

# MAGIC CODEX

UNDERSTANDING THE MAGIC WORLD OF PROGRAMMING



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# INTRODUCTION

THIS EBOOK WAS CREATED FOR THE TONNIE BOOTCAMP – JAVA AND AI IN EUROPE, IN PARTNERSHIP WITH DIO – DIGITAL INNOVATION ONE. THE OPEN-TOPIC ASSIGNMENT IS FOCUSED ON CONTENT CREATION USING ARTIFICIAL INTELLIGENCE.

THIS EBOOK USES CHATGPT TO GENERATE TEXT AND IMAGE PROMPTS, MICROSOFT BING IMAGE GENERATOR FOR THE GRAPHICS AND MICROSOFT COPILOT FOR REVIEWING..

AS FOR THE CONTENT, I PREPARED A BRIEF PRESENTATION OF POPULAR TECHNOLOGIES. OF THE ONES SHOWN HERE, THE ONLY ONE I HAVEN'T PERSONALLY STUDIED IS C; AND THE OTHERS HAVE BEEN PART OF COURSES I'VE TAKEN.

THE IDEA OF COMPARING MAGIC AND PROGRAMMING COMES FROM THE BELIEF THAT, TO PEOPLE FROM THE NOT-SO-DISTANT PAST, PROGRAMMING WOULD TRULY SEEM LIKE MAGIC!

I HOPE THIS EBOOK PRESENTS THESE TECHNOLOGIES IN AN ENJOYABLE WAY AND SERVES AS A STARTING POINT FOR READERS TO EXPLORE THEM FROM A NEW—AND ALMOST MYSTICAL—PERSPECTIVE.

**ENJOY YOUR READING!**



# I - PYTHON



**SCHOOL OF ELEMENTAL MAGIC**

# PY AND THE ELEMENTS

## CLARITY, FLEXIBILITY, FLUIDITY

*“AT THE BEGINNING OF THE JOURNEY, WHEN THE APPRENTICE TAKES THEIR FIRST STEPS TOWARD UNDERSTANDING THE ARCANES CODE, THE SCHOOL OF ELEMENTAL MAGIC WELCOMES THEM. IT IS HERE THAT THEY LEARN TO SUMMON SIMPLE YET POWERFUL SPELLS – EASILY READABLE EVEN TO INEXPERIENCED EYES.”*

## THE ESSENCE OF PYTHON

PYTHON IS THE LANGUAGE MANY CALL UPON FIRST. LIKE WATER OR WIND, IT FLOWS EFFORTLESSLY THROUGH THE FINGERS OF THE APPRENTICE MAGE.

ITS STRENGTH LIES IN CLARITY, SIMPLICITY, AND EXPRESSIVENESS – THE INCANTATIONS CAN BE READ LIKE PHRASES IN EVERYDAY LANGUAGE.



# PYTHON SCROLLS



## WHO ARE THE PYTHON MAGES?

- DATA SCIENCE ALCHEMISTS
- WRITTING AUTOMATA (SCRIPTING / AUTOMATION)
- ARTIFICIAL INTELLIGENCE SUMMONERS
- SCHOLAR MAGES INITIATING NEW APPRENTICES

## SCROLLS AND RUNES

- DYNAMIC TYPING: THE LANGUAGE DETERMINES TYPES DURING EXECUTION.
- MANDATORY INDENTATION: THE MAGICAL STRUCTURE DEPENDS ON THE VISUAL ALIGNMENT OF THE SPELLS.
- MAGIC LIBRARIES: PANDAS, NUMPY, SCIKIT-LEARN, FLASK, AND OTHERS.



# WEAKNESSES OF THE SPELL

- INVOCATION IS SLOWER COMPARED TO MORE PRIMITIVE RUNIC MAGICS (C, RUST).
- POORLY WRITTEN SPELLS CAN SPIRAL OUT OF CONTROL IF NOT WELL-TESTED.
- WEAK TYPING CAN BE LIKE AN UNSTABLE POTION – IT WORKS, BUT MIGHT EXPLODE LATER.

# WHEN TO USE PY MAGIC?

USE PYTHON WHEN YOU NEED QUICK RESULTS, WANT TO TEST OUT MAGICAL IDEAS, OR MANIPULATE LARGE VOLUMES OF DATA WITHOUT HAVING TO CARVE EVERY RUNE INTO STONE.

# FINAL SPELL

PYTHON IS THE GATEWAY TO THE MAGIC OF CODE. LIKE A LIGHT YET POWERFUL STAFF, IT ALLOWS YOU TO CONJURE EVERYTHING FROM SIMPLE SPELLS TO ARTIFICIAL INTELLIGENCE INVOCATIONS.

*"ONE WHO MASTERS PYTHON, MASTERS THE FLUIDITY OF COMPUTATIONAL THOUGHT. BUT BEWARE – DO NOT GROW TOO COMFORTABLE WITH ITS LIGHTNESS. THE MAGICAL WORLD IS VAST AND NOT ALWAYS SO GENTLE."*

# II - JAVAScript



**JAVAScript: SCHOOL OF CHAOS**

# JAVASCRIPT AND CHAOS

## MUTATION MAGIC, HASTINESS AND IMPROVISATION

*"AFTER THE CLARITY OF PYTHON'S WATERS, THE APPRENTICE FINDS THEMSELVES FACING THE WILD WHIRLPOOL OF BROWSER MAGIC. HERE, DISCIPLINE MEETS ITS GREATEST TRIAL: INSTABILITY. THE CHAOTIC SCHOOL TEACHES THAT WITHIN CHAOS LIES CREATION — AND THAT A MISCAST SPELL CAN JUST AS EASILY BRING DOWN A CASTLE AS IGNITE A THOUSAND FIRES OF POSSIBILITY."*

## THE ESSENCE OF JAVASCRIPT

JAVASCRIPT WAS BORN FOR THE WEB, BUT HAS EVOLVED IN EVERY IMAGINABLE DIRECTION — LIKE A MUTANT CREATURE MADE OF PURE ENERGY.

IT IS ASYNCHRONOUS, DYNAMIC, MUTABLE, AND AT THE SAME TIME OMNIPRESENT: IT LIVES IN BROWSERS, SERVERS (NODE.JS), MOBILE APPS, AND EVEN HOME APPLIANCES.





# JAVASCRIPT SCROLLS



## WHO ARE THE JAVASCRIPT MAGES?

- WEB WEAVERS (FRONT-END DEVELOPERS)
- INTERFACE ARTIFICERS (MAGICAL UX/UI CRAFTERS)
- INTERACTION ILLUSIONISTS (EVENTS, ANIMATIONS, REACTIVITY)
- SERVER TAMERS WITH NODE.JS

## SCROLLS AND RUNES

- WEAK, DYNAMIC TYPING (THE POTION MIGHT CHANGE MID-SPELL)
- MUTABLE MAGICAL PROPERTIES (OBJECTS TRANSFORM WITH EASE)
- ASYNCHRONY WITH ASYNC/AWAIT AND PROMISES (TIME BENDS IN THIS SCHOOL)
- DOM MASTERY: CONJURING INTERACTIONS WITH PAGE ELEMENTS

# CHAOS TRAPS

- UNCERTAIN TYPING CAN LEAD TO SNEAKY BUGS
- MAGIC ‘WORKS’ EVEN WITH LOGICAL ERRORS (OVERLY PERMISSIVE BEHAVIOR)
- CURSED LEGACY: MANY BAD PRACTICES STILL WANDER THE WILD

## WHEN TO USE JAVASCRIPT MAGIC?

USE JAVASCRIPT WHEN YOU NEED TO CONJURE RICH INTERFACES, DYNAMIC PAGES, COMPLEX INTERACTIONS, OR BUILD FULL WEB PORTALS. WITH FRAMEWORKS LIKE REACT, VUE, OR ANGULAR, THE SPELLS CAN BECOME EXTREMELY POWERFUL – AND DANGEROUS.

## FINAL SPELL

JAVASCRIPT IS THE SCHOOL OF IMPROVISATION. LIKE A BARD OF A THOUSAND TALENTS, IT MAY SEEM CHAOTIC AT FIRST GLANCE, BUT IN THE RIGHT HANDS, IT CAN BUILD FLYING CASTLES WITH A SINGLE LINE OF CODE.

*“DON’T TRY TO TAME THE CHAOS. DANCE WITH IT. THE TRUE MAGIC OF JAVASCRIPT LIES IN ITS FREE NATURE – BUT ONLY THE MOST DISCIPLINED CAN DRAW STABLE WISDOM FROM IT.”*

# III - C



**C: THE PRIMORDIAL SCHOOL**



# C, ABSOLUTE STRENGTH

## RUNE MAGIC, BRUTAL PRECISION

*“NOT EVERY APPRENTICE SURVIVES THE PRIMORDIAL SCHOOL. HERE, WORDS ARE BLADES, AND EVERY SPELL DEMANDS ABSOLUTE DISCIPLINE. THE C LANGUAGE OFFERS NO MERCY; EITHER YOU MASTER THE RUNE – OR IT DESTROYS YOU.”*

## THE ESSENCE OF C

C IS AN ANCESTRAL LANGUAGE. LIKE IRON FORGED INTO SACRED RUNES, ITS MAGIC SHAPES THE MOST FUNDAMENTAL LAYER OF THE PHYSICAL PLANE OF COMPUTING: POINTERS, MEMORY, BITS, AND BYTES.

NO SPELL HERE IS FREE. EACH INCANTATION CONSUMES REAL RESOURCES – AND A SINGLE MISTAKE CAN DESTROY ENTIRE KINGDOMS (OR YOUR RAM).



# C SCROLLS



## WHO ARE THE MAGES OF C?

- FORGERS OF OPERATING SYSTEMS
- CONTROLLERS OF MACHINES AND DEVICES (FIRMWARE, DRIVERS)
- ARCHMAGES OF PERFORMANCE (GAMES, RENDERERS, COMPILERS)
- KEEPERS OF ANCIENT KNOWLEDGE (DEEP MACHINE-LEVEL SAGES)

## SCROLLS AND RUNES

- STATIC, EXPLICIT, AND INFLEXIBLE TYPING
- DIRECT MEMORY CONTROL VIA POINTERS
- NATIVE COMPILATION: THE SPELL BECOMES PURE MACHINE CODE
- NO AUTOMATIC SAFETY: THE MAGE IS RESPONSIBLE FOR EVERYTHING

# RISKS OF POWER

- ONE WRONG POINTER AND THE WORLD COLLAPSES (SEGMENTATION FAULT).
- NO GARBAGE COLLECTION: THE WIZARD MUST CLEAN UP THEIR OWN MESS.
- STRICT SYNTAX: EVEN A MISPLACED COMMA CAN SEAL YOUR DOOM.

## WHEN TO USE C MAGIC?

C IS USED WHEN ABSOLUTE CONTROL, MAXIMUM SPEED, OR DIRECT INTERACTION WITH THE PHYSICAL MACHINE WORLD IS NEEDED. IT'S NOT CONVENIENCE MAGIC – IT'S THE MARTIAL ART OF CODE.

## FINAL SPELL

C IS THE FOUNDATION. ALL OTHER LANGUAGES HAVE DRUNK FROM ITS ANCIENT GRIMOIRE. ITS ENCHANTMENTS ARE HARSH, BUT IMMORTAL. CREATING WITH C IS LIKE CARVING THE WRITINGS IN STONE.

*“THE PRIMORDIAL SCHOOL FORGIVES NO MISTAKES, BUT IT FORGES TRUE WIZARDS. HE WHO MASTERS C DOES NOT MERELY CONJURE – HE BUILDS THE RUNES OTHERS WILL USE.”*



# IV - JAVA



**JAVA: THE SCHOOL OF TIME**

# JAVA AND THE MULTIPLANE

## RITUALS, CONTRACTS AND INVOCATION

*“IN THE TOWER OF TIME, WIZARDS FOLLOW ANCIENT  
RULES. EVERY SPELL REQUIRES A SEAL, EVERY ENTITY  
OBEYS CONTRACTS. HERE, STABILITY IS MORE  
IMPORTANT THAN IMPROVISATION. AND MAGIC... IS  
WRITTEN ON LONG SCROLLS.”*

## THE ESSENCE OF JAVA

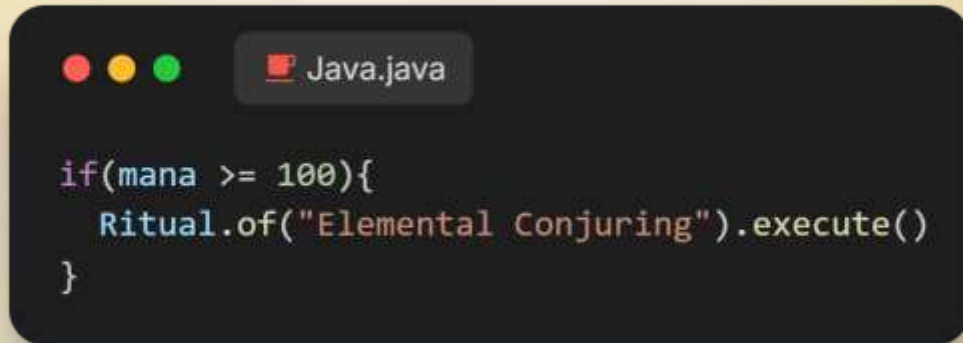
JAVA IS THE LANGUAGE OF STRUCTURE,  
PORTABILITY, AND PERSISTENCE. CREATED TO WRITE  
ONCE AND RUN ANYWHERE,

IT SUMMONS ENTITIES KNOWN AS CLASSES,  
WHERE EVERYTHING IS METICULOUSLY DESCRIBED  
BEFORE THE SPELL IS CAST.

NOTHING HAPPENS WITHOUT A PLAN. JAVA  
DEMANDS THE WIZARD DEFINE EVERY PART OF THE MAGIC  
EVEN BEFORE ATTEMPTING TO CONJURE IT.



# JAVA SCROLLS



## WHO ARE THE JAVA WIZARDS?

- BUILDERS OF CORPORATE KINGDOMS (BANKING SYSTEMS, ERPS)
- CONJURERS OF CROSS-PLATFORM MAGIC (ANDROID APPS, BACKENDS)
- DEFENDERS OF STABILITY (ROBUSTNESS AND MAINTENANCE OF LONG-LASTING SPELLS)
- ORACLES OF OBJECT ORIENTATION

## RUNES AND TECHNIQUES

- STRONGLY TYPED AND COMPILED INTO BYTECODE (INTERPRETED BY A VIRTUAL MACHINE)
- OBJECT-ORIENTED PROGRAMMING AS A SACRED DOGMA
- GARBAGE COLLECTOR: THE TOWER HANDLES THE CLEANUP, BUT SOMETIMES... SLOWLY
- VERBOSE: EVEN SIMPLE ENCHANTMENTS ARE LONG, BUT EASY TO READ



# TOWER LIMITATIONS

- NOT VERY FLEXIBLE: SOMETIMES ALTERING A SPELL REQUIRES REDESIGNING THE ENTIRE RITUAL
- EXCESSIVE VERBOSITY CAN TIRE THE APPRENTICE
- THE VIRTUAL MACHINE (JVM) IS POWERFUL, BUT DEMANDS CONSIDERABLE ARCANE ENERGY (MEMORY AND PROCESSING)

## WHEN TO USE JAVA MAGIC?

JAVA IS CHOSEN WHEN LONGEVITY, ORGANIZATION, AND CROSS-PLANE PORTABILITY ARE THE GOALS. IT'S IDEAL FOR LARGE SYSTEMS WHERE MULTIPLE WIZARDS MUST READ AND CONTINUE ENCHANTMENTS CRAFTED BY OTHERS.

## FINAL SPELL

JAVA IS A LANGUAGE OF CEREMONIAL CONJURATION. IT TEACHES PATIENCE, PLANNING, AND RESPONSIBILITY. EACH LINE IS A BRICK IN A LONG-TERM TOWER.

*"MASTERING JAVA IS LIKE BENDING TIME ITSELF: ITS SPELLS DON'T EXPLODE... BUT THEY SUSTAIN EMPIRES THROUGH AGES."*

V – C#



ARCANE HARMONY SCHOOL

# C# AND HARMONY

## MUSICAL RUNES, VISUAL SUMMONINGS, AND VERSATILITY

*“IN THE HARMONIC CATHEDRAL, WIZARDS CONDUCT SPELLS LIKE MAESTROS. THE C# LANGUAGE WAS COMPOSED TO UNITE ELEGANCE, POWER, AND CLARITY. ITS ENCHANTMENTS FLOW LIKE SYMPHONIES – AT TIMES AS THUNDEROUS AS A STORM, AT OTHERS AS SUBTLE AS A WHISPER IN LINQ.”*

## THE ESSENCE OF C#

C# WAS BORN FROM THE SAME ROOT AS C AND JAVA, BUT WAS SHAPED BY A DIFFERENT ARCANES ORDER – THE ENGINEERS OF REDMOND.

THE SCHOOL OF ARCANES HARMONY SEEKS BALANCE: BETWEEN CONTROL AND ABSTRACTION, BETWEEN PRODUCTIVITY AND PERFORMANCE.

ITS SPELLS ARE CLEAR, ELEGANT, YET DEEPLY POWERFUL. C# OFFERS BOTH THE PRECISION OF A SWORD AND THE SOFTNESS OF A BRUSH.





# C# SCROLLS



## WHO ARE THE C# MAGES?

- ARTISANS OF VISUAL PORTALS (WINDOWS, WPF, MAUI, XAMARIN)
- CONJURERS OF DIGITAL WORLDS (UNITY FOR GAMES)
- ARCHITECTS OF COMMERCIAL SYSTEMS (.NET ENTERPRISE BACKENDS)
- DEVOTEES OF THE MICROSOFT ECOSYSTEM

## RUNES AND TECHNIQUES

- OBJECT-ORIENTED, BUT WITH FUNCTIONAL MAGIC (LINQ, LAMBDA)
- STATICALLY TYPED AND MODERN, WITH INFERENCE WHEN NEEDED
- ASYNC/AWAIT: TEMPORAL MAGIC FOR MULTITASKING
- .NET RUNTIME: A VAST TROVE OF LIBRARIES
- BLAZOR/MAUI: WEB AND NATIVE INTERFACES

# BALANCE POINTS

- REQUIRES SPECIFIC PLATFORMS (USUALLY .NET)
- HISTORICALLY TIED TO WINDOWS, BUT HAS BECOME CROSS-PLATFORM
- CAN BE AS VERBOSE AS JAVA IN SOME RITUALS – THOUGH MORE REFINED

## WHEN TO USE C# MAGIC?

C# IS IDEAL WHEN AIMING FOR PRODUCTIVITY WITH ROBUSTNESS, RICH INTERFACES, OR INTERACTIVE EXPERIENCES (LIKE GAMES AND ENTERPRISE SYSTEMS). IT IS THE CHOICE OF THE VERSATILE WIZARD – ONE WHO WISHES TO BUILD BOTH CASTLES AND LABYRINTHS WITH THE SAME LANGUAGE.

## FINAL SPELL

C# IS A LANGUAGE THAT HONORS THE MUSIC OF CODE. ITS SPELLS ARE WRITTEN LIKE SHEET MUSIC, WHERE EVEN THE ERRORS HAVE RHYTHM.

MASTERING C# IS LIKE CONDUCTING A CHOIR OF DIGITAL ARTIFACTS – AND MAKING THEM ALL SING IN HARMONY.

*“IN THE SCHOOL OF HARMONY, THE WIZARD DOES NOT FIGHT THE CODE, BUT FLOWS WITH IT – LIKE TWO MUSICIANS SHARING THE SAME TEMPO.*

# VI – PHP



**PERSISTENT TRANSMUTATION**



# PHP AND MULTIFORMS

## WEB ALCHEMY, SURVIVAL AND THE DOING WITH WHAT'S AT HAND

*"IN THE TOWER FORGOTTEN BY THE GODS, WEB ALCHEMISTS WRITE SPELLS WITH WHAT REMAINS OF THE GREAT LIBRARY. THEY IMPROVISE. ADAPT. SURVIVE. AND AGAINST ALL ODDS... THEY REMAIN INDISPENSABLE."*

## THE ESSENCE OF PHP

PHP WAS BORN AS A HANDFUL OF SCRIPTS, BUT THROUGH SHEER USAGE, COMMUNITY EFFORT, AND EVOLUTION, IT BECAME AN OMNIPRESENT LANGUAGE ON THE WEB.

ITS GRIMOIRE MAY SEEM MESSY AT FIRST GLANCE, BUT IT HIDES FORMULAS THAT STILL SUPPORT THE MAJORITY OF TODAY'S DIGITAL KINGDOMS.

PHP IS THE MAGIC OF PROBLEM-SOLVERS. THE ONES WHO GET THE SITE ONLINE. THE ONES WHO FIX THE BROKEN RUNE AT 2 A.M. WITH A `VAR_DUMP()` AND SHEER FAITH.



# PHP SCROLLS



## WHO ARE THE PHP WIZARDS?

- VETERAN WEBMAGES WHO WERE SUMMONING SITES BACK IN THE .PHP3 DAYS
- ALCHEMISTS OF WORDPRESS, LARAVEL, AND MAGENTO
- ARTISANS OF QUICK SOLUTIONS THAT NEED TO WORK RIGHT NOW
- PRAGMATIC PROGRAMMERS, MORE FOCUSED ON DELIVERY THAN ARCAINE PURITY

## RUNES AND TECHNIQUES

- FLEXIBLE TYPING, FLUID MAGIC, AND EASY ACCESS
- DIRECT SERVER-SIDE INTERPRETATION – SPELLS CAST WITHOUT COMPILING
- MODERN FRAMEWORKS LIKE LARAVEL HAVE BROUGHT NEW SCHOOLS OF MAGIC AND ELEGANCE
- MAINTENANCE RITUALS OFTEN DEMAND PATIENCE AND ACCUMULATED WISDOM

# LANGUAGE TRANSFORMATIONS

PHP EVOLVED FROM CHAOS TO ROBUST FRAMEWORKS, FROM SPAGHETTI PAGES TO ELEGANT RESTFUL APIS, FROM INSECURITY TO MATURITY WITH MODERN VERSIONS AND OPTIONAL STRONG TYPING.

IT'S NOT A LANGUAGE STUCK IN THE PAST – IT'S A LANGUAGE THAT INSISTS ON BEING PART OF THE FUTURE BY CONSTANTLY REINVENTING ITSELF.

## WHEN TO USE PHP MAGIC?

- WEB CONSTRUCTIONS WHERE AGILITY AND DELIVERY ARE TOP PRIORITIES
- LEGACY SYSTEMS THAT STILL SUPPORT HALF THE DIGITAL PLANE
- PROJECTS USING WORDPRESS, WOOCOMMERCE, OR SIMILAR MAGICAL CMSS
- WHEN THE WIZARD MUST SOLVE THE PROBLEM WITHOUT WAITING FOR DIVINE APPROVAL

## FINAL SPELL

PHP IS PURE ALCHEMY. IT'S THE MAGIC OF TURNING SCRAP INTO SOLUTIONS. ITS SPELLS MAY NOT BE THE MOST BEAUTIFUL, BUT THEY ARE ACCESSIBLE, EFFECTIVE, AND RESILIENT. AND IN THE MOST FORGOTTEN CORNERS OF THE DIGITAL TOWER... THE SOUND OF <?PHP STILL ECHOES.

*“THOSE WHO UNDERESTIMATE PHP FORGET THAT ALCHEMY IS ABOUT TURNING WHAT YOU HAVE INTO WHAT YOU NEED. AND THAT... IS ONE OF THE MOST POWERFUL FORMS OF MAGIC.”*



# VII – ARCANUM



CODE AND MAGIC

# THE ARCANUM OF CODE

*“AND AT THE END OF THE JOURNEY, THE WIZARD LOOKS BACK AND UNDERSTANDS: THERE IS NO SINGLE SOURCE OF POWER. EACH SCHOOL, EACH RUNE, EACH LANGUAGE IS JUST ONE FACET OF THE SAME CRYSTAL OF KNOWLEDGE.”*

THERE ARE MANY GRYPHONS OF PROGRAMMING. SOME LANGUAGES WERE FORGED THROUGH DISCIPLINE, LIKE JAVA AND C#, WHILE OTHERS WERE BORN FROM CREATIVE CHAOS, LIKE JAVASCRIPT. SOME GREW IN QUIET TEMPLES, LIKE PYTHON, WHILE OTHERS EMERGED AS ALCHEMICAL HACKS THAT TOOK THE WORLD BY STORM – LIKE PHP.

AND YET, THEY ALL CONVERGE TOWARD THE SAME PURPOSE: TO TRANSFORM INTENTION INTO ACTION, IMAGINATION INTO SYSTEMS, IDEAS INTO SOLUTIONS.

THE ART OF PROGRAMMING DOESN'T RESIDE SOLELY IN THE LANGUAGE, BUT IN THE MIND OF THE CONJURER. THE TRUE ARCHMAGE OF CODE KNOWS MORE THAN ONE SCHOOL, BLENDS STYLES, ADAPTS SPELLS, RECOGNIZES PATTERNS – AND UNDERSTANDS THAT THERE IS NO WEAK LANGUAGE, ONLY POORLY CRAFTED APPLICATION.



# MAGIC CONTINUES

WITH THIS CODEX IN HAND, MAY YOU — WHETHER APPRENTICE OR VETERAN — BE ABLE TO:

- LEARN WITH REVERENCE, BUT CREATE WITH IRREVERENCE.
- RESPECT THE OLD ENCHANTMENTS, BUT FEAR NOT THE NEW.
- CODE NOT ONLY FOR MACHINES, BUT ALSO FOR HUMAN BEINGS.
- SHARE YOUR KNOWLEDGE AS THE ANCIENT WIZARDS ONCE LEFT THEIR GRIMOIRES OPEN IN THE LIBRARIES.

## LAST SPELL

*“THE WORLD CHANGES. THE MAGIC CHANGES. BUT THE WIZARD’S JOURNEY — THAT REMAINS.”*

KEEP LEARNING. KEEP CONJURING. AND MAY YOUR NEXT PROJECT BE WORTHY OF LEGEND.





# SPECIAL THANKS

## THANK YOU FOR READING!

THE CONTENT YOU JUST READ WAS MADE USING ARTIFICIAL INTELLIGENCE, WITH MINOR CHANGES AND SOME CHECKING.

ALTHOUGH THE INFO IS OF SURFACE LEVEL NATURE, CONSIDER ALWAYS CHECKING CRITICAL CONTENT.

THANK YOU VERY MUCH!

BRUNNO ROBERTO PEREIRA DA SILVA, 2025

MY GITHUB:

