**CHAPTER 1**

**INTRODUCTION**

This chapter introduces the research’s project entitled “CodeRunner”. It also includes the project context, purpose and description, objectives, scope and limitation

**Project Context**

Technology at its current state is different from technology years ago. Technology before would only mean the evolution of TVs, Computers and such. But now, technology advances even further. When you ask someone what technology is now, people would say it’s about smartphone apps, tablet apps, social media apps. Some would even say that technology is some kind of evolution from sticks and stones to automated things. But when you look back, you would have never thought of technology becoming like this. Both positively and negatively. Before people imagined as the future of technology would be like ordering something from a robot, or an automated fast food chain. Well, maybe we are going there in the near future. But still, as it turns out, technology not only gives us pleasure. But it can be helpful for us as there are things that can help us with work, school, even at home.

Since technology boomed a couple of years ago, programming has been more frequent than ever before. Before people would only hire programmers as a system developer or a software developer. But since the digital age of smartphones and tablets has arrived, programmers do not only provide system or software for their clients. Now, they offer their services to develop apps for smartphones and tablets. Developers, which are the makers of these apps, also make teachers or instructors life easier, as they develop something that would make it look like it can be taught even to people without background to technology. And with that, this project will help programming instructors make their life easier. As we all know there comes a time where a problem would require students to have different answers or different syntaxes to the problem. This is where it will help them check whether that student is correct from answering that problem.

**Purpose and description**

The project helps the user identify or correct a programming syntax. By just a picture of the syntax. Probably, written in paper. Then the project will scan the source code and check whether the code is valid or not. Not only will this be a help for programmers that write code in a piece of paper for practice, it will also be time-efficient for teachers to check the papers of their students. The application used will scan the taken picture for words that are relevant to programming languages

**Objectives of the study**

The main objective of the study is to develop an application that would take a picture of a source code written in a paper to display the output whether it is correct or not by doing the following:

* To develop an application that would take a picture a source code written in paper
* To develop an application that would scan the picture taken and provide an output. If the source code is correct or not
* To develop an application that will help programming instructors, ease of checking of their student’s papers

**Scope and Limitations**

The features of this project is focused on developing an application that displays or gives the output of a certain source code by taking a picture of it. Then the application will scan the picture taken and then converted to text. In this way, the user can easily determine, without the help of a pc or laptop, whether the written code is correct or not, or if there are errors within the code.

On the other hand, since the application handles programming languages, as a start it would only feature certain or a single programming languages only.