Manual

For Alexa

English

Summary

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1. Accessing the Form

To access the ForAlexa form in Google Chrome, Safari or Microsoft Edge, enter the browser and type the address http://levo.ufpa.br/ForAlexa. Note the "http" here – if the user attempts to access ForAlexa using the "https" protocol, an error message will be displayed and access to ForAlexa will be suspended temporarily. This is caused by the institutional server that hosts ForAlexa, which does not permit access via the "https" protocol. Some navigators, such as Mozilla Firefox, will force the access to sites via the "https" protocol. If access is suspended, an alternative approach is to access ForAlexa using an anonymous tab.

Painel de controle - Acesso não permitido.

Possíveis motivos:

- Para gerenciar a sua hospedagem é necessário estar conectado a VPN.
- Comportamento indevido vindo da sua rede, aguarde um momento.
Para maiores esclarecimentos, abra um chamado via Sagitta.

Gerencido pelo CTIC
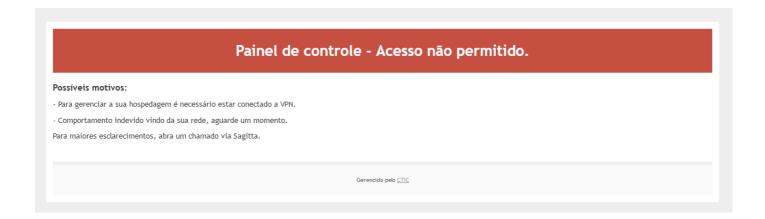
Figure 1. Error when attempting to access ForAlexa using the https:// protocol.

1.1. ForAlexa Login

If the developer has already registered on ForAlexa, it is only necessary to inform the e-mail and password in the respective fields and click on "Sign In" (option 1, Figure 2), after which, a message will be displayed, informing the developer that ForAlexa is consulting the database. If the e-mail and password are correct, ForAlexa will load the developer's repositories, otherwise, the user is informed that the e-mail or password are incorrect. If the developer is not registered, it is necessary to click on "Sign up to ForAlexa" (option 2 in Figure 2), or, if the password is forgotten, it can be recovered by clicking on "Recover Password" (option 3, Figure 2).
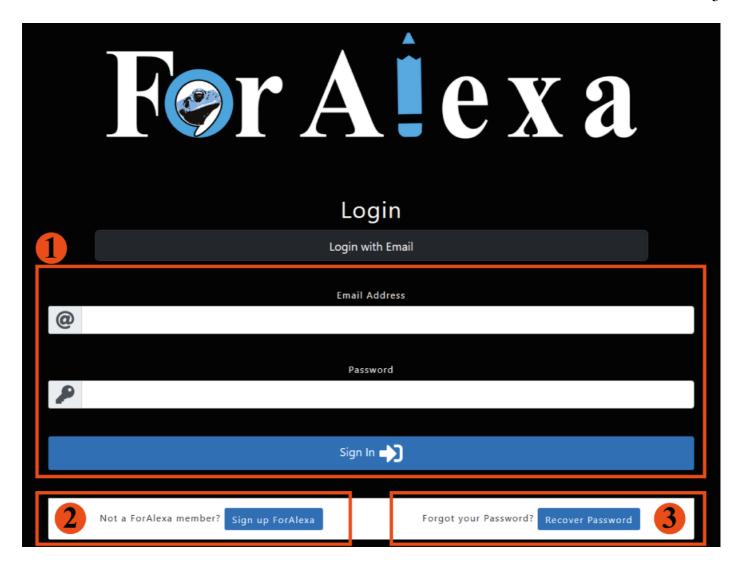
Figure 2. ForAlexa Login screen.

1.2. Developer registry

If the developer has not registered previously on the ForAlexa server, this can be done by clicking on "Sign up to ForAlexa" (option 2, Figure 2), which will load the developer registry (Figure 3). Note that all the fields are required here. The developer must inform some personal data to register and, if necessary, to recover their password. These data are stored on the institutional server at the Federal University of Pará.
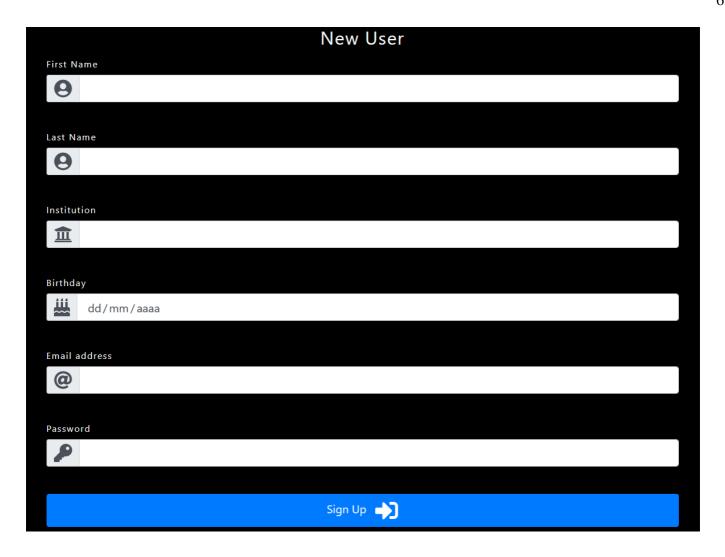
Figure 3. Developer registration form.

1.3. Password Recovery

If the password is forgotten, it can be recovered by clicking on "Recover Password" (option 3, Figure 2), which will load a password recovery page (option 4, Figure 4). Here, the user must inform their personal data, exception their password, and then click on "Recover Password!" (option 5, Figure 4). When ForAlexa recovers these data, the same page is loaded, this time allowing for the insertion of a new password, which will replace the previous one.
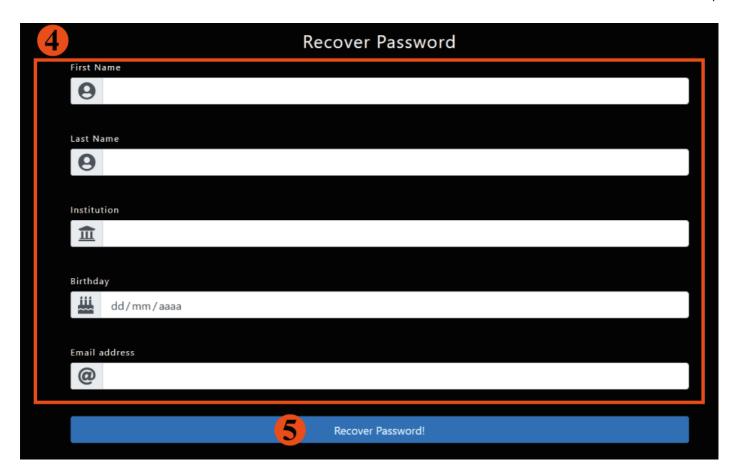
Figure 4. Password Recovery.

2. ForAlexa

Once the user has logged in to ForAlexa (option 1, Figure 2), the developer validation page will be loaded, which consult the database to verify of the e-mail and password provided already exist in its database. If they are found, ForAlexa will load the list of repositories already registered by the developer, but if the e-mail is not in the database, ForAlexa will exhibit an error message (see 1.2 and 1.3).

Note that the whole Skill development process must be linked to a register in the database (e-mail and password). In this case, we recommend the use of a standard e-mail in ForAlexa.

Figure 5. ForAlexa consulting the database.

2.1. Repositories

After validating the e-mail and password of the developer, a page containing the list of repositories will be loaded (Figure 6). Here, the developer can add new repositories (option 6, Figu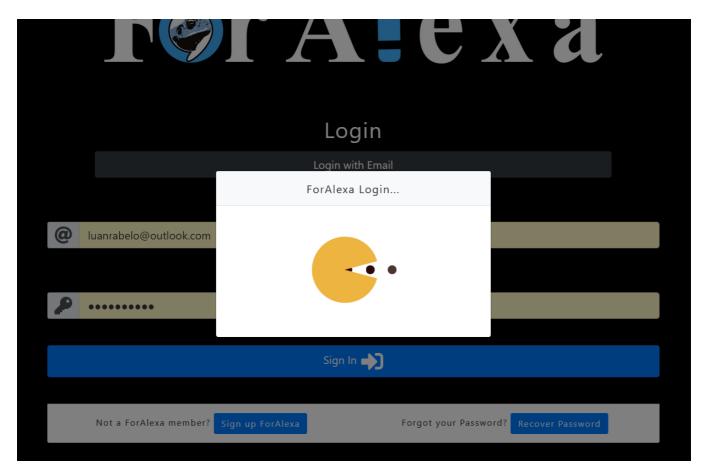re 6) or access, edit or delete existing repositories (option 8, Figure 6). Each repository contains the Intents (see below) necessary for the creation of a skill. Each developer can create up to five repositories (option 7, Figure 6), each of which can contain an infinite number of Intents. However, each repository is valid for only 90 days, after which, it will be deleted from the ForAlexa server, together with its contents.

To create a repository, click on "Create a New ForAlexa Repository", which will load the creation page (Figure 7), which requires a name for the repository (option 9, Figure 7) and allows for an optional description (option 10, Figure 7). It is also necessary to accept the terms of the 90-day validity (option 11 Figure 7). Then click on "Create Repository" (option 12 Figure 7) to save the new repository.

Hello Luan Rabelo

Create a New ForAlexa Repository

6

You Have **1** of **5** Repositories

7

8

Evolution Skill

Evolution Skill testing ForAlexa
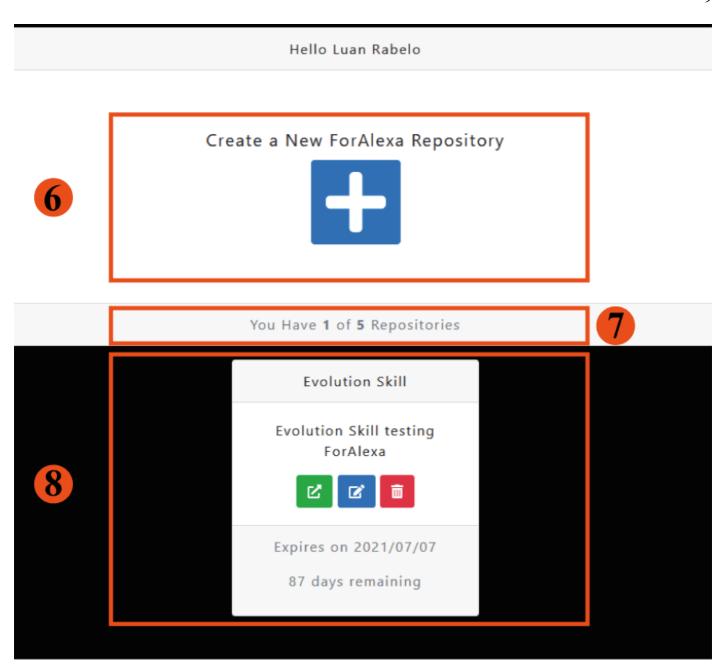
Expires on 2021/07/07

87 days remaining

Figure 6. List of repositories. Each developer can create up to five repositories, which are valid for 90 days.
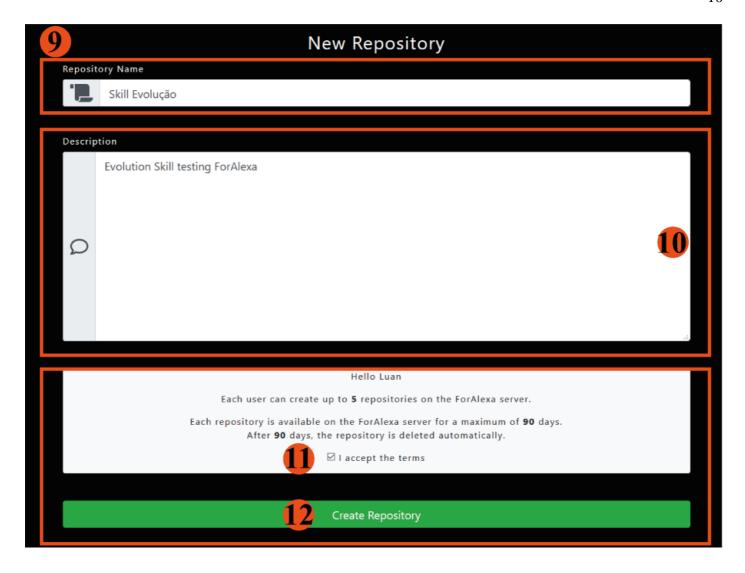
Figure 7. Creating a New Repository.

Once the repository has been created, ForAlexa returns to the initial page with a new repository registered (option 8, Figure 6), where the developer has the options of accessing the repository, editing its description or deleting it (Figure 8). When accessing a repository for the first time, ForAlexa will validate some data. (1) ForAlexa will verify if the repository already has the required Intents for the creation of a skill and, if not, ForAlexa will create and load a list of Intents for the developer. This makes the first access to a repository slightly slower than the subsequent accesses; (2) ForAlexa will also verify whether all the required Intents have been registered, if not, the missing Intent(s) will be identified and registered. If all the Intents already exist in the database, ForAlexa will skip the creation of these intents and load the list for the developer.

Figure 8. Options for the accessing, editing or exclusion of a repository.

3. Creating a Skill

When accessing a repository, the developer will be presented with a list of the required Intents (Figure 9), and we would recommend editing the "LaunchRequest" Intent first. For this, click on the"Edit" icon in "Options" (option 13, Figure 10).

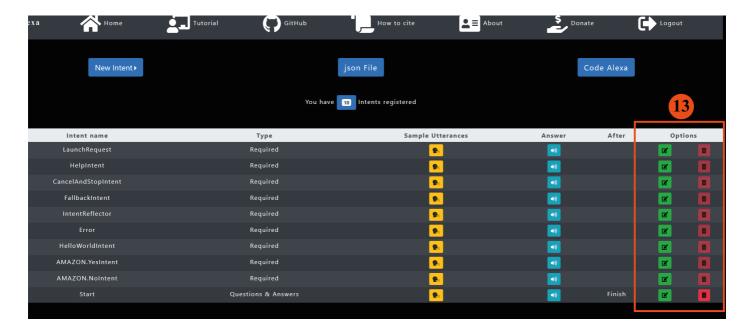Figure 9. Required Intents for operational skills.

Figure 10. Page containing the list of Intents, and the options for the creation of new Intents or the exportation of existing Intents.

4. Configuring the LaunchRequest and welcome message

This Intent is responsible for the skill invocation name. For example, if the LaunchRequest is "professor evolution", the skill is activated by the command "Alexa, open professor evolution". To add an invocation name, fill in "Skill Invocation Name" (option 14, Figure 11). Once the Skill has been requested, a welcome message will be displayed, where developer can inform what will be said to the user when the Skill is activated (option 15, Figure 11). This field has three rules:

- Invocation names must have at least two words (2–50 characters);

- The characters can only be letters or spaces, no special characters are accepted;

- No upper-case letters in any of the words.

One important tip here is to use simple phrases, given that Alexa is still learning some languages and, in any case, simple is always better. Here is an example:

Skill Invocation Name: professor evolution

Alexa will say: Hello, welcome to the Evolution Course. My name is Alexa and will guide you through the course. If you would like to know what classes are included in this course, ask me, "what classes are taught in the evolution course?".

Figure 11. Intent editing form (LaunchRequest).
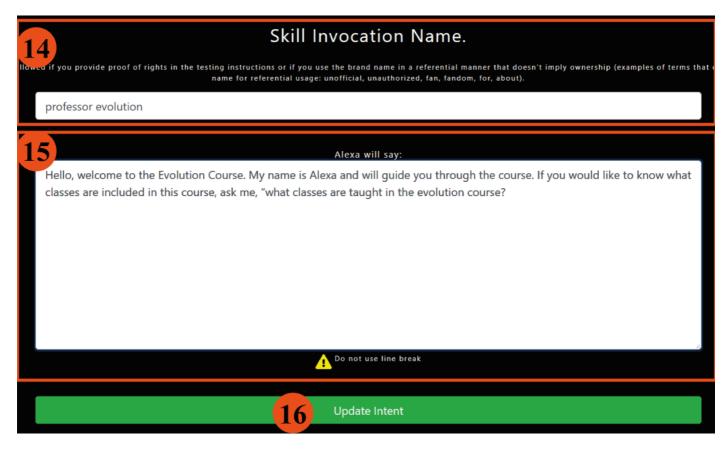
Once the data are inserted, click on Update Intent (option 16 da Figure 11) to save changes.

5. Registering New Intents

5.1. Questions and Answers

Let's register some new Intents, of the Question-and-Answer type. On the page with the list of intents (Figure 10), click on New Intent and then on Questions and Answers (Figure 12).

Figure 12. Registering a new Intent.

This form is divided into two parts, the first (option 17 Figure 13) refers to the Intent Name (9) and its utterances (option 18 Figure 13). Insert the intent name, being careful to remember the rules for this field – "Intent name can only contain case-insensitive alphabetic characters and underscores. Numbers, spaces, or other special characters are not allowed".
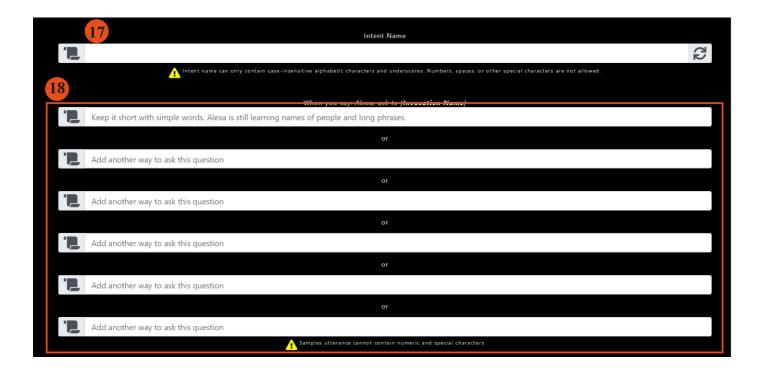

Figure 13. Questions and Answers form.

Intent names cannot be duplicated. In this case, ForAlexa will inform the user that the name suggested already exists (Figure 14).

Figure 14. Intent Name already exists in the database.

After establishing the Intent Name, insert the utterances, which are the request phrases of an Intent. Here, the developer must consider all the different potential forms of request. For example, if a user wants to ask the skill "Who was Charles Darwin?", but in the utterance, says only "Who was Darwin?" Alexa will respond with an error because the request phrase is either not registered in the database or is slightly different from that registered in the Intent. The second part of this form determine what Alexa will reply to a request (option 19 in Figure 15) and the subsequent action (option 20 in Figure 15).

Figure 15. Second part of the Questions and Answers form.

The developer cannot use line breaks in "Alexa will say" (option 19, Figure 15). Some words may need to be adapted to guarantee that the user will understand them.

There are two options for "After Answer" (option 20 in Figure 15), Finish or Reprompt. If Finish is selected, the skill will end after reading the answer (option 19 in Figure 15). If Reprompt is selected, a new field is displayed (Figure 16), in which the developer must inform what Alexa will say after reading the answer (option 19, Figure 15).
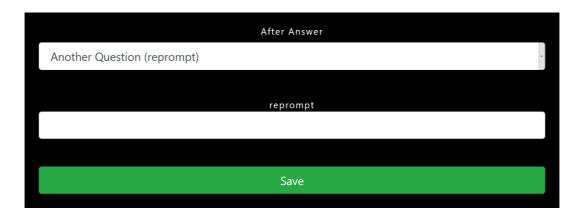
Figure 16. The reprompt will only appear to the developer if this option is selected (option 19 in Figure 15).

6. Examples of Questions and Answers

Some examples of Questions and Answers intents are given below:

Intent Name: Beginning

Utterance: What classes are taught in the evolution course?

Alexa will say: Mendelian Genetics and What is Evolution

After Answer: Choose the option, Another question (reprompt)

Reprompt: If you want, you can ask me another question, for example, ask me questions on chapter one, or any other chapter you like.

Intent Name: Allele

Utterance: What is an allele?

Alexa will say: One of several forms of the same gene, presumably differing by mutation of the DNA sequence.

After Answer: Choose the option, Another question (reprompt)

Reprompt: If you want, you can ask me another question, for example, ask me, questions on chapter one, or any other chapter you like.

Intent Name: Dominance

Utterance: What is a dominant allele?

Alexa will say: The dominance of an allele refers to the extent to which it produces the homozygous phenotype when heterozygous.

After Answer: Choose the option, Another question (reprompt)

Reprompt: If you want, you can ask me another question, for example, ask me, questions on chapter one, or any other chapter you like.

Intent Name: Recessive

Utterance: What is a recessive allele?

Alexa will say: A recessive allele is one that is detectable in the phenotype only when homozygous.

After Answer: Choose the option, Another question (reprompt)

Reprompt: If you want, you can ask me another question, for example, ask me, questions on chapter one, or any other chapter you like.

Intent Name: Evolution

Utterance: What is evolution?

Alexa will say: In a broad sense, the origin of entities possessing different states of one or more characteristics and changes in the proportions of these entities over time.

After Answer: Choose the option, Another question (reprompt)

Reprompt: If you want, you can ask me another question, for example, ask me, questions on chapter one, or any other chapter you like.

Intent Name: Microevolution

Utterance: What is microevolution?

Alexa will say: A broad term, which usually refers to slight, short-term evolutionary changes within a species.

After Answer: Choose the option, Another question (reprompt)

Reprompt: If you want, you can ask me another question, for example, ask me, questions on chapter one, or any other chapter you like.

Intent Name: Macroevolution

Utterance: What is macroevolution?

Alexa will say: A broad term, which usually refers to the evolution of substantial changes in the phenotype, usually large enough to assign the modified lineage to a distinct genus or higher taxon.

After Answer: Choose the option, Another question (reprompt)

Reprompt: If you want, you can ask me another question, for example, ask me, questions on chapter one, or any other chapter you like.

7. Random Quotes

Let's now register intents of the Random Quotes type. In the New Intents screen (Figure 12), select the Random Quotes option. Here, the procedure is the same as the Question-and-Answers (Q&A) form, where the developer must first inform an Intent Name (option 21 Figure 17) as well as an utterance (option 22, Figure 17).

Figure 17. Random Quotes form.

The only difference here in comparison with the Q&A form is the type of information that Alexa will present once the intent is activated. The developer must first determine how many random phrases Alexa will be able to say to the user (option 23, Figure 18). It is important to note here that random quotes may be subject to a certain level of repetition. Where there are five random quotes, for example, the developer can set the system to randomly select three, where some phrases will inevitably be repeated. In this case, the developer will need to either increase the number of random quotes or reduce the number of phrases that are selected. Option 24 (Figure 18) shows how many random quotes there are in the intent, which helps the developer design the content. "Customize Introduction" (option 25 da Figure 18) is not a required field, but allows the developer to personalize the interaction between Alexa and the user. Additional random quote fields can be added (option 26, Figure 18), and the quotes can subsequently be visualized (option 27, Figure 18) or deleted (option 28, Figure 18).

Like the introductory phrase, the final phrase, spoken after the random quotes, can also be customised (option 29, Figure 18). Once again, this is not required, but as for the introduction, it can amplify the possible interactions between Alexa and the user.

It is important to note that, once an intent is saved (option 30, Figure 18), it cannot be edited further, but only deleted for the creation of a new Intent with the same questions. It is thus vital at this stage that the developer avoids possible errors.
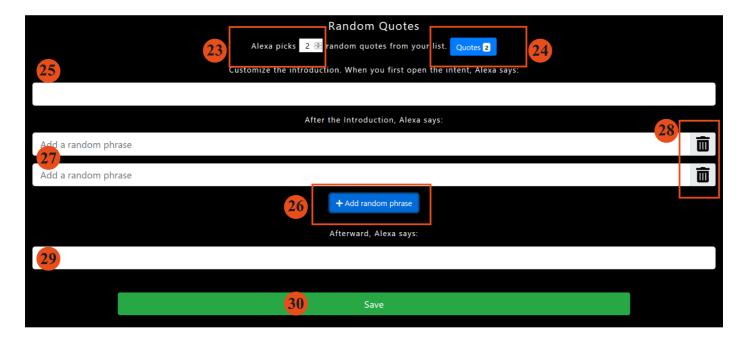

Figure 18. Random Quotes.

7.1. Examples of Random Quotes

Intent Name: chapterone

utterance: Questions on chapter one

Introduction: You can ask me

Random Quote 1: What is an allele?

Random Quote 2: What is a dominant allele?

Random Quote 3: What is a recessive allele?

After, Alexa says: If you want, you can ask me another question, for example, ask me, questions on chapter one, or any other chapter you like.

Intent Name: chaptertwo

utterance: Questions chapter two

Introduction: You can ask me

Random Quote 1: What is evolution?

Random Quote 2: What is microevolution?

Random Quote 3: What is macroevolution?

After, Alexa says = If you want, you can ask me another question, for example, ask me, questions on chapter one, or any other chapter you like.

8. Json Files

Once the developer has created all the Intents (Q&A or RQ), they can create a json file containing these Intents, together with the utterances of each Intent (Figure 19). This file should be imported with the respective skill created in the Amazon Developer Console (https://developer.amazon.com/alexa/console/) (Figure 20). It is possible to obtain the whole source code of a skill, by clicking on "Alexa Code" (Figure 21), which loads the page of the source code (Figure 22), which the developer can visualize, copy, and paste into the area of development of the Amazon Developer Console. For further details, consult the ForAlexa tutorials page.

Figure 19. Button for the creation of a json file

Figure 20. Area for the importation of a json file created in ForAlexa.

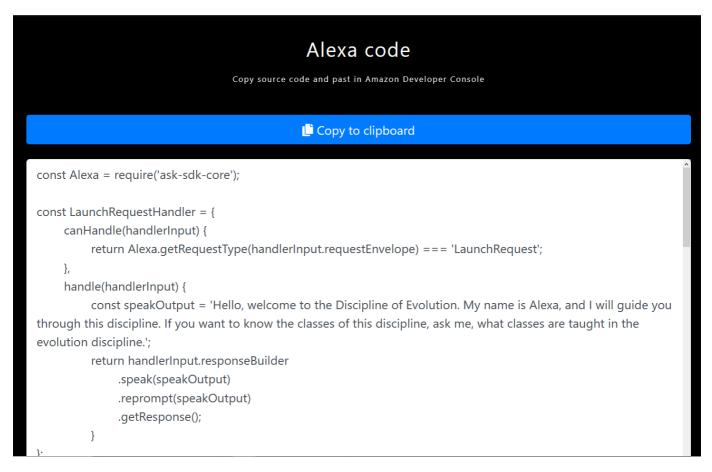Figure 21. Button used to visualize the source code of a skill.

Figure 22. Source code of a skill created in ForAlexa.

9. Navigation menu

ForAlexa has a navigation menu with a number of useful links (Figure 23). The Home link redirects the developer from any other page to the list of repositories. The Tutorial link loads the tutorials page, where the developer can consult video tutorials explaining each step in the creation of a skill. The GitHub link leads to the repository containing the ForAlexa source code. "How to cite" refers to the reference for the ForAlexa paper, and "Donate" will help us to improve and continue the development of ForAlexa, in particular by providing more coffee lol (many thanks for any support!). The Logout is self-explanatory.

Figure 23. ForAlexa navigation menu.