Query

Separate words and store the order of each word

Determine Input Data based on critical words

Correct Input Data based on data type

Eliminate undesired words

Request missing data

Send to Input Processing

Figure 7
Receive query, input data, and app id

Read processing instructions registered on the app

Alter existing variables or generate new variables accordingly

Read required user information and query the user system

Send processed variables, query, user info and app id to External Communications System

Figure 8
Send the query, processed variables, and user information to the third party application defined in the app instructions

Receive response and decode it

Determine if response is positive

Send output to Output Processing

Send query back to Input Interpretation
1. Receive the response and check it
2. Decode the response
3. Verify that the response is not malicious
4. Alter the decoded response according to app instructions
5. Produce output display code
6. Send output display code to output display system

Figure 10
App responds to query

Does the app request a session?

Yes

Store a cookie in the client's browser or send a session request

Client submits another request

Check the request from the client

Does the query indicate intent to end session?

Yes

No

Send the query to the third party application associated with the app that owns the session

End/Cancel Session

Figure 11
Figure 12