Detailed Documentation Text for BOTMS Genesis Bible

BOTMS Genesis Bible – Detailed Documentation
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Author: Master Adi
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1. Introduction

What is BOTMS?
BOTMS (Bot Making Simplified) is a revolutionary programming language designed to simplify the creation of AI and automation bots using natural, conversational commands. It is designed for both beginners and expert developers, merging natural language with technical precision.

Why BOTMS?
Traditional programming languages often come with steep learning curves and rigid syntax. BOTMS breaks these barriers by enabling users to "write like you explain" while retaining the power of a full-fledged programming language. This approach not only speeds up development but also democratizes bot creation.

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2. Project Overview and Philosophy

BOTMS Vision:
“Write like you explain — Code like you mean it.”
This core philosophy drives every aspect of BOTMS. It emphasizes clarity, simplicity, and power through natural language constructs.

Design Goals:

- **Human-Friendly Syntax:** Use of natural commands like Ask, Reply, and Print.
- **Modular Extensibility:** Support for variables, conditions, loops, arithmetic, lists, and future API integrations.
- **Context-Aware Parsing:** Intelligent interpretation that distinguishes between plain variables and custom expressions.
- **Innovative Features:** Rules like Variable Wins Rule and Connected Expressions ensure clarity and reduce ambiguity.

Key Concepts:

- **BOTMS Decipher:** The parser/interpreter that understands BOTMS code.
- **BOTMS Bridge Module:** A planned future component to integrate external APIs.
- **Grammar Levels:** Progressing from basic interactions to advanced functionalities.

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3. BOTMS Grammar and Syntax

BOTMS uses an indentation-based block style (inspired by Python) while maintaining a natural language feel.

- **Block Style:** Blocks are defined by indentation instead of braces.
- **Punctuation:** Full stops are optional but recommended for clarity.

- **Dual Syntax:** Both natural language phrases and standard mathematical symbols are supported where needed.

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4. Special Features and Innovations

BOTMS Genesis introduces several **unique features** that combine natural language simplicity with intelligent parsing to create a powerful yet accessible programming language.

4.1 Variable Wins Rule

The **Variable Wins Rule** ensures that when a name is **ambiguous** between a previously defined variable and a custom expression, BOTMS always prioritizes the **variable's value**.

How It Works

If a variable with the same name as a common expression (like **half**) is already defined, BOTMS will return the variable's value instead of re-evaluating the expression.

Example

botms

CopyEdit

```
Set half as 200

Reply half
```

Output:

CopyEdit

```
200
```

Explanation:

- Even though **half of** is a recognized custom expression, BOTMS **prioritizes** the previously defined variable **half**.

4.2 Connected Expressions™

Connected Expressions™ allow BOTMS to handle **natural language computations** by identifying phrases linked with the word **"of"** as expressions. This feature makes mathematical operations more intuitive without requiring traditional syntax.

How It Works

Whenever **"of"** appears in a sentence, BOTMS automatically enters **Expression Mode**, where the entire phrase following **"of"** is treated as a **computation** rather than plain text or a variable name.

Examples

botms

CopyEdit

```
Set price as 200

Set discount as 10% of price

Print discount
```

Output:

CopyEdit

```
20
```

Expression	Meaning	Example	Output
half of	Divides by 2	`Set x as half of 100`	50

square of	Power of 2	`Set y as square of 4`	16
root of	Square root	`Set z as root of 25`	5
mean of	Average	`Set avg as mean of 5, 10, 15`	10
% of	Percentage	`Set tax as 18% of 200`	36

4.3 Context-Aware Parsing

Context-Aware Parsing enables BOTMS to **understand the meaning of words** based on their placement and prior definitions in the code. This feature allows BOTMS to automatically differentiate between:

- Variables
- Text
- Expressions

How It Works

1. BOTMS checks if the word is already defined as a variable.
2. If yes, the word is treated as the **variable's value**.
3. If not, the word is assumed to be **plain text**.

Example

botms

CopyEdit

```
Set price as 100

Set price of book as price
```

```
Print price of book
```

Output:

CopyEdit

```
100
```

Explanation:

- BOTMS identifies **price of book** as connected to the previously defined variable **price**.

4.4 Optional Full Stops

BOTMS allows **optional full stops** at the end of commands to give users the freedom to write code in a more **natural and conversational style**.

Examples

Without Full Stop:

botms

CopyEdit

```
Set a as 10
Print a
```

With Full Stop:

botms

CopyEdit

```
Set a as 10.
Print a.
```

Output (Both Cases):

CopyEdit

```
10
```

Why Optional Full Stops?

Feature	Benefit
Conversational Style	Makes code feel like **natural speech**
Beginner-Friendly	No strict syntax rules for statement endings
Freedom of Expression	Allows **flexibility** without breaking the code

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✅ All these features collectively make **BOTMS Decipher** both **intelligent** and **accessible**, aligning with the language's core philosophy:
"Write like you explain — Code like you mean it."

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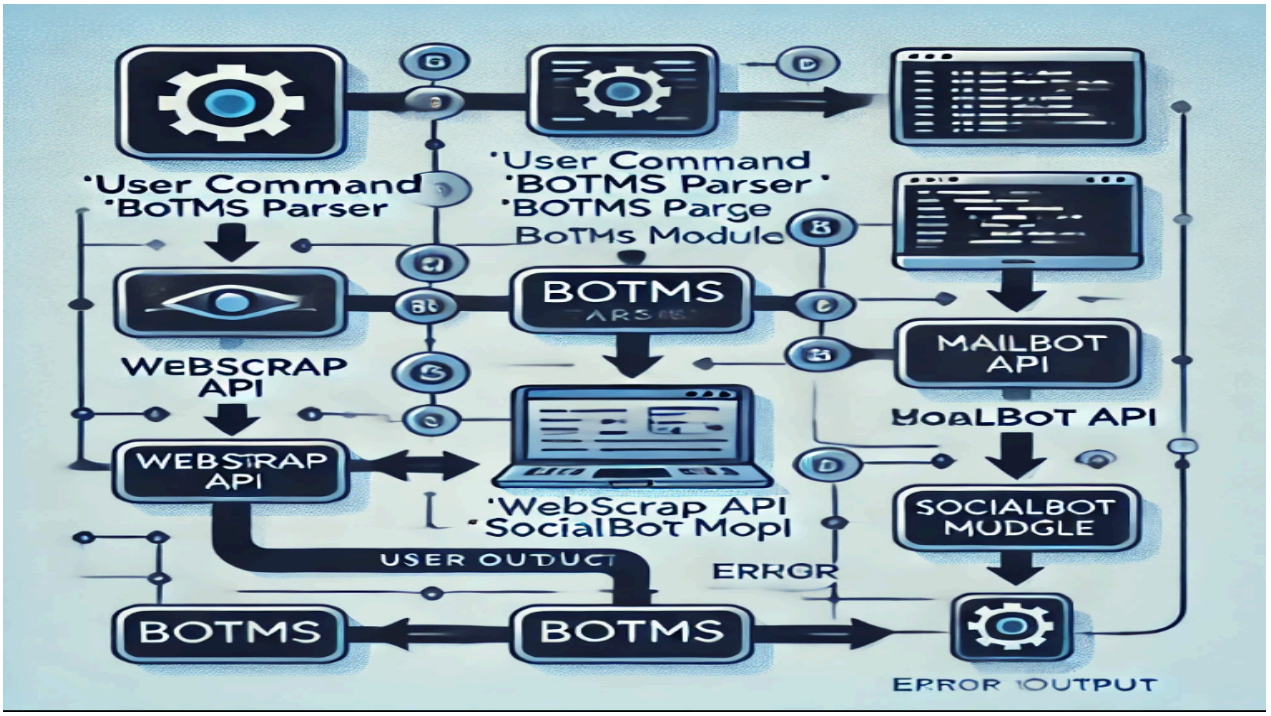
5. Execution Flow and Architecture

BOTMS Decipher: The parser that converts natural language commands into executable actions using the defined grammar rules.

BOTMS Bridge Module: A planned future integration that will connect BOTMS to external APIs and libraries for extended functionalities.

Flow Diagrams: Visual representations of how commands are parsed, processed, and executed. These diagrams accompany this documentation and will be updated as the

system evolves.



6. Future Plans and Roadmap

BOTMS Genesis is a living project with a roadmap that includes:

- **API Integrations:** Modules for web scraping, email automation, and social media.
- **Advanced Functions:** Support for reusable code blocks and higher-order functions.
- **Named Lists and Dictionaries:** Expanding the unified list system.
- **Enhanced Error Handling:** User-friendly debugging and error notifications.

7. Conclusion and Vision for the Future

BOTMS Genesis merges the clarity of natural language with the power of structured programming. Designed for both beginners and advanced users, it simplifies bot creation while maintaining scalability. This Bible will evolve alongside BOTMS, serving as both a historical document and a comprehensive teaching guide.

8. Updates and Versioning

This documentation will be updated with each major BOTMS release, covering:

- New modules and integrations.
- More detailed function definitions and libraries.
- Extended examples and tutorials.

9. Future Prospects, Models, and Versions

9.1 BOTMS Genesis Release

- **Current Version:** BOTMS Genesis v1.0 (Private Release).
- **Features:** Fundamental grammar rules, core command sets (output, conditionals, loops, variables, arithmetic, lists, and custom expressions), and a conversational list system.
- **Future Direction:** Internal validation before transitioning to an open-source model.

9.2 Integration Modules Roadmap

BOTMS is designed to be modular, with planned integration modules categorized into phases:

- **Phase 1 (BOTMS Genesis)**: WebScrap, MailBot, SocialBot (Prioritized for the first release).
- **Phase 2 (Future Enhancements)**: VisionAI, VoiceBot, FileBot (Planned for later versions).
- **Phase 3 (Long-Term Expansion)**: CloudConnect, TranslateBot, ChatBot, CryptoFetch (Future developments based on user needs).

9.3 BOTMS Decipher (Parser)

- **Current Version:** Grammar Rules v1.3 (Level 1 - Basic).
- **Features:** Natural language parsing, indentation-based blocks, optional full stops, context-aware parsing, Variable Wins Rule, and Connected Expressions (e.g., “half of”, “mean of”).
- **Planned Enhancements:**
    - Intermediate and advanced syntax support.
    - Expanded function support and improved error handling.

9.4 BOTMS Bridge Module

- **Purpose:** Middleware for external API and library integration.
- **Current State:** Conceptual, pending stable core grammar and modules.
- **Vision:** A seamless interface for BOTMS to interact with external services.

9.5 Additional Future Enhancements

- **User-Defined Functions:** Enabling modular and reusable code.
- **Expanded Data Structures:** Support for named lists and dictionaries.
- **Intelligent Debugging:** Enhanced error handling and natural-language debugging.
- **Developer Tools:** Built-in versioning and project management.
- **Open-Source Transition:** Once stable, BOTMS will open for community collaboration.

This structured roadmap ensures that BOTMS continues to evolve while staying true to its mission—simplifying bot development while maintaining technical power and flexibility.