Dear Students!!

In this e-book of 11th class, study material of computer science is being sent to you as per new syllabus (2021-22). You can easily prepare your test / papers by reading the contents in this file. Following are the links of the video lectures (for HTML and C Language) for various practical topics of your syllabus for better understanding of various concepts.

11th Class - Monthly distribution of Computer Science Syllabus & Video Lecture Links (Pbi)

How to do HTML Practical on Mobile?	https://youtu.be/PYFuKCwdlOY
HTML Part-1	https://youtu.be/DcYz0QX9CVs
HTML Part-2	https://youtu.be/qLlzLKrbhIA

Programs, Programming & Programming Languages	https://youtu.be/CKwC8oeOw_o
Introduction to C Language: Part-1	https://youtu.be/G9ZaHvTd5sU
Introduction to C Language: Part-2	https://youtu.be/8NXsnDCr1ho
Introduction to C Language: Part-3	https://youtu.be/aU06gTkp82k
Operators and Expressions in C	https://youtu.be/PGv1_8Q5fh8
Control Statements in C - Branching	https://youtu.be/xi-38dRt3mY
Control Statements in C – Looping & Jumping	https://youtu.be/NIkDGAr-AjE

C Language – Practical Video Lectures

C Language Practical -1	https://youtu.be/8hg3BJAyBqE
C Language Practical -2	https://youtu.be/v_lw8wmfIP4
C Language Practical -3	https://youtu.be/RBq--darc0I

Following is the Link of Playlist for detailed Lectures on C Programming

https://youtube.com/playlist?list=PLja3EaJFAjmYjeAcDs0ZQdVmx7liCtg5P

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YouTube http://youtube.com/c/computersciencepunjab

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Please use the following link to download the study material/e-books/e-contents for 6th to 12th classes:

http://cspunjab.nirmancampus.co.in/study.php

Chapter – 7th

Introduction to C and Basic Structure of C Program

Que1: Multiple Choice Questions

1. C is a ________________ purpose programming language.

a. special b. general c. objective d. None of these

2. Which of the following is valid example of identifier?

a. roll_no b. %age_marks c. rollno d. main

3. Which of the followings are the tokens?

a. keywords b. special symbols c. Literals d. All of these

4. Which of the following keywords do not represent a data type?

a. int b. float c. const d. char

5. ______________ are used to describe a code in the program?

a. Compiler b. Comments c. Literals d. Identifiers

Que:2 Fill in the Blanks:

1. __________ are the smallest individual units of a program.
2. The names given to program elements, such as variables, constants, arrays, functions etc. is called _________
3. Those program elements which do not allow changing their value during execution are called __________
4. To work with single precision values, we use ________________ data type.
5. File extension of header files is _________________

Ans: 1. Token 2. Identifier 3. Constant 4. float 5. .h

Que:3 Write the Full form of following:

1.	FORTRAN	Formula Translation
2.	BCPL	Basic Combined Programming Language
3.	IDE	Integrated Development Environment
4.	stdio.h	Standard Input Output Header file
5.	conio.h	Console Input Output Header file
6.	ASCII	American Standard Code for Information Interchange

Que:4 Short Answer Type Questions.

Q1: Why C is called Middle Level Programming Language?

Ans: C has the functionality of both types of programming languages, i.e. low-level and high-level programming languages. It means C language is suitable for writing both types of programs - system programs and application programs. Thus C-Language became a programming language that stood between both low-level and high-level programming languages. That is why C language is called middle level language. However, the middle level language is not a special category of programming languages. Because of the special capabilities of the C language, it is known as a middle level programming language.

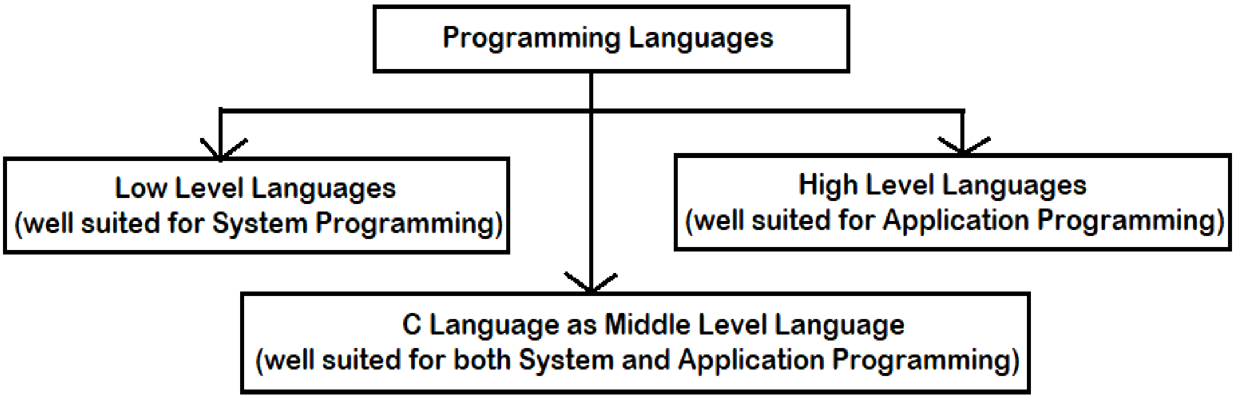
Programming Languages
Low Level Languages
(well suited for System Programming)
High Level Languages
(well suited for Application Programming)
C Language as Middle Level Language
(well suited for both System and Application Programming)

Fig: Why C is known as Middle Level Language

Q2: What is a character set?

Ans: The set of all characters and symbols used in the C language is called the character set of C language. The C language supports the ASCII character set. The following characters and symbols can be used in C language:

- **Upper-case and Lower-case Alphabets (A to Z, a to z)**
- **Digits (0 to 9)**
- **Special Symbols, For Example: ! @ # $ % ^ . ? / | \ etc.**
- **Some Non-printable characters, For example: new-line, horizontal-tab etc.**

Q3: What are keywords?

Ans: Keywords are also called Reserve Words. These words are predefined in C compiler. The meaning of these words is predefined. They are used for the specific purpose for which they were defined. We cannot change their meaning. In Turbo C these words are shown in white color while in Code::Blocks these words are shown in blue color. The standard C language has 32 keywords. For example: int, float, void, if, else, for, while etc. In C programming, all keywords are written in lowercase letters only.

Q4: What should be the steps for creating and executing C program?

Ans: The following steps can be used to create a C language program:

1. **Develop a program algorithm.**
2. **Create a C program as per the algorithm using any text editor or IDE that supports C language.**
3. **Save the file by writing a file name with .c extension.**
4. **Compile the program.**
5. **If the program has a syntax error, correct it and repeat step 4.**
6. **Execute the program.**
7. **Output of program will appear in the output window.**

Q5: Write the difference between variables and constants.

Ans: Both of these are important program elements that are used to store a value in a program. Both elements are given a name in the program and the type of value to be stored in them. But there is a slight difference between the two. Variables allow us to change their values while running a program whereas constants do not allow it. It means constant values are fixed while variable values are changeable.

Q6: What are Pre-processor directives?

Ans: Pre-processor instructions are those statements that begin with the # symbol. These statements give instructions to the compiler to perform some specific operations before compilation. These directive statements are commonly used to include header files in the program or to define symbolic constants. Here are some examples of commonly used pre-processors:

```
#include <stdio.h>
#define PI 3.14
```

Que:5 Long Answer Type Questions.

Q1: What are Identifiers? Write the naming rules of identifiers.

Ans: Identifiers are the names given to program elements, such as variables, constants, arrays, functions, structures, etc. Some rules are followed in C programs to define the names of program elements. These rules are as follows:

- **The identifier must start with a letter or underscore (_) sign.**
- **No special symbols, except underscore (_), are allowed in the identifier.**
- **Two consecutive underscores cannot be used in the identifier.**
- **In Turbo C compiler, the length of the identifier is limited to 31 characters.**
- **Keywords cannot be used as identifier.**
- **Identifier are case-sensitive.**
- **No spaces are allowed in the identifier.**

Q2: What are Tokens? What are the different categories of tokens that can be used in a program?

Ans: Tokens are like words and punctuation marks used in English. A C program is made up of tokens. Tokens are the smallest individual units in a program. A C program can have the following five types of tokens:

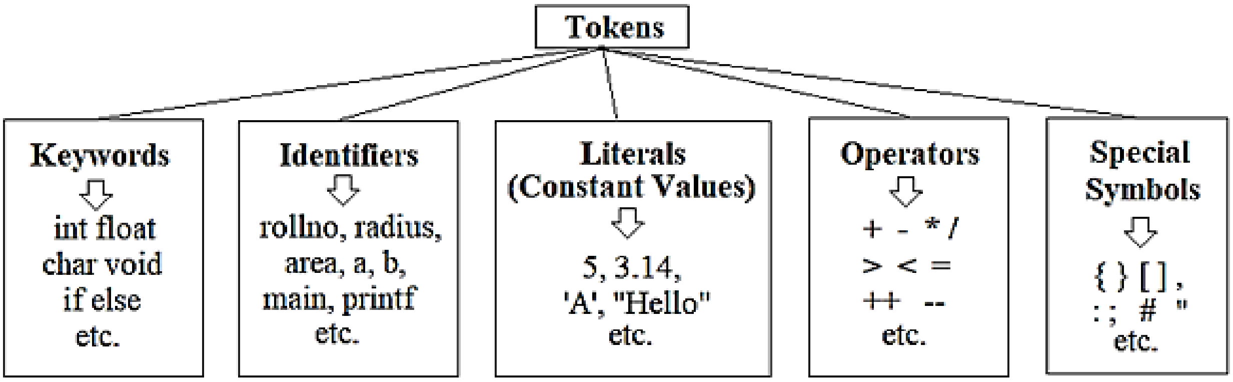

Fig: C Tokens with Examples

1. **Keywords: These are predefined words. For example: int, float, char, if, else, void etc.**
2. **Identifier: These are the names given to program elements. For example: main, printf, etc.**
3. **Literals: These are fixed values. For example: 5, -25, 3.14, ‘A’ “Hello” etc.**
4. **Operators: These are the symbols for specific operations. For example: +, -, *, /,>, <, = etc.**
5. **Special symbols: These are the special symbols. For example: #, &, { }, ( ), [ ], :, ; etc.**

Q3: What are the data types? Which primitive data types are supported by C language?

Ans: Data type defines what type of data is to be stored in program elements, such as variables, constants, arrays, etc. They define a specific range of values for variables or other program elements. The C language supports a variety of data types. The following table shows the different basic data types available in the standard C language:

Keyword	Description	Memory Requirement	Range of values	Format
char	Used to store single byte/character data	1 byte	-128 to 127	%c
int	Used to store integer type data	2 bytes	-32768 to +32767	%d
float	Used to store single precision floating values	4 bytes	3.4x10^{-38} to 3.4x10^{+38}	%f
double	Used to store double precision floating values	8 bytes	1.7x10^{-308} to 1.7x10^{+308}	%lf
void	Used with functions which do not return any value	-	-	-