



CODE CHALLENGE
CHAMPIONSHIP

AI MISSION 1

CODE CHALLENGE CHAMPIONSHIP
SENIOR CATEGORY

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24

Devin - Crop Identifier

Overview:

Alex is a dedicated farmer who has recently planted a variety of crops but is unsure about some of them. Alex needs a reliable tool to identify the crops based on their descriptions. To meet this need, Devin, an advanced Virtual Agriculture Assistant powered by **Natural Language Processing (NLP)**, is created. Your mission is to help Alex interact with Devin to get the crop identification and details they need.

Mission:

As a skilled developer, your task is to build Devin, the Virtual Agriculture Assistant, using PictoBlox and its NLP capabilities. Devin will use natural language descriptions provided by Alex to identify different crops and offer detailed care tips.

To train Devin, use the following dataset with various crop descriptions:

- **Tomato:**

- Red, sometimes yellow or green
- Small to medium, typically the size of a tennis ball
- Round or slightly oval
- Harvested in summer, sometimes early fall
- The fruit is red and round, often used in salads
- The skin is smooth, and the flesh is juicy

- **Corn:**

- Yellow, sometimes white or bi-color
- Large, about 6 to 10 inches long
- Long and cylindrical with kernels arranged in rows
- Harvested in late summer to early fall
- It has yellow kernels arranged in rows on a cob
- The plant is tall, reaching up to 8 feet

- **Carrot:**

- Orange, though sometimes purple, yellow, or white
- Typically 6 to 10 inches long
- Long, narrow, and tapered.
- Grows in spring or fall; harvested before the first frost
- It has an orange, elongated root
- The vegetable is crunchy and sweet

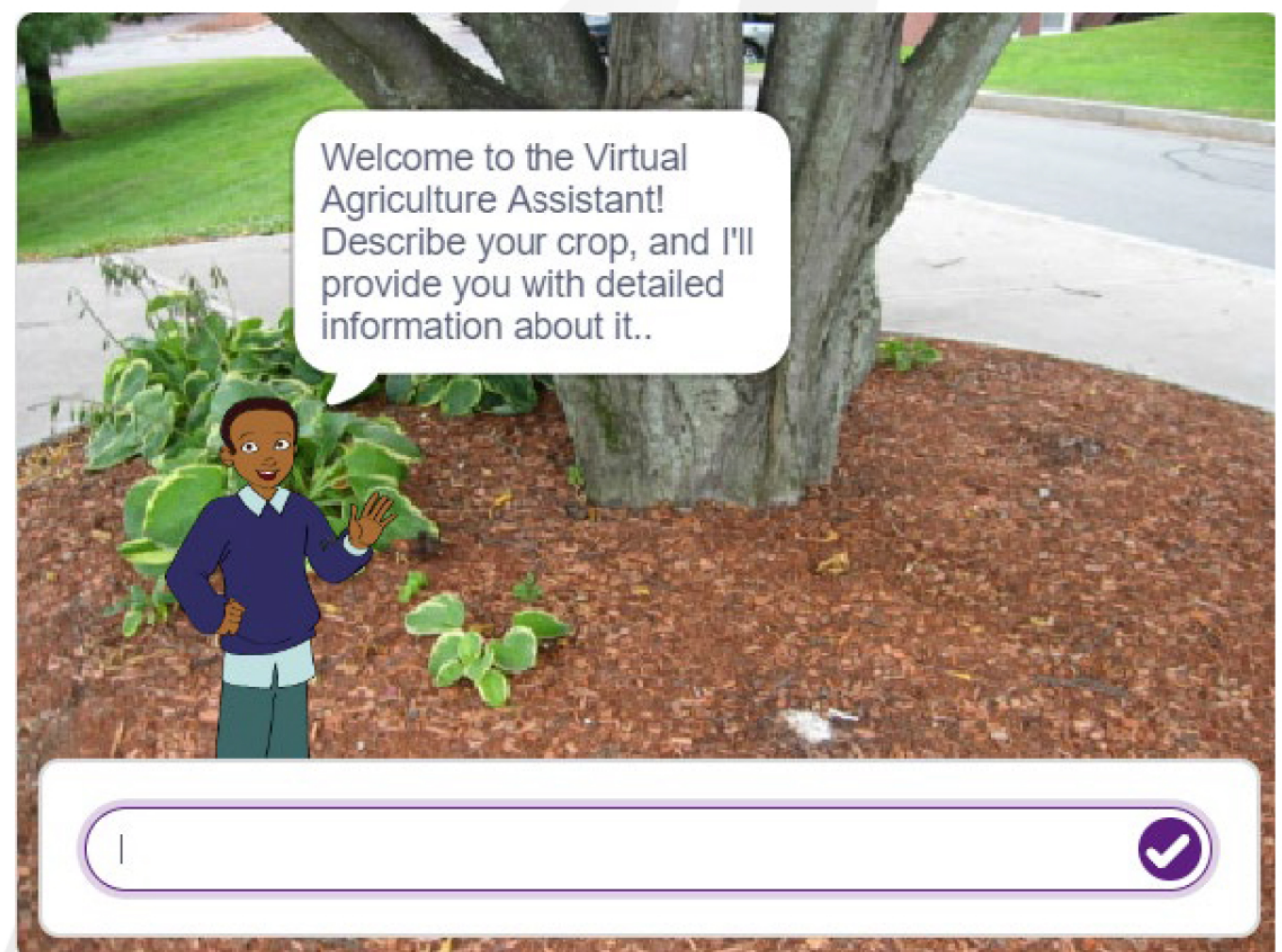
Useful Hints:

- Utilize PictoBlox's NLP extension to analyze and interpret Alex's crop descriptions effectively.
- Ensure you use the dataset provided exactly as it is to achieve accurate crop identification. Enter the descriptions correctly to ensure Devin responds accurately.

Game Steps:

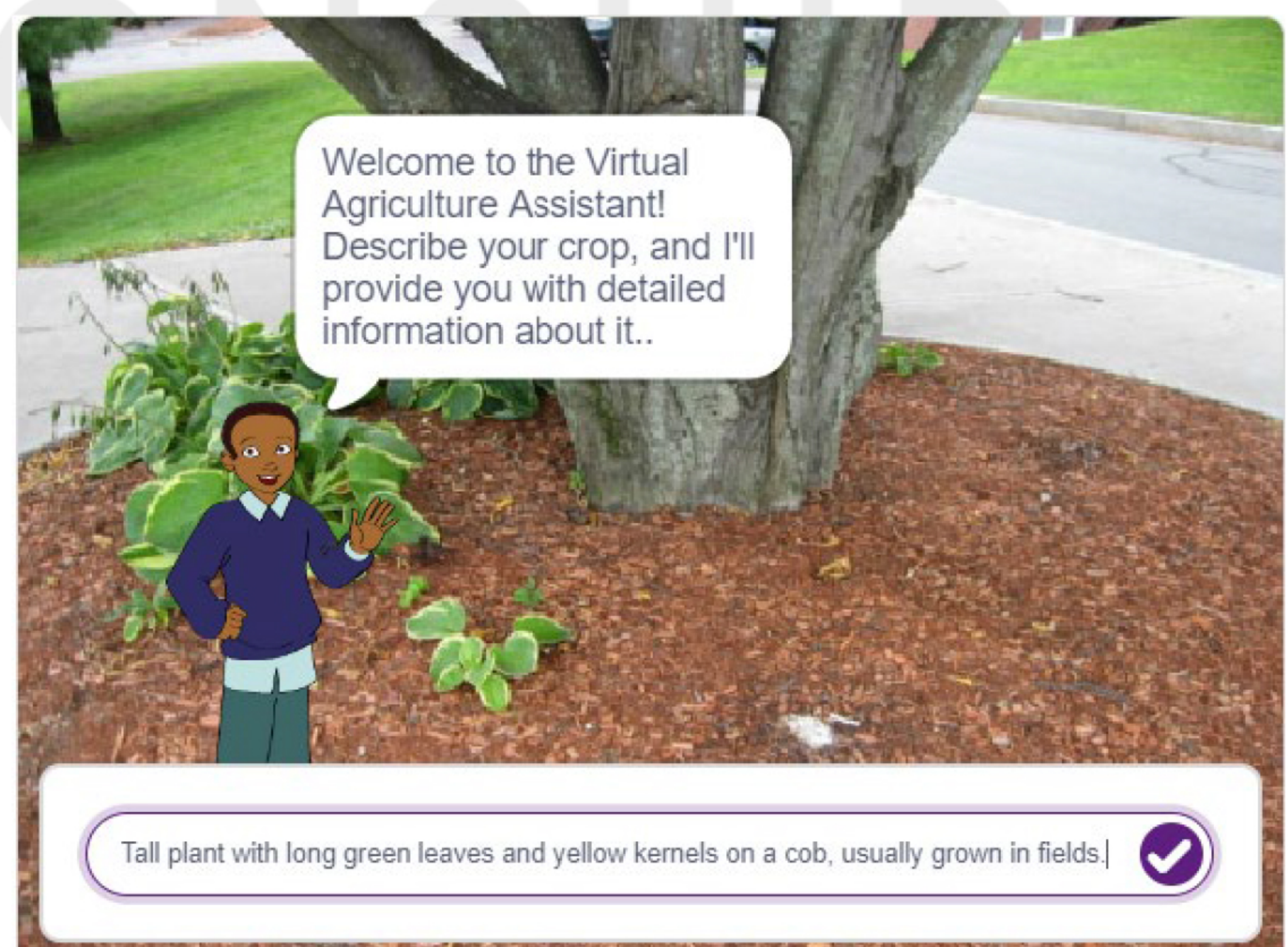
- **Step 1**

Devin greets the user: **"Welcome to the Virtual Agriculture Assistant! Describe your crop, and I'll provide you with detailed information about it."**



- **Step 2**

Devin uses NLP to process the user's description, extracting key features and characteristics from the input.



- **Step 3**

Based on the extracted features, Devin matches the description with a database of known crops and identifies the crop. Devin then responds with detailed information about the identified crop, including some benefits about this crop.



Devin Responses:

- **Tomato Response:**
 - Your crop is Tomato. Tomatoes are rich in antioxidants like lycopene, which support heart health and reduce the risk of certain cancers.
- **Corn Response:**
 - Your crop is Corn. Corn is a good source of dietary fiber, aiding in digestion and providing sustained energy.
- **Carrot Response:**
 - Your crop is Carrot. Carrots are high in beta-carotene, which promotes good vision and supports immune function.

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