

# Introduction to C++

CLASS- 1

# Introduction

- C++ is a general purpose, case-sensitive, free-form programming language.
- C++ supports object-oriented, procedural and generic programming.
- C++ is a middle-level language, as it encapsulates both high and low level language features.
- C++ also called C with classes.

# History of C++

- C++ programming language was developed in 1980 by **Bjarne Stroustrup** at bell laboratories of AT&T (American Telephone & Telegraph), located in U.S.A.



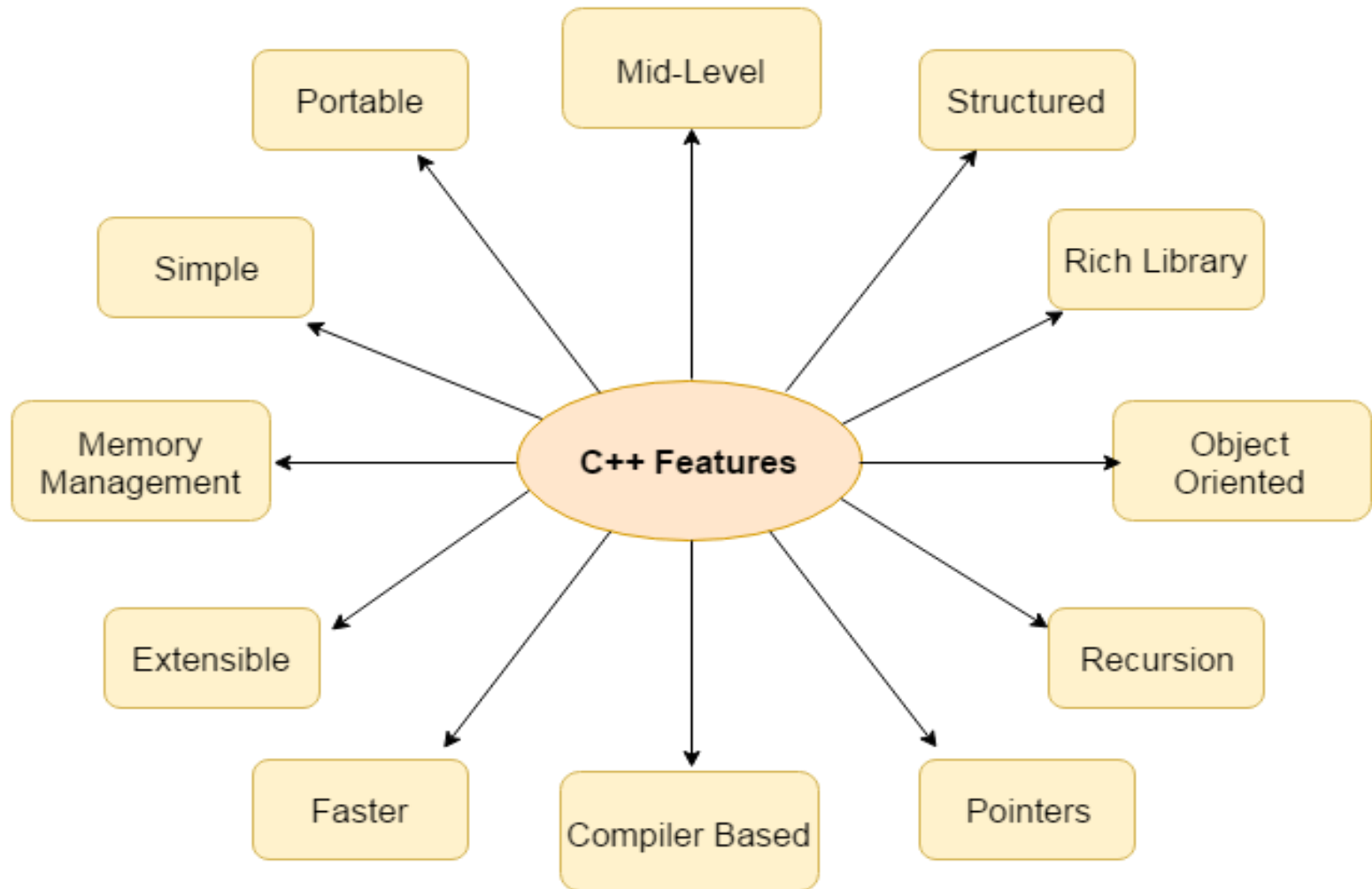
# History of C++

- C++ was originally named “C with classes” and was renamed C++ in 1983.
- It was first installed outside the research group in July 1983 but few important features were not invented.
- In 1985, first edition of C++ was released publically.
- Release 2.0 of C++ edition comes in 1989 and updated in 1991.

# History of C++

- After updating, it contains a rich C++ standard library, I/O stream library and large amount of standard templates library.
- C++ is some times called a hybrid language due to possibility of writing both procedural and object oriented codes.
- C++ continued to be used as a preferred language to write professional codes.

# Features of C++



# Features of C++

- Simple
- Portable
- Machine independent
- Mid level
- Structured
- Object oriented
- procedural
- Recursion

# Features of C++

- Compiler based
- Faster
- Extensible
- Memory management
- Pointers
- Rich library
- Large template support



# C vs C++

C	C++
Procedural in nature	Both procedural and Object oriented
Doesn't have classes and objects	Contains classes and objects
Data is not secured	Data is secure (hidden)
Uses top down approach	Uses bottom up approach
Doesn't support function overloading	Supports function overloading
Support malloc() and free() for memory	Support delete and new commands
Doesn't support reference variable	Support reference variable
Operator overloading is not possible	Operator overloading is allowed.
Do not contains object oriented features	Contains object oriented features

# C++ vs Java

C++	Java
Contains pointers	Do not contains pointers
Includes structures and union	Do not have structure and union
Contains preprocessor directives	Do not have preprocessor directives
Support typedef	Do not support typedef
Multiple inheritance allowed	Multiple inheritance in not allowed
Contains global variable and functions	Do not have global variable and functions

# WHAT'S NEXT



- Object Oriented Concepts
- C++ installation
- C++ program structure

