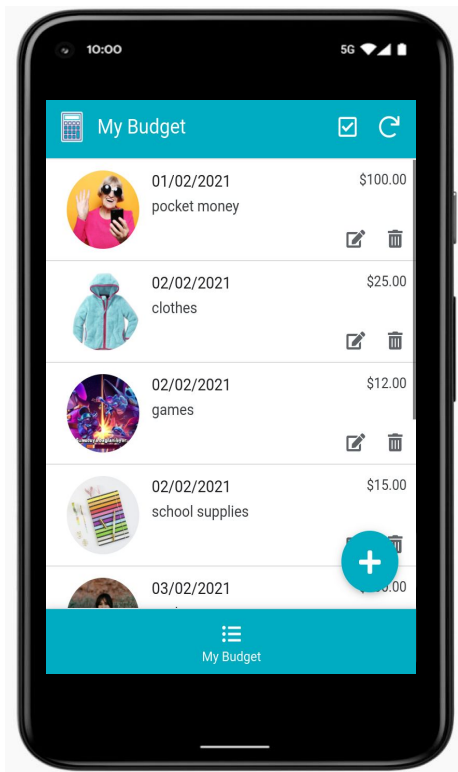


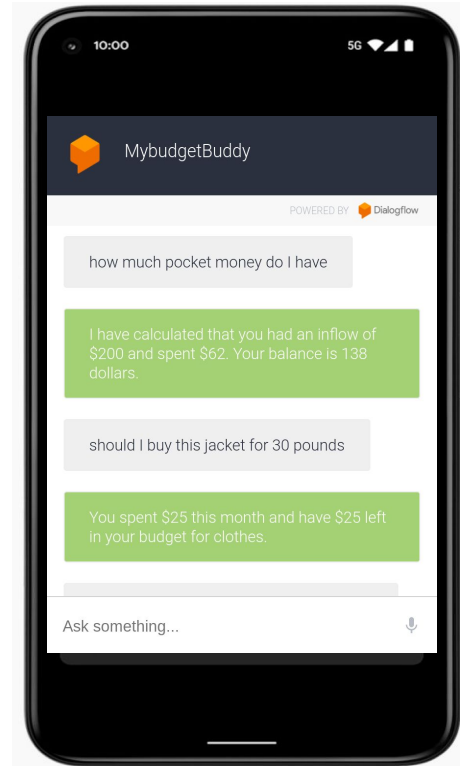
# Build a virtual assistant with Dialogflow that reads your budget from Sheets

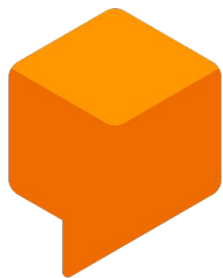
**Build a mobile app** to store your money inflow and your spendings where you can also upload pictures and take notes.



**You are here!**

**Build a chatbot** to get virtual assistance from ***your budget buddy*** during shopping!





# Dialogflow

An end-to-end developer platform for building  
natural and rich conversational experiences

# Intents

To define how conversations work, you create intents in your agent that map user input to responses. In each intent, you define example of **user utterances** and **how to respond**.

**User** >> How much money do I have for clothes this month?

**Agent** >> You have £20 in your budget

☰

● Check Money Flow in Category

SAVE

⋮

Contexts ⓘ

Events ⓘ

Training phrases ⓘ

Search training phrases 🔍 ⬆

” Add user expression

” How much money do I have for games?

” How much can I spend in games?

” Should I buy this dress for £25? 

🗑

” Should I buy this book for \$10?

” How much did I spend in clothes this month?

Action and parameters ⬆

Enter action name

REQUIRED ⓘ

PARAMETER NAME

ENTITY ⓘ

VALUE

IS LIST

PROMPTS ⓘ

Try it now 

🎤

Agent

USER SAYS 

COPY CURL

I would like to buy this hat

DEFAULT RESPONSE ▾

Ok. Can you check what fabric it is made of?

INTENT

Check fabric

ACTION

Not available

PARAMETER

VALUE

custom-category

clothes

SENTIMENT

Query Score: 0.9

DIAGNOSTIC INFO

# Entities

While intents allow your agent to understand the motivation behind the utterances, entities are used to extract specific pieces of information that your users mention. Any important data you want to get from a user's request will have a corresponding entity.

**User >>** I cannot decide. Should I buy this **dress** for **£25**?

custom-category

SAVE

☒ Define synonyms

☐ Regexp entity

☐ Allow automated expansion

☐ Fuzzy matching

clothes	fashion, clothes, hat, jacket, dress, shoes
games	entertainment, games, concert, cinema, movie
school	school, books, notebooks, school supplies
donation	donation, gift
<a href="#">Click here to edit entry</a>	

+ Add a row

Try it now

Agent

USER SAYS [COPY URL](#)  
I would like to buy this hat

DEFAULT RESPONSE   
Ok. Can you check what fabric it is made of?

INTENT  
[Check fabric](#)

ACTION  
Not available

PARAMETER

VALUE

custom-category

clothes

SENTIMENT  
Query Score: 0.9

DIAGNOSTIC INFO

# Fulfillment

Fulfillment helps us generate dynamic responses or integrate with external systems and trigger actions on the back end systems. It is the code that is deployed as a webhook and let's your Dialogflow agent respond to an intent using a business logic.

In our shopping assistance demo, fulfillment allows you to use the intent extracted by Dialogflow and bring the relevant information from you budget on Google Sheets file.

**Agent >> You have £15 in your budget for games this month.**

⚡ Fulfillment

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.

Inline Editor

(Powered by Google Cloud Functions)

ENABLED ☒

COPY CURL

Build and manage fulfillment directly in Dialogflow via Cloud Functions. [Docs](#)

Newly created cloud functions now use Node.js 10 as runtime engine. Check [migration guide](#) for more details.

index.js

package.json

```
20 async function checkMoneyFlow(agent) {
21   const auth = await google.auth.getClient({
22     scopes: [
23       "https://www.googleapis.com/auth/spreadsheets"
24     ]
25   });
26   const sheetsAPI = google.sheets({version: 'v4', auth});
27   const request = {
28     spreadsheetId: '10xMy1E6suQKIVV4ooIXM0-m8ebvMNK4KntSjuxEC5Gc',
29     range: 'A2:F',
30   };
31   try {
32     const rows = (await sheetsAPI.spreadsheets.values.get(request)).data.values;
33     if (rows.length) {
34       let moneyIn = 0;
```

View execution logs in the Google Cloud Console

Last deployed on 02/06/2021 14:36

DEPLOY

Try it now

Agent

USER SAYS

I would like to buy this hat

DEFAULT RESPONSE

Ok. Can you check what fabric it is made of?

INTENT

Check fabric

ACTION

Not available

PARAMETER

VALUE

custom-category

clothes

SENTIMENT

Query Score: 0.9

DIAGNOSTIC INFO

# Knowledge Connectors

Dialogflow lets you pre-build explicit responses to specific user intents.

Knowledge Connectors enrich the conversation by complementing explicit intents with automated responses sourced from internal knowledge bases (articles, FAQs, etc.).

Our shopping assistant reads the knowledge base from an FAQ document to give information about the **fabrics of clothes**.

The screenshot displays the Dialogflow console interface for a project titled "Fabric Sustainability". The top navigation bar includes a hamburger menu icon, the project name, a "SAVE" button, and a "Try it now" button with a microphone icon.

The main content area is divided into two panels. The left panel, titled "Search question answer entries", contains a table of knowledge connector entries. The table has columns for "Question", "Status", and a refresh icon. Three entries are visible:

Question	Status	Refresh
<input type="checkbox"/> <b>Question:</b> Wool <b>Answer:</b> Wool can be a sustainable fabric depending on how it's produced. Wool is also compostable, incredibly insulating, and doesn't shed plastic microfibers. Unfortunately, there is also a lot of animal abuse in the wool industry, and so it's essential to vet brands to verify sourcing and production methods. While wool isn't for everyone, it is a fabric that many sustainable brands are turning to. Look for the ZQ certification.	ENABLED	
<input type="checkbox"/> <b>Question:</b> Polyester <b>Answer:</b> Recycled polyester is PET (the chemical used to create polyester) from plastic water bottles that have been broken down into fibers. The recycled fabric keeps plastic out of landfills and can be recycled again many times over. When a garment can't be made from 100 percent natural fibers (for example, stretchy garments like underwear or leggings), we recommend looking for recycled polyester as it's less harmful than its virgin counterpart, generating fewer carbon emissions in production.	ENABLED	
<input type="checkbox"/> <b>Question:</b> Bamboo <b>Answer:</b>	ENABLED	

The right panel shows a simulated conversation with an "Agent". The "USER SAYS" section contains the text "I would like to buy this hat" with a "COPY CURL" link. The "DEFAULT RESPONSE" section shows a response: "Ok. Can you check what fabric it is made of?". The "INTENT" section shows "Check fabric". The "ACTION" section shows "Not available". The "PARAMETER" section shows "custom-category" with a "VALUE" of "clothes". The "SENTIMENT" section shows "Query Score: 0.9". At the bottom, there is a "DIAGNOSTIC INFO" button.

# Pre-built agents help you get a head start



## Food Delivery

Create and manage food and drink orders



## Formats

Control default units of measurement



## Hotel Booking

Find, create and manage reservations for hotels



## Jokes

The agent tells jokes



## Language Settings

Set language preferences



## Local Services

Search local services and shops



## Navigation

Ask for directions



## News

Get news stories and manage news feed



## Radio

Control playing radio stations



## Reminders

Schedule, edit, view and remove reminders



## Maps

Search maps for a location



## Music

Play and control your music and playlists

# To learn more ...

[Dialogflow demo zip file](#)

- Youtube channel for [Dialogflow](#)
- Youtube playlist for [deconstructing chatbots](#)

