

Project Title: Chat Bot for Java Language Query

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### Short description of the project:

This Chat bot will handle queries related to Basics of Java, Datatypes, Syntax, Different errors, different exceptions, best practices and other important topics (If else, Loops, Functions, arrays, 2D arrays, classes and objects, collections in Java, frequent errors, exception handling and more).

To solve the problem or to make digital learning more natural, Javamate provides a chatbot interface. A java learning student can easily ask any query on java and javamate can answer it with most suitable response.

- Frontend: HTML, CSS, Javascript
- Backend: Flask (Python)
- Dataset: Custom JSON dataset
- Model: tflearn based Neural network architecture

- User enter query into the frontend
- Frontend sends the query to backend which will further passed to NN model
- NN model will predict a tag according to which proper response is selected
- Backend receives the response and send back to frontend where User can see the same

#### **Possible outcome of the project:**

- Javamate will benefit learners to understand Java Language in a more natural manner.
- Any doubt and query can be resolved anytime from anywhere.
- Chatbots enhances the learning experiences
- It can be deployed on multiple platforms like android, ios etc.
- It can also be implemeted with learning bots for discord, telegram etc

#### **Importance of the project in engineering aspect:**

- The use of chatbots in educational mobile apps help students in getting instant replies and help for their queries.
- Growing digital learning trends, ensure chatbot as an important mode of learning for students.
- Chatbots help learner to learn in a more interactive and natural way.
- Chatbot introduces students to a field of AI/ML application.
- It also provide an organised and easily maintained services to the users.

#### **Innovativeness if any (why the project is different from others):**

- It focuses more on user interaction and helps user to learn java laanguages easily and conveniently.
- Being a Web App it can be used in any platform or can be accessed from anywhere.
- It can easily learn any programming languages by only changing datasets (intents).
- It is very practical project as in current situation digital learning is growing at an exponential rate thus chatbots are an interactive digital learning mode.

#### **Reference :**

- [http://tflearn.org/getting\\_started/](http://tflearn.org/getting_started/)
- <https://flask.palletsprojects.com/en/2.0.x/>
- <https://github.com/nltk/nltk/wiki>
- <https://developer.mozilla.org/en-US/docs/Web/HTML>