SWIFT

19CSE-100

PROBLEM SOLVING & ALGORITHMIC THINKING

Programming language survey

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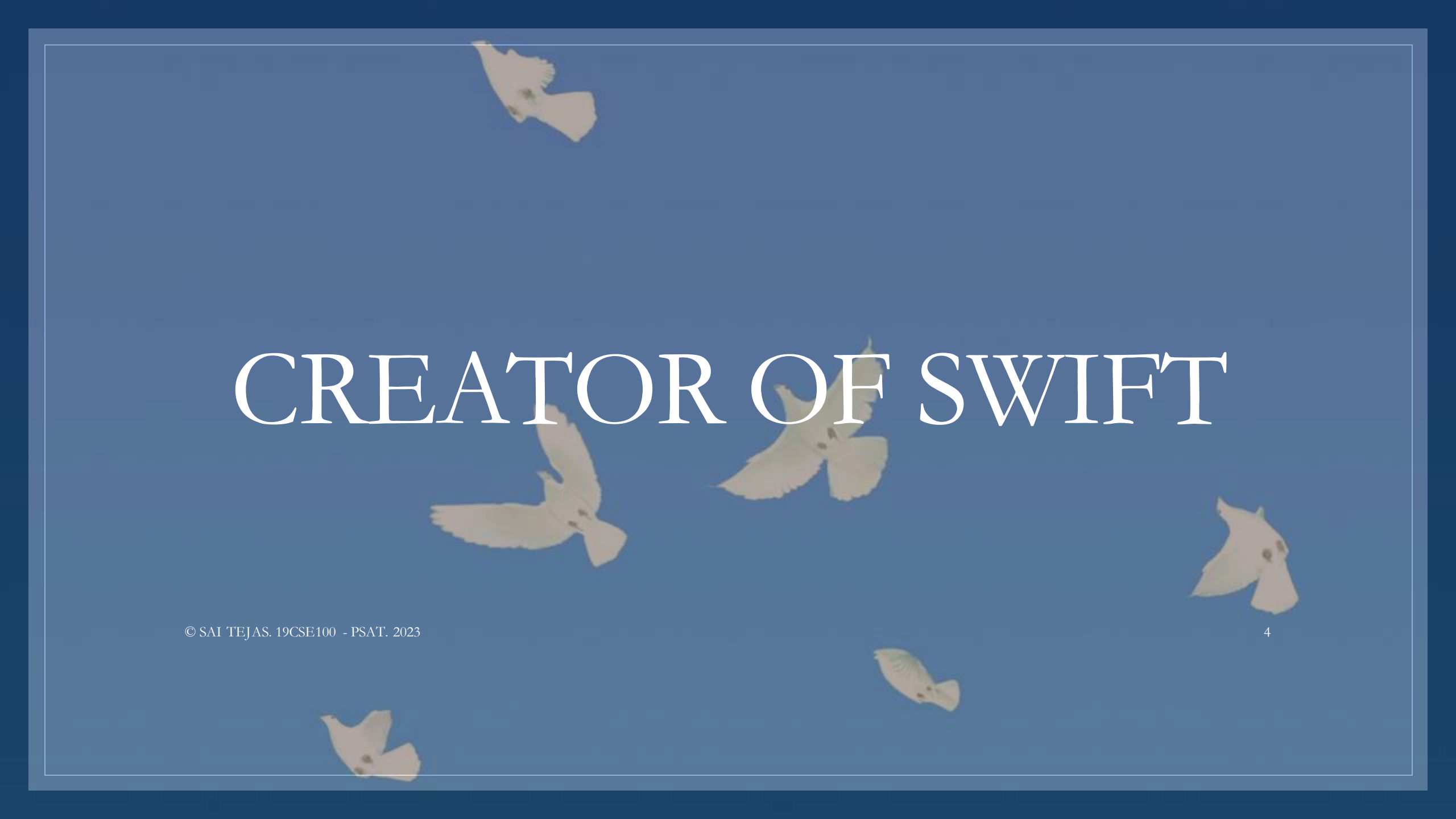
INTRODUCTION

Introduction

- Swift is a programming language created by Apple for iOS, iPadOS, macOS, watchOS, tvOS, and Linux. Swift is intended to be more reliable and readable than Objective-C. Swift combines object-oriented programming with functional programming patterns
- Swift was first introduced by Apple in June 2, 2014 . It was announced as a replacement for the Objective-C programming language for iOS and macOS development. Swift was designed to be more readable and expressive than Objective-C, with the goal of making it easier for developers to write and maintain code. The first patch of SWIFT was released on September 2014.



CREATOR OF SWIFT

Creator of Swift

- Chriss lattner is considered as father of Swift. He initially put up the concept of developing the language in 2010 . He was profoundly known for development of Swift and LLVM (Low Level Virtual Machine)
- He was the lead Architect of SWIFT project at Apple . He worked at Apple for over a decade and joined in google . He continues to be active

Pro's and cons of Swift

Advantages

1. Swift is faster than Objective-C and easier to read and maintain
2. Swift is highly expressive, which makes it easier to write complex code
3. Swift has a simplified syntax, making it easier for developers to learn and use

Disadvantages

1. Swift is a relatively new language, so there is a smaller community of developers who are proficient in it
2. Swift has a large number of features, which can make it difficult for new developers to learn and understand.
3. Swift requires a more powerful hardware to run efficiently, which can increase the development costs

Paradigm

- Swift is a multi-paradigm, compiled programming language. This means that it supports multiple programming paradigms and it is transformed into machine code that can be executed directly by the computer before the execution . Additionally, Swift also has some features from imperative and procedural programming paradigms, making it a flexible and versatile language for various types of applications.
- The paradigms supported by Swift are:

1. Object-Oriented Programming (OOP)
2. Functional Programming (FP)
3. Protocol-Oriented Programming (POP)

HELLO WORLD PROGRAMME