged into the Drexel network or using the VPN</li> <li>• User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>• “When does Saxby’s close on Sundays?” is typed in the textbox</li> <li>• Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>• “Saxby’s closes at 9pm on Sundays.” is displayed.</li> </ul>

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

<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Website, API, and database server are running</li> <li>User is logged into the Drexel network or using the VPN</li> <li>User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>"What food does Shake Shack have?" is typed in the textbox</li> <li>Press Enter to send the question</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>"Shake Shack is a modern day "roadside" burger stand serving the most delicious burgers, fries, hot dogs, and frozen custard." is displayed.</li> </ul>

<b>ID</b>	TC 4.16
<b>Description</b>	The system can handle nonsensical input
<b>Requirements(s)</b>	R4.2.3.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Website, API, and database server are running</li> <li>User is logged into the Drexel network or using the VPN</li> <li>User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Type the meaningless text "dkdcnk dkdaciad csdl" into the text box</li> <li>Click Enter</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Website show both the input string and the reply from the server.</li> <li>The reply says, among other things, "Sorry I did not understand your question..."</li> </ul>

<b>ID</b>	TC 4.17
<b>Description</b>	The system can handle the case of having an answer format but no information for it, and the subject have no website.
<b>Requirements(s)</b>	R4.4.2.2
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Website, API, and database server are running</li> <li>User is logged into the Drexel network or using the VPN</li> <li>User has opened Drexel Chatbot Website using web browser</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Type "What is Bossone's email?" into the text box</li> <li>Click Enter</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Website show both the input string and the reply from the server.</li> </ul>

	<ul style="list-style-type: none"> <li>The reply says “Sorry I don't have an answer for that. I also could not find the website for Bossone”</li> </ul>
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<b>ID</b>	TC 4.18
<b>Description</b>	The system can handle the case of having an answer format but no information for it, and the subject has a website. .
<b>Requirements(s)</b>	R4.4.2.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Website, API, and database server are running</li> <li>User is logged into the Drexel network or using the VPN</li> <li>User has opened Drexel Chatbot Website using web browse</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Type “What is Moon’s research interests?” into the text box,</li> <li>Click Enter</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Website shows both the input string and the reply from the server.</li> <li>The reply says, among other things, “Sorry I don't have an answer for that. But I found Moon 's website: <a href="http://drexel.edu/medicine/faculty/profiles/Amanda-Moon/">http://drexel.edu/medicine/faculty/profiles/Amanda-Moon/</a>”</li> </ul>

<b>ID</b>	TC 4.19
<b>Description</b>	The system can handle the case of not having an answer format
<b>Requirements(s)</b>	R4.3.2.1
<b>Precondition(s)</b>	<ul style="list-style-type: none"> <li>Website, API, and database server are running</li> <li>User is logged into the Drexel network or using the VPN</li> <li>User has opened Drexel Chatbot Website using web browse</li> </ul>
<b>Action(s)</b>	<ul style="list-style-type: none"> <li>Type “What is Mongan’s favorite fruit?” into the text box.</li> <li>Click Enter</li> </ul>
<b>Result(s)</b>	<ul style="list-style-type: none"> <li>Website shows both the input string and the reply from the server.</li> <li>The reply says “Sorry I don't have an answer for that. But I found Mongan 's website: <a href="http://www.cs.drexel.edu/~wmm24">http://www.cs.drexel.edu/~wmm24</a>.”</li> </ul>