Unit : 20
Applied Programming with Design Principles

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Lecturer

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Greeting with Students

- Name
- Hobby
- Favorite Subject
- Ambition

Unit Specification

01

We will learn Advanced Programming in the following semester:

- We need to learn Advanced Programming is about 40 sessions and we must do One Assignment for AP lecture.
- We must learn AP lecture at Lecturer Lead Discussion, Group Discussion, Practical with Programming Concept on Dart Programming, Flutter and Android Studio

Unit Specification (Cont'd)

Learning Aims of this unit are:

1. **Investigate the impact of SOLID development principles on the OOP paradigm**
2. **Design a large dataset processing application using SOLID principles and clean coding techniques**
3. **Build a data processing application based on a developed design**
4. **Perform automatic testing on a data processing application.**

Unit Specification (Cont'd)

- ✓ Assignment based learning at AP Unit
- ✓ At one assignment, you need to do formative assessment and summative assessment

- ✓ There are three grading points of one assignment, Pass, Merit, and Distinction
- ✓ If you fail the Pass assessment, you need to submit "Resit" assessment.

- ✓ Whenever you get "Resit" assessment, you can get only "Pass" point.
- ✓ If you fail the "Resit" assessment, you need to take "Retake" on this unit.

- ✓ When you do "Retake" on this unit, you need to register on this unit again.
- ✓ Whenever you do "Retake" on this unit, you can get only "Pass" point.

What is Computer Programming

1. **A programming language** is a way to communicate with the computer and provide instructions to the computer so that the computer can execute our tasks.

2. **Computer Programming** is the process of **designing and building programs** in order to execute the instructions successfully.

3. Using computer programming concepts, we can **analyze, develop, and implement** several algorithms that are used for executing the programs.

Computer Programming Languages

- C Language: The language was developed in 1972 by Dennis Ritchie and its laboratories at AT & T Bells. It was basically designed and developed for implementing the UNIX OS.
- It is a structured programming language.

- C++: It was developed in 1983 and was an object-oriented version of the C programming language.
- C++ was developed for providing high-level abstractions so as to handle large development projects efficiently.

Computer Programming Languages (Cont'd)

- C#: It was developed in 1983, known as Objective-C by Apple.
- It was mainly created for addressing the lacking points of the object-oriented programming language. Later on, it was licensed by NeXt in 1988.

- Python: It was developed in the late 1980s, which was an advanced programming language because it was object-oriented, interpreted, robust plus flexible.

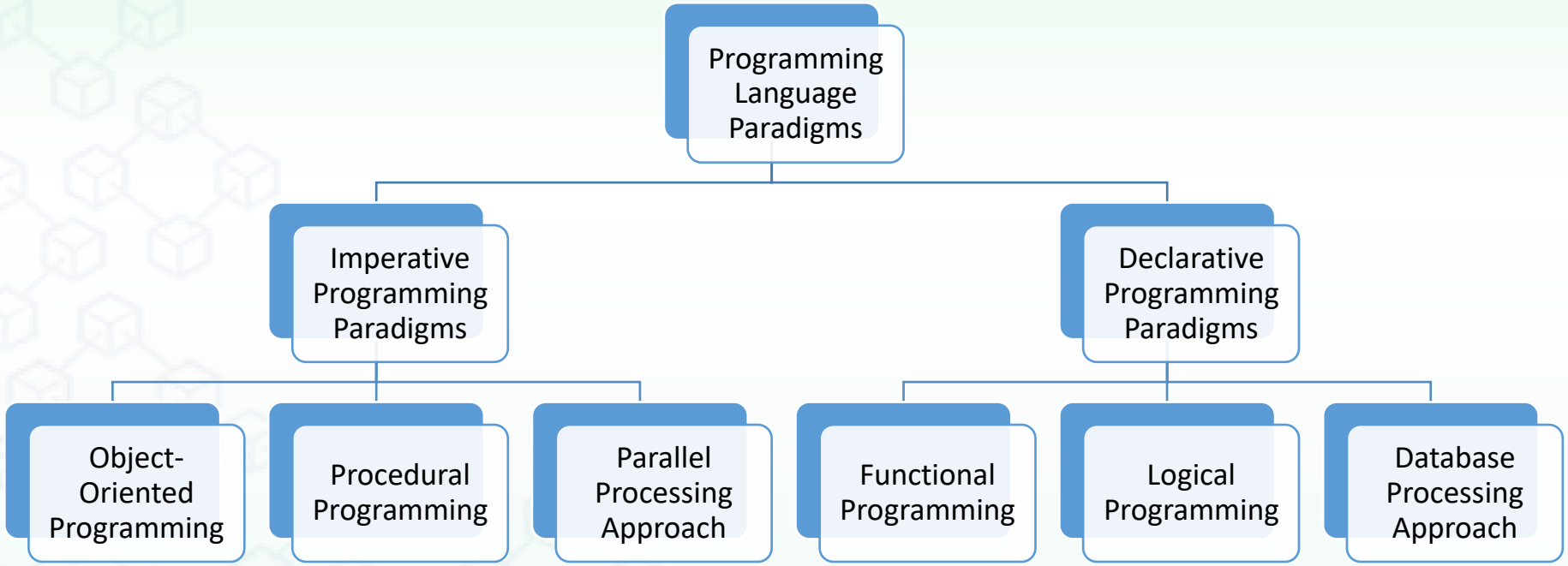
Computer Programming Languages (Cont'd)

- Java: It was developed in 1990 at Sun Microsystems, and was originally known as Oak.
- It is a general-purpose and high-level programming language.

- HTML: Hyper Text Markup Language was developed in 1990 by Tim Berners-Lee (a physicist) that enabled scientists to share documents in an online mode.

- JavaScript: It was developed in 1995 at Netscape and was known as LiveScript.
- Later on, it was named JavaScript, which is a client-side programming language.

Programming Language Paradigms



References

https://www.javatpoint.com/what-is-computer-programming