

# The Life of a Self-taught Software Developer

## Requirements and Test Document

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## **INTRODUCTION:**

This Requirements and test document(RTD) is meant to show the requirements of the Simulator game and test 3 aspects of each test case ID. The project goals are to create a simulator game that simulates the career of a self taught developer. It shows how they start, get a job, and rank up.

## **BACKGROUND INFORMATION:**

Some terms needed are:

[Programming]Languages: These are what software is written in and what the programmer is going to have to choose

IDE: An IDE is an Integrated Developer Environment, this is the tool that programmers use to write and run code. Some IDEs are more suited for certain languages.

The requirements and test cases are very straightforward. There aren't any other terms that I believe are not common. The test cases are meant to test whether certain aspects of the program work or not. The test cases I have created are meant to show that the simulator is able to work as intended and show the error checking capabilities.

## **REQUIREMENTS:**

This section actually contains the requirements. Remember that requirements must be atomic (requiring only one thing) and testable (able to be objectively measured via test). The section starts with a short description of the purpose of the section (presenting the requirements), and any other additional text that helps the reader understand what the purpose of the requirements are. You must have one requirement per user story. You may have more, but your grade is based on one per user story. The requirements shall be numbered or identified in some fashion. Each requirement shall be associated with the user story, or stories, that it relates to. Formats may vary; a recommended format is provided in Table 1. Expand Table 1 as needed as you record user stories and requirements during the software development process.

KEY:

USER STORY

REQUIREMENTS

Table 1: Requirement Specifications

Reqt ID	Requirement Specification
	1)As a developer I want to create all classes to be able to run my code.
1	This program shall use a class called Computer to hold computer information.
	1)As a developer I want to create all classes to be able to run my code.
2	This program shall use a class called Windows which is a subclass of Computer to hold Windows computer information.
	1)As a developer I want to create all classes to be able to run my code.
3	This program shall use a class called Mac which is a subclass of Computer to hold Mac computer information.
	1)As a developer I want to create all classes to be able to run my code.
4	This program shall use a class called Chrome which is a subclass of Computer to hold Chrome computer information.
	1)As a developer I want to create all classes to be able to run my code.
5	This program shall use a class called Linux which is a subclass of Computer to hold Linux computer information.
	1)As a developer I want to create all classes to be able to run my code.
6	This program shall use a class called Language to hold programming language information.
	1)As a developer I want to create all classes to be able to run my code.
7	This program shall use a class called Programmer to hold player information.
	1)As a developer I want to create all classes to be able to run my code.
8	This program shall use a class called GameController which stores the bulk of the functionality of the program.
	2)As a developer I want to load all of the computer types from a file.
9	The program shall load in computer type values from a ComputerTypes file.
	3)As a player I want to be able to specify basic information about myself.
10	The GameController class shall prompt the user for their information.
	3)As a player I want to be able to specify basic information about myself.
11	The GameController class shall create a programmer object for the player.
	4)As a player I want to be able to choose my computer.
12	Display all available computer options to the user
	4)As a player I want to be able to choose my computer.

13	Save the user's choice of computer with error checking
	5)As a developer I want to load all of the Programming languages from a file.
14	The program shall load in languages value from a Languages file.
	5)As a developer I want to load all of the Programming languages from a file.
15	This program shall use a class called Question to hold question information.
	5)As a developer I want to load all of the Programming languages from a file.
16	This program shall use a class called FillInTheBlank which is a subclass of Question to hold FillInTheBlank question information.
	5)As a developer I want to load all of the Programming languages from a file.
17	This program shall use a class called MultipleChoice which is a subclass of Question to hold MultipleChoice question information.
	6)As a player I want to be able to choose my programming language of choice.
18	This program shall display all available languages options to the user
	6)As a player I want to be able to choose my programming language of choice.
19	This program shall save the users choice of programming language with error checking
	7)As a player I want to be able to choose how I learn how to code.
20	This program shall display to the console the different options of learning how to code(youtube and udemy)
	8)As a developer I want to teach/quiz the player based on their choice of learning method.
21	This program shall display all questions from the selected choice of learning to the console
	8)As a developer I want to teach/quiz the player based on their choice of learning method.
22	This program shall display text telling the player great job if they get the answer right or try again if they got it wrong
	8)As a developer I want to teach/quiz the player based on their choice of learning method.
23	When the player gets both answers correct, text will be displayed to the console telling them that they are ready for the interview
	9)As a player I want to be able to interview after I finish learning.
24	This program shall display all questions from the interview to the console
	9)As a player I want to be able to interview after I finish learning.
25	This program shall give the player a response based on how many questions they got right
	10)As a developer I want to generate some reviews for the year which affects anxiety and promotability
26	This program shall load in reviews from the "Reviews.txt" file
	10)As a developer I want to generate some reviews for the year which affects anxiety and promotability

27	This program shall print a good, medium, or bad review
	11)As a developer I want to tell the user that they will get a promotion if they get a certain question right.
28	This program shall display to the console when the player gets a chance to earn a promotion
	11)As a developer I want to tell the user that they will get a promotion if they get a certain question right.
29	This program shall print to the console a coding question
	11)As a developer I want to tell the user that they will get a promotion if they get a certain question right.
30	This program shall raise the players rank if they get the question right
	12)As a developer I want to track the player's anxiety level and determine if they lose the game.
31	This program shall use an enum class called rank to store the players job rank
	12)As a developer I want to track the player's anxiety level and determine if they lose the game.
32	This program shall increase or decrease the player's anxiety levels during certain circumstances
	12)As a developer I want to track the player's anxiety level and determine if they lose the game.
33	This program shall end the game if the anxiety level hits 9 or above
	13)As a developer I want to be able to promote the player all the way to the CEO level to win the game
34	This program shall end the game if the player reaches ceo level
	13)As a developer I want to be able to promote the player all the way to the CEO level to win the game
35	This program shall us a class called simMain to run the program

*[Shall be completed for user stories actively worked in the current sprint.]*

#### **TEST CASES:**

This section contains the actual test cases. Students are required to test one requirement per user story. Each test shall be composed of a minimum of three test cases. Students having additional requirements for a user story are not required to provide tests cases for the additional requirements. Test cases shall be constructed with specific values for input and expected behavior.

Use Table 2 for the test cases. Naturally, the actual behavior and pass/fail columns don't get filled out until the tests are actually performed. Introductory text shall explain the table (you should never include a table or figure in a document without discussing it and referring to it).

**Table 2: Test Cases and Results**

Req't ID	Test Case ID	Initial Conditions And Input	Expected Behavior Or Output	Actual Behavior Or Output	Pass Fail
6	1	A python object is created	Python and pyCharm info is displayed	Python and pyCharm info is displayed	Pass
6	2	A Java object is created	Java and IntelliJ info is displayed	Java and IntelliJ info is displayed	Pass
6	3	A C object is created	C and Codeblocks info is displayed	C and Codeblocks info is displayed	Pass
9	4	Windows computer info in ComputerTypes.txt	Prints out a windows computer with its make and model	Prints out a windows computer with its make and model	Pass
9	5	Mac computer info in ComputerTypes.txt	Prints out a Mac computer with its make and model	Prints out a Mac computer with its make and model	Pass
9	6	Chrome computer info in ComputerTypes.txt	Prints out a Chrome computer with its make and model	Prints out a Chrome computer with its make and model	Pass
11	7	Blank spaces as name	Welcome to the simulator, Anonymous	Welcome to the simulator, Anonymous	Pass
11	8	Taylor	Welcome to the simulator, *name*	Welcome to the simulator, *name*	Pass
11	9	Taylor Jensen	Welcome to the simulator, *first Last*	Welcome to the simulator, *First Last*	Pass
13	10	choosing a valid computer	the users choice of computer should be saved	the selected computer info was printed to the screen	Pass
13	11	choosing an invalid index	a random computer should be chosen	a random computer info was printed to the screen	Pass

13	12	entering non numeric selection	a random computer should be chosen	a random computer info was printed to the screen	Pass
14	13	Java language info in ProgrammingLanguage.txt	Prints out Java and IntelliJ	Prints out Java and IntelliJ	Pass
14	14	Python language info in ProgrammingLanguage.txt	Prints out Python and Pycharm	Prints out Python and Pycharm	Pass
14	15	C language info in ProgrammingLanguage.txt	Prints out C and Codeblocks	Prints out C and Codeblocks	Pass
19	16	choosing "1"	the users choice of language should be saved	the selected language info was printed to the screen	Pass
19	17	choosing "7"	a random language should be chosen	a random language info was printed to the screen	Pass
19	18	entering "a"	a random language should be chosen	a random language info was printed to the screen	Pass
20	19	entering 1	youtube/free courses should be chosen	youtube/free courses was chosen	Pass
20	20	entering 2	udemy/paid courses should be chosen	udemy/paid courses was chosen	Pass
20	21	entering a number other than 1 or 2	youtube/free courses should be chosen top air on the safe side	youtube/free courses was chosen	Pass
22	22	typing in the correct answer	the console will print "Great job"	the console prints "Great job"	Pass
22	23	typing in the wrong answer	the console will print "Try again!!!"	the console prints "Try again!!!"	Pass
22	24	picking the wrong answer for multiple choice	the console will print "Try again!!!"	the console prints "Try again!!!"	Pass
23	25	getting one answer right	the console will print "You passed, you're hired!"	the console prints "You passed, you're hired!"	Pass

23	26	getting two answers right	the console will print "You are absolutely outstanding, you're hired!"	the console prints "You are absolutely outstanding, you're hired!"	Pass
23	27	getting no answer right	the console will print "You suck but we're short on staff so you're hired!"	the console prints "You suck but we're short on staff so you're hired!"	Pass
27	28	receiving a positive review	the console prints" Answer this question for a promotion"	the console prints" Answer this question for a promotion"	Pass
27	29	receiving a mild review	the console just displays" press enter to continue"	the console displays"Continue to next year? [Press Enter]"	Pass
27	30	receiving a bad review	the anxiety count increases by 2	the anxiety count increases by 2	Pass
30	31	Typing "=" in response to the question, "What is the correct way to initialize an array in Python?"	the console prints, "Congrats you now have a Senior Position"	the console prints, "Congrats you now have a Senior Position"	Pass
30	32	Typing "!!" in response to the question, "What is the correct way to initialize an array in Python?"	The console prints, "You got it wrong"	The console prints, "You got it wrong"	Pass
30	33	Typing "a" in response to the question, "What is the correct way to write an array of integers in Python?"	the console prints, "Congrats you now have a CEO Position"	the console prints, "Congrats you now have a CEO Position"	Pass
33	34	Anxiety reaching 9	The console prints, You got too anxious so you quit your job to join the circus!"	The console prints, You got too anxious so you quit your job to join the circus!"	Pass
33	35	Anxiety reaching 5	The game will continue until something else stops it	The game will continue until something else stops it	Pass



33	36	Anxiety reaching 10	The console prints, You got too anxious so you quit your job to join the circus!"	The console prints, You got too anxious so you quit your job to join the circus!"	Pass
34	37	Typing "b" in response to the question,"What is the correct way to write an array of integers in Python?"	The console prints, "You got it wrong"	The console prints, "You got it wrong"	Pass
34	38	Typing "a" in response to the question,"What is the correct way to write an array of integers in Python?"	THE console prints "You are now the boss and have all the money and have found the key to happiness!!")	"You are now the boss and have all the money and have found the key to happiness!!")	Pass
34	39	Don't get CEO promotion chance	The game will continue until something else stops it	The game will continue until something else stops it	Pass

*[Shall be completed for user stories actively worked, and completed, in the current sprint.]*

#### **REFERENCES:**

#### **APPENDICES:**

This is optional, but may include external sources, source code, input data files, or other related material.

*[Shall be completed by deliverable P4, and edited as needed for future deliveries]*