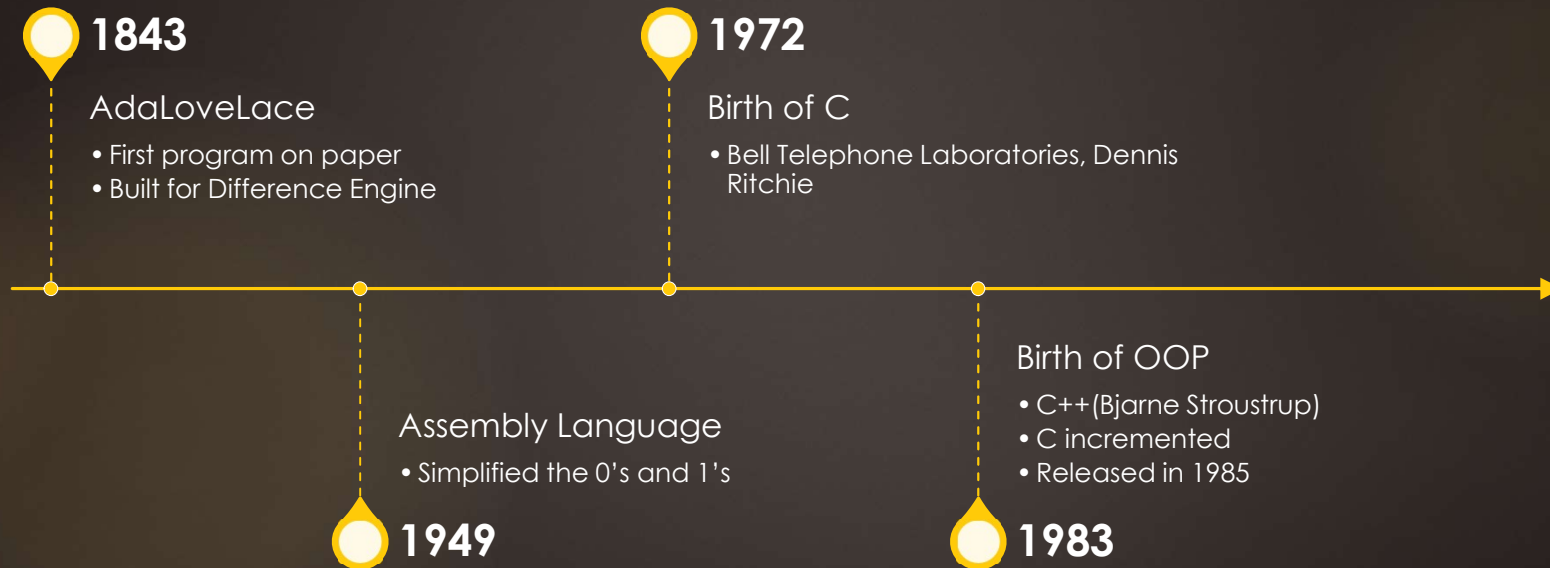


History of C++

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What is C++

- ▶ C++ is a cross-platform, object oriented language that can be used to create high-performance applications.
- ▶ C++ is used in developing browsers, operating systems, and applications, as well as in-game programming,

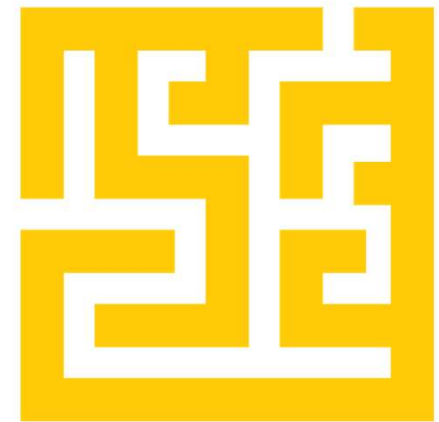
- ▶ For writing C++ Programs we need a Code Editor and Compiler
- ▶ ***“A software that provides programming environment to facilitate programmers in writing and executing a computer programs is known as IDE.”***
- ▶ An IDE has Graphical user interface and it helps the programmers, in writing, executing and testing a computer program
- ▶ Visual Studio, Xcode and DevC++ are some famous IDE for C++ Language

Installing DevC++

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Polya's 4 Steps of Problem Solving

- ▶ Problem Solving Phase
 - ▶ U – Understand the Problem
 - ▶ D – Devise a Good Plan to Solve
- ▶ Implementation Phase
 - ▶ I – Implement the Plan
 - ▶ E – Evaluate the Solution



Algorithm

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- ▶ A sequence of precise instructions which leads to a solution is called an **algorithm**.
- ▶ Some approximately equivalent words are *recipe*, *method*, *directions*, *procedure*, and *routine*.

DISPLAY 1.6 An Algorithm

Algorithm that determines how many times a name occurs in a list of names:

1. Get the list of names.
 2. Get the name being checked.
 3. Set a counter to zero.
 4. Do the following for each name on the list:
Compare the name on the list to the name being checked,
and if the names are the same, then add one to the counter.
 5. Announce that the answer is the number indicated by the counter.
-

First Program in C++

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```
▶ #include<iostream>
▶ using namespace std;
▶ int main(){
    cout<<"Hello World";
    return 0;
}
```

8.3.2 Structure of C++ Program

► Structure of C++ Program:

► *Format of Writing C++ Program*

```
1.Preprocessor directives
2.Global Declarations
3.Main Function{
Local Declarations
Statements          Body of Main
Comments
}
4.User-Defined Functions
```


a. Preprocessor Directives

Begin with # Symbol like
#include, #define etc

Used to include header
files, like stdio.h, conio.h
etc or to define
constants like #define
max 10

Placed at the top of C++
Program

b. Main Function

Special Function, Entry Point
for every C++ Program

Starts the execution of
program

```
void main(){} returns  
nothing
```

```
int main(){return 0;}  
returns 0
```

b. Main Function (Body)

▶ **Body of Main Function starts after opening curly brackets and ends before closing curly brackets, It may contain:**

- Statements
- Variable Declarations
- Calling of Functions
- Return Statement
- Comments

Features of C++ Language



C++ is considered as High level language.



C++ is case sensitive language.



C++ has compiler as a language translator.



C++ is hybrid language (Combination of structured as well as Object orientation paradigm)