

***Wojskowa Akademia Techniczna
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Wydział Cybernetyki, kierunek informatyka - inżynieria systemów

Sprawozdanie z laboratorium z przedmiotu:

Standarty w projektowaniu systemów dialogowych

Temat laboratoriów:

***Tworzenie ChatBotów za pomocą serwisu
Dialogflow***

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Wstęp

Założeniem zadania jest stworzenie bota dostarczającego użytkownikowi różne żarty. Bot ten będzie komunikować się z backendem i przysyłać użytkownikowi pobrany z api żart.

Wykorzystane będzie JokeAPI: <https://sv443.net/jokeapi/v2/>

Tworzenie bytów (Entities)




Na początku stworzymy byty, na podstawie których będzie można konstruować intencje. Określają one kategorię żartu, ewentualny jego typ i rodzaj.

Category

category

SAVE



- ☒ Define synonyms  ☐ Regexp entity  ☒ Allow automated expansion
☐ Fuzzy matching 




programming	programming, programmers, programmer
misc	misc, miscellaneous
dark	dark
pun	pun
spooky	spooky, scary
christmas	christmas, xmas
Click here to edit entry	

Flags

flags

SAVE



- ☒ Define synonyms  ☐ Regexp entity  ☒ Allow automated expansion
☐ Fuzzy matching 




religious	religious
political	political
Click here to edit entry	

Type

type

SAVE



- ☒ Define synonyms  ☐ Regexp entity  ☒ Allow automated expansion
☐ Fuzzy matching 

single	single, singlepart, onepart, single-part, one-part
twopart	twopart, two-part
Click here to edit entry	

Tworzenie intencji (Intents)

Następnym krokiem jest utworzenie intencji, będą one dwie: jedna do wyświetlenia jakiegokolwiek żartu, druga do podania żartu na podstawie konkretnych preferencji podanych w rozmowie z chatbotem.

General Joke Request

General Joke Request

SAVE



Template phrases are deprecated and will be ignored in training time. More details [here](#).

When a user says something similar to a training phrase, Dialogflow matches it to the intent. You don't have to create an exhaustive list. Dialogflow will fill out the list with similar expressions. To extract parameter values, use [annotations](#) with available [system](#) or [custom](#) entity types.

” Add user expression

” Do you know any good jokes?

” I'd like a joke.

” Say something funny.

” Do you have a funny joke?

” Tell me a joke.

Action and parameters



Responses ?



DEFAULT +

Text Response



1 Here's a joke: \$PrintJoke

2 Enter a text response variant



ADD RESPONSES

☐ Set this intent as end of conversation ?

Fulfillment ?



☒ Enable webhook call for this intent

☐ Enable webhook call for slot filling

Specific Joke Request

- Specific Joke Request

SAVE



Training phrases ?

Search training phr



Template phrases are deprecated and will be ignored in training time. More details [here](#).

When a user says something similar to a training phrase, Dialogflow matches it to the intent. You don't have to create an exhaustive list. Dialogflow will fill out the list with similar expressions. To extract parameter values, use [annotations](#) with available [system](#) or [custom](#) entity types.

” Add user expression

” I'd like a two-part Explicit joke with religious content.

” Do you have any single Pun jokes with religious content?

” Tell me a two-part Spooky joke with religious content.

” I need a single Miscellaneous joke with religious content.

” Give me a two-part Programming joke with religious content.

” Can you tell me a single Explicit joke with religious content?

” Do you have a two-part Pun joke with religious content?

” Tell me a single Spooky joke with religious content.

” I want a two-part Miscellaneous joke with religious content.

” Give me a single Programming joke with religious content.

1

OF 4



Specific Joke Request

SAVE



Action and parameters



Enter action name

Document was last saved: Just now

	NAME	ENTITY	VALUE	IS LIST	PROMPTS
<input checked="" type="checkbox"/>	category	@category	\$category	<input type="checkbox"/>	Define prompts...
<input type="checkbox"/>	flags	@flags	\$flags	<input type="checkbox"/>	—
<input type="checkbox"/>	type	@type	\$type	<input type="checkbox"/>	—
<input type="checkbox"/>	Enter name	Enter entity	Enter value	<input type="checkbox"/>	—

+ New parameter

Responses



DEFAULT +

Text Response



- Here is a \$category joke: \$PrintJoke
- Here is a \$category \$flags joke: \$PrintJoke
- Here is a \$category \$type joke: \$PrintJoke
- Here is a \$category \$flags \$type joke: \$PrintJoke
- Enter a text response variant

ADD RESPONSES

☐ Set this intent as end of conversation



Fulfillment



☒ Enable webhook call for this intent

Tworzenie funkcji

W kolejnym kroku utworzona zostanie funkcja do obsługi żądania użytkownika wypracowane przez chatbota, w ramach funkcji zostanie pobrany żart z API i zwrócony do wypisania przez chatbota.

get_any_joke

Cloud Functions

Create function

1 Configuration

2 Code

Basics

Environment2nd gen

Function name *get_joke

Region *us-central1 (Iowa)

Trigger

Trigger typeHTTPS

URLhttps://us-central1-rosy-clover-425610-q1.cloudfunctions.net/get_joke

Authentication

Allow unauthenticated invocations

Require authentication

Cloud Functions

Functions

CREATE FUNCTION

REFRESH

Filter

Filter functions

	Environment	Name ↑	Last deployed	Region	Recommendation	Trigger	Runtime
	2nd gen	get_joke	Jun 7, 2024, 11:27:34 PM	us-central1		HTTP	Python 3.12

Kod Pythona

```
import functions_framework
from flask import jsonify
import requests

def fetch_joke(category=None, flag=None, joke_type=None):
    url = "https://v2.jokeapi.dev/joke/"

    if category:
        url += category
    else:
        url += "Any"

    params = {}
    if flag:
        params['blacklistFlags'] = flag
    params['type'] = joke_type if joke_type else "single"

    response = requests.get(url, params=params)

    if response.status_code == 200:
        joke_data = response.json()
        if joke_data.get("type") == "single":
            return joke_data.get("joke")
        elif joke_data.get("type") == "twopart":
            return f"{joke_data.get('setup')} ... {joke_data.get('delivery')}"
    return f"(Err) Sorry, I couldn't fetch a joke at the moment. url: {url} params: {params}"

@functions_framework.http
def hello_http(request):
    """HTTP Cloud Function.

    Args:
        request (flask.Request): The request object.

    Returns:
        The response text, or any set of values that can be turned into a
        Response object using `make_response`.
    """

    request_json = request.get_json(silent=True)

    response_text = "(Err) Sorry, I didn't understand that request."

    if request_json:
        intent = request_json.get('queryResult', {}).get('intent', {}).get('displayName')

        if intent == 'General Joke Request':
            joke = fetch_joke()
            response_text = f"Here's a joke: {joke}"

        elif intent == 'Specific Joke Request':
            parameters = request_json.get('queryResult', {}).get('parameters', {})
            category = parameters.get('category')
            flag = parameters.get('flags')
            joke_type = parameters.get('type')

            joke = fetch_joke(category, flag, joke_type)

            response_text = "Here is a"
            if category:
                response_text += f" {category}"
            if flag:
                response_text += f" {flag}"
```

```

    if joke_type:
        response_text += f" {joke_type}"
        response_text += f" joke: {joke}"

    return jsonify({
        "fulfillmentText": response_text
    })

```

Potrzebne biblioteki:

```

functions-framework==3.*
flask
requests

```

Dodanie adresu URL funkcji do webhookera

Webhook

ENABLED 

Your web service will receive a POST request from Dialogflow in the form of the response to a user query matched by intents with webhook enabled. Be sure that your web service meets all the [webhook requirements](#) specific to the API version enabled in this agent.

URL*	<input type="text" value="https://us-central1-rosy-clover-425610-q1.cloudfunctions.net/get_joke"/>	
BASIC AUTH	<input type="text" value="Enter username"/>	<input type="text" value="Enter password"/>
HEADERS	<input type="text" value="Enter key"/>	<input type="text" value="Enter value"/>
	+ Add header	
SMALL TALK	<input type="checkbox"/> Disable webhook for Smalltalk	

Przykładowe rozmowy

Powitanie (wykorzystanie domyślnej intencji)

Agent

USER SAYS

[COPY CURL](#)

Hello



DEFAULT RESPONSE



Hello! How can I help you?

INTENT

[Default Welcome Intent](#)

ACTION

input.welcome

Pobranie jakiegokolwiek żarty

Agent

USER SAYS

[COPY CURL](#)

Do you know any good jokes?



DEFAULT RESPONSE



Here's a joke: Never date a baker. They're too kneady.

INTENT

[General Joke Request](#)

Pobranie żartu z kategorii

Agent

USER SAYS

[COPY CURL](#)

Give me a programmers joke



DEFAULT RESPONSE



Here is a programming joke: Debugging:
Removing the needles from the haystack.

INTENT

[Specific Joke Request](#)

ACTION

Not available

PARAMETER

VALUE

flags

category

programming

type

Pobranie żartu z kategorii i flagą

Agent

USER SAYS

[COPY CURL](#)

Give me a programmers pun joke



DEFAULT RESPONSE



Here is a pun programmers joke: Two fish in a tank. One turns to the other and says, "Do you know how to drive this thing?"

INTENT

Specific Joke Request

ACTION

Not available

PARAMETER

VALUE

type

programmers

category

pun

flags

Pobranie żartu z kategorii i typem

Agent

USER SAYS

COPY CURL

Give me a programming two-part joke

 DEFAULT RESPONSE

▼

Here is a programming twopart joke: Why is 6 afraid of 7 in hexadecimal Canada? ... Because 7 8 9 A?

INTENT

Specific Joke Request

ACTION

Not available

PARAMETER	VALUE
category	programming
type	twopart
flags	

Pobranie żartu z kategorią, flagą i typem

Agent

USER SAYS

[COPY CURL](#)

Give me a two-part programming joke with political content



DEFAULT RESPONSE



Here is a programming political twopart joke:
How did the programmer die in the shower? ... He
read the shampoo bottle instructions: Lather.
Rinse. Repeat.

INTENT

[Specific Joke Request](#)

ACTION

Not available

PARAMETER

VALUE

flags

political

type

twopart

category

programming

Podsumowanie:

Podczas zajęć udało się stworzyć chatbota za pomocą serwisu Dialogflow. Udało się zastosować różne intencje i byty oraz zaimplementować funkcję obsługującą żądania i odpowiedzi zarządzane przez bota, która przy pomocy API pobiera żarty i zwraca je użytkownikowi.