

	Project Charter	Version:1.0 Date: March 3, 2020
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Beginning Date	Februray 25, 2020	Project Manager:	Néstor Iván Martínez Ostoa
Section I - General Information			
Project applicant:	Team Assembly		
Project sponsor:	Norberto Ortigoza Márquez		
Email account:	<a href="mailto:hiphoox@bunsan.io">hiphoox@bunsan.io</a>		
Section II – Project Details			
Project name:	Writing a C compiler in Elixir		
Project description:	In this project, Team Assembly will be writing a compiler for the C programming language using Elixir as its base language. The compiler compile source programs written in C (which are described in <b>Project deliverables</b> ), assemble those source programs and run its executable files.		
Project objective:	Learn how to build a compiler and identify its main parts.		
Project scope:	More detailed information in the document named <b>Project Scope</b>		
Project deliveries:	<div><div>1. Compiler written in Elixir that compiles source programs written in C that return the following expressions inside the <b>main</b> function:</div><div><div>1.1 Phase One: Integers</div><div><div>1.1.1 1, 2, 3, 4, etc.</div></div></div><div><div>1.2 Phase Two: Unary Operators</div><div><div>1.2.1 Negation (-)</div><div>1.2.2 Bitwise complement (~)</div><div>1.2.3 Logical negation (!=)</div></div></div><div><div>1.3 Phase Three: Binary Operators</div><div><div>1.3.1 Addition (+)</div><div>1.3.2 Subtraction (-)</div><div>1.3.3 Multiplication (*)</div><div>1.3.4 Division (/)</div></div></div><div><div>1.4 Phase Four: More Binary Operators</div><div><div>1.4.1 Logical AND (&amp;&amp;)</div><div>1.4.2 Logical OR (  )</div><div>1.4.3 Equal to (==)</div><div>1.4.4 Not equal to (!=)</div><div>1.4.5 Less than (&lt;)</div><div>1.4.6 Less than or equal to (&lt;=)</div><div>1.4.7 Greater than (&gt;)</div><div>1.4.8 Greater than or equal to (&gt;=)</div></div></div></div> <div><div>2. The compiler should contain at least the following programs/modules:</div><div><div>2.1 Scanner</div><div>2.2 Parser</div><div>2.3 Code generator</div></div></div> <div><div>3. Project Documentation:</div><div><div>3.1 Project Charter document.</div><div>3.2 Project Scope document.</div><div>3.3 Analysis and Technical Design document.</div><div>3.4 Installation guide document.</div><div>3.5 Slides documenting the building process.</div></div></div>		

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	Project start date	Project estimated final date	Project Manager
	March 3, 2020	March 17, 2020	Néstor Iván Martínez Ostoa
Project approval requirements:	<div>1. For this phase, a program written in Elixir that compiles a source program written in C.<div>1.1 The compiler should contain at least a Scanner, Parser and Code Generator.</div>1.2 The source program should only return integers (<b>Project deliverables 1.1</b>).</div> 1.3 The program should assemble the source program.1.4 The user should be able to run the program in assembly language.2. Live demo of the first phase of the project.		
Project risks:	<div>1. GitHub repository to work on.</div> 2. Team understanding of Elixir basics.3. Team understanding of a compiler and its basic components and processes.4. Complicated team agenda that may reduce working time on the project.		
Key stakeholder list:	<div>1. Sponsor: Norberto Ortigoza Márquez</div> 2. Customer: Norberto Ortigoza Márquez3. Domain Expert: Norberto Ortigoza Márquez4. Project Manager: Néstor Iván Martínez Ostoa5. System Architect: Mario Horacio Garrido Czacki6. System Integrator: José Enrique Hernández Zamora7. System Tester: Alejandro Ramírez Bondi		
Section III – Signatures			
Sponsor		Project Manager	
Name and Signature		Name and Signature	