ATLASENGINE COMPLETE GUIDE

Every Command, Every Feature, Every Button

The Ultimate Reference Manual

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PART 1: GETTING STARTED

1.1 WHAT IS ATLASENGINE?

AtlasEngine is a complete game development environment featuring:

Visual Editor - Professional IDE for game development **T# Language** - Easy scripting language (334 commands!) **3D Viewport** - First-person games with raycasting **2D Graphics** - Top-down RPG and arcade games **Text Adventures** - Interactive fiction support **Physics Engine** - Realistic movement and collisions **AI System** - NPC behaviors and pathfinding **Game Mechanics** - Weapons, inventory, quests, combat

What Can You Make?

- **3D FPS Games** (Doom-style shooters)
- **2D RPG Games** (Top-down adventures)
- **Text Adventures** (Interactive stories)
- **Puzzle Games** (Logic challenges)
- **Physics Games** (Realistic movement)
- **Arcade Games** (Classic gameplay)

1.2 INSTALLATION & LAUNCH

Requirements:

- Python 3.8 or higher
- Tkinter (included with Python)
- Pillow (for images): `pip install pillow`

Launch:

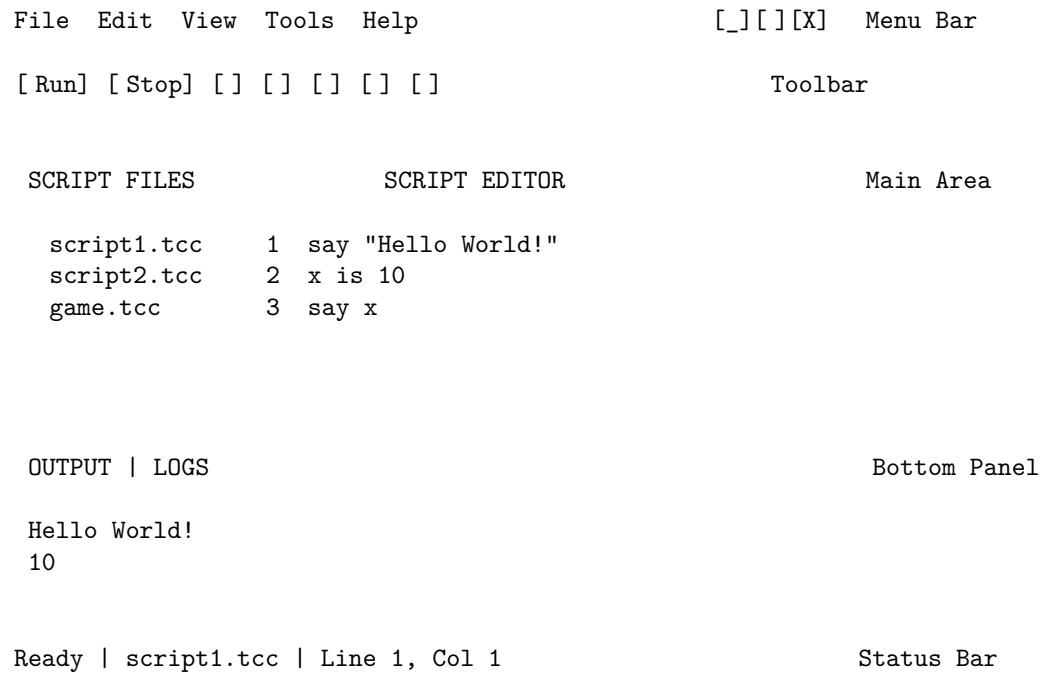**Windows:**

```
cd AtlasEngine1.0
python editor\main.py
```

Mac/Linux:

```
cd AtlasEngine1.0
python editor/main.py
```

Or use the batch file (Windows):

```
Double-click: START_ATLAS.bat
```

1.3 FIRST LOOK AT THE INTERFACE

When you launch AtlasEngine, you'll see:

```
 File  Edit  View  Tools  Help              [_][][X]   Menu Bar

[ Run] [ Stop] [] [] [] [] []                  Toolbar


  SCRIPT FILES              SCRIPT EDITOR               Main Area

   script1.tcc      1  say "Hello World!"
   script2.tcc      2  x is 10
   game.tcc         3  say x




  OUTPUT | LOGS                             Bottom Panel

  Hello World!
  10


 Ready | script1.tcc | Line 1, Col 1            Status Bar
```

Interface Components:

1. **Menu Bar** (Top)
   - File, Edit, View, Tools, Help
2. **Toolbar** (Below menu)
   - Quick action buttons
3. **Script Sidebar** (Left)
   - List of .tcc script files
4. **Script Editor** (Center)
   - Where you write T# code
   - Syntax highlighting
   - Line numbers
5. **Output Window** (Bottom)
   - Text tab: Text output
   - Graphics tab: 2D drawings

6. **Log Panel** (Bottom, next to Output)
   - System messages
   - Errors and warnings
7. **Status Bar** (Bottom)
   - Current file info
   - Line/column position

1.4 YOUR FIRST SCRIPT

Step 1: Create New Script

Method 1: Menu 1. Click **File → New** 2. Type filename: `hello.tcc` 3. Click OK

Method 2: Toolbar 1. Click [**New**] button 2. Type filename 3. Click OK

Method 3: Keyboard 1. Press `Ctrl+N` 2. Type filename 3. Press Enter

Step 2: Write Code

Type this in the editor:

```
say "Hello, World!"
say "Welcome to AtlasEngine!"

name is "Player"
say "Your name is: " name

x is 10
y is 20
sum is x + y
say "10 + 20 = " sum
```

Step 3: Run Script

Method 1: Toolbar - Click [**Run**] button

Method 2: Keyboard - Press `F5`

Method 3: Menu - Click **Tools → Run Script**

Step 4: See Output

Check the **OUTPUT** tab (bottom):

```
Hello, World!
Welcome to AtlasEngine!
Your name is: Player
10 + 20 = 30
```

Congratulations! You've run your first script!

1.5 UNDERSTANDING T# BASICS

T# is Line-Based

Each line is one command:

```
say "Hello"        ← One command
x is 10            ← One command
say x              ← One command
```

NO semicolons needed! (unlike JavaScript, C++, etc.)

Comments

```
# This is a comment
say "Hello"  # Comment after code

// Also a comment
say "World"  // Another comment style
```

Variables

Creating variables:

```
name is "Alice"
age is 25
score is 1000
health is 100.5
```

Using variables:

```
say name           → Prints: Alice
say age            → Prints: 25
say "Score: " score → Prints: Score: 1000
```

Math

```
x is 10
y is 5

sum is x + y       → 15
diff is x - y      → 5
product is x * y   → 50
quotient is x / y  → 2
```

Conditions

```
score is 100

when score equals 100 {
    say "Perfect score!"
}

when score greater 50 {
    say "Good job!"
}
```

Loops

```
repeat 5 times {
    say "Hello!"
}

x is 1
repeat 10 times {
    say x
    x add 1
}
```

PART 2: THE EDITOR INTERFACE (DETAILED)

2.1 MENU BAR

FILE MENU

New (Ctrl+N) - Creates a new .tcc script file - Opens dialog to enter filename - Adds to script sidebar

Open (Ctrl+O) - Opens existing .tcc file - File browser dialog - Loads into editor

Save (Ctrl+S) - Saves current script - Overwrites existing file - No dialog if already saved

Save As (Ctrl+Shift+S) - Saves with new name - Opens save dialog - Creates new file

Close - Closes current script - Prompts to save if unsaved - Clears editor

Exit - Closes AtlasEngine - Prompts to save unsaved work - Shuts down application

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EDIT MENU

Undo (Ctrl+Z) - Reverses last edit - Multiple undo levels - Works on all text changes

Redo (Ctrl+Y) - Redoes undone action - Multiple redo levels - Restores changes

Cut (Ctrl+X) - Cuts selected text - Copies to clipboard - Removes from editor

Copy (Ctrl+C) - Copies selected text - Stores in clipboard - Doesn't remove text

Paste (Ctrl+V) - Pastes from clipboard - Inserts at cursor - Replaces selection if any

Select All (Ctrl+A) - Selects all text - Entire script selected - Ready for copy/cut

Find (Ctrl+F) - Opens find dialog - Search in current file - Highlights matches

Replace (Ctrl+H) - Opens find & replace - Search and replace text - Preview before replacing

---

VIEW MENU

Toggle Script Sidebar - Shows/hides file list - More editor space - Keyboard: `Ctrl+B`

Toggle Output Window - Shows/hides output panel - More editor space - Keyboard: `Ctrl+J`

Toggle Log Panel - Shows/hides logs - See system messages - Keyboard: `Ctrl+L`

Zoom In (Ctrl++) - Increases font size - Better readability - Editor text only

Zoom Out (Ctrl+-) - Decreases font size - See more code - Editor text only

Reset Zoom (Ctrl+0) - Default font size - Returns to normal - Resets view

Full Screen (F11) - Maximizes window - Hides OS taskbar - More workspace

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TOOLS MENU

Run Script (F5) - Executes current script - Shows output below - Logs to console

Stop Script (Shift+F5) - Stops running script - Cancels execution - Clears state

Clear Output (Ctrl+K) - Clears output window - Fresh start - Removes all text/graphics

Clear Logs - Clears log panel - Removes messages - Clean slate

Reload Script (Ctrl+R) - Reloads from file - Discards unsaved changes - Fresh copy

Validate Syntax - Checks for errors - Before running - Shows problems

Settings (Ctrl+,) - Opens preferences - Customize editor - Save settings

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HELP MENU

Documentation (F1) - Opens this guide - Full reference - Learn T#

Quick Start - Beginner tutorial - First steps - Examples

Command Reference - All T# commands - Syntax guide - Quick lookup

Examples - Sample scripts - Game templates - Copy & modify

Keyboard Shortcuts - All hotkeys - Quick reference - Print-friendly

About - Version info - Credits - License

2.2 TOOLBAR BUTTONS (LEFT TO RIGHT)

[Run] Button

Function: Execute current script **Keyboard:** F5 **What it does:** 1. Saves file automatically 2. Parses T# code 3. Executes line by line 4. Shows output below 5. Logs completion

When to use: Run your game/script

[Stop] Button

Function: Stop running script **Keyboard:** Shift+F5 **What it does:** 1. Halts execution 2. Cancels loops 3. Clears state 4. Logs stopped message

When to use: Stop infinite loops or long scripts

[Reload] Button

Function: Reload script from disk **Keyboard:** Ctrl+R **What it does:** 1. Discards current edits 2. Loads saved version 3. Refreshes editor 4. Loses unsaved changes

When to use: Undo all changes since last save

[Save] Button

Function: Save current script **Keyboard:** Ctrl+S **What it does:** 1. Writes to file 2. Overwrites existing 3. Updates timestamp 4. Shows confirmation

When to use: Save your work frequently!

[Open] Button

Function: Open file browser **Keyboard:** Ctrl+O **What it does:** 1. Shows file dialog 2. Browse scripts folder 3. Select .tcc file 4. Loads into editor

When to use: Open existing scripts

[New] Button

Function: Create new script **Keyboard:** Ctrl+N **What it does:** 1. Prompts for filename 2. Creates .tcc file 3. Opens in editor 4. Adds to sidebar

When to use: Start a new game/script

[Settings] Button

Function: Open preferences **Keyboard:** Ctrl+, **What it does:** 1. Opens settings window 2. Customize editor 3. Change colors 4. Set defaults

When to use: Customize AtlasEngine

[Clear] Button

Function: Clear output **Keyboard:** Ctrl+K **What it does:** 1. Clears text output 2. Clears graphics 3. Fresh start 4. Ready for new run

When to use: Clean output before running again

2.3 SCRIPT EDITOR PANEL

The script editor is where you write T# code.

Features:

Syntax Highlighting

```
say "Hello"      ← Keywords in blue
x is 10          ← Numbers in green
# Comment        ← Comments in gray
```

Line Numbers

```
1  say "Line 1"
2  say "Line 2"
3  x is 10
```

- Shows line count
- Click to select line
- Helps find errors

Auto-Indent

```
when x equals 10 {
    say "Auto indented!"  ← Automatic indent
}
```

Bracket Matching

```
when x equals 10 {
    say "Hello"
} ← Highlights matching brace
```

Undo/Redo - Ctrl+Z: Undo - Ctrl+Y: Redo - Multiple levels

Find & Replace - Ctrl+F: Find - Ctrl+H: Replace - Regex support

Multi-Cursor - Hold Ctrl+Click: Add cursor - Alt+Click+Drag: Column select - Edit multiple lines

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2.4 SCRIPT SIDEBAR

Located on the left, shows all .tcc files in scripts folder.

Features:

File List

```
scripts/
   hello.tcc
   game.tcc
   maze.tcc
   adventure.tcc
```

Click to Open - Single click: Preview - Double click: Open in editor - Shows in main panel

Right-Click Menu - **Open**: Edit file - **Rename**: Change name - **Delete**: Remove file - **Duplicate**: Make copy - **Properties**: File info

Drag & Drop - Drag files to reorder - Drag to desktop to export - Drag from desktop to import

Search - Type to filter files - Find by name - Quick access

2.5 OUTPUT WINDOW

Located at bottom, shows script output.

Two Tabs:

TEXT Tab   Shows text output from commands:

```
say "Hello"      → Hello
say x            → 10
shout "LOUD!"    → LOUD! (red, bold)
whisper "quiet"  → quiet (gray, small)
```

Features: - Scrollable - Color-coded - Copy text - Clear button

GRAPHICS Tab   Shows 2D drawings:

```
drawcircle at 300, 300 radius 100 color "#ff0000"
drawrect at 100, 100 size 50, 50 color "#00ff00"
```

Features: - 800x600 canvas - Black background - Clear button - Auto-switch mode

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2.6 LOG PANEL

Located at bottom, next to OUTPUT.

What It Shows:

System Messages

```
[10:30:45]   Script completed
[10:30:50]   Warning: Variable not found
[10:31:00]   Error on line 5: Syntax error
```

Message Types: - **Info** (blue): General messages - **Warning** (yellow): Potential problems - **Error** (red): Fatal errors - **Debug** (gray): Debug info

Features: - Timestamps - Color-coded - Scrollable - Clear button - Filter by type

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2.7 STATUS BAR

Located at very bottom, shows current status.

Information Displayed:

```
Ready | script1.tcc | Line 5, Col 12 | T# | UTF-8
  ↑         ↑              ↑            ↑      ↑
Status   Filename    Cursor Position  Lang  Encoding
```

Status: - **Ready**: Idle - **Running**: Executing script - **Saving**: Writing to disk - **Loading**: Reading file - **Error**: Problem occurred

Filename: - Current script name - Unsaved: * indicator - Click to switch files

Cursor Position: - Line number - Column number - Updates in real-time

Language: - Shows "T#" - Script language indicator

Encoding: - UTF-8 default - File encoding type

TO BE CONTINUED IN PART 2...

(This guide continues with all 334 commands, 3D viewport, game examples, and complete tutorials)