GANPAT UNIVERSITY

U.V.PATEL COLLEGE OF ENGINEERING & TECHNOLOGY

Department of Computer Science and Engineering

B .Tech 1ST Semester Subject – ESFP

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Assignment -1

Q.2. Explain different data types available in C.

ANS:-

Data types in C language can be classified into the following categories.   
  
1. Basic Data type   
2. User Defined Data type   
3. Enumerated Data type   
4. Empty Data Set.

1) BASIC DATA TYPE   
  
 Basic data type includes the Integers, real numbers and Characters or string.   
 There are Key words to define these data types.   
  
 int ---> key word is used to declare Integer variables.

2) USER DEFINED DATA TYPE   
  
 User defined data type are those which are derive from the basic data types. Some of the user defined data types are   
 Arrays   
 Structures   
 Unions   
  
Arrays   
Arrays can be defined as the collection of similar type of data. It can also be called as subscripted variables. For example, if you want to store 100 different values, you cannot use 100 variables. Instead you can define it as an array. Each value in the array can be retrieved using the subscript.

3) ENUMERATED DATA TYPE   
  
Enumerated data types are those in which a variable can contain only some specific set of values. For example if a variable needs to hold only the moths, it can have any one of the values from January to December. These types of variables can be created as enumerated data types. This is done using the key word “enum”.

4) EMPTY DATA SET.   
  
As the name indicates, it contains nothing or a NULL value. This data type is used to specify return values of function. If there is nothing to return from a function, the return type can be specified as “void”

Q.3 Explain about C Tokens in brief.

ANS:-

In software engineering, a token is commonly understood to be a segment of textual input data, separated from similar segments by one or more separators. For example, all text that is not a space, tab or newline character in C language code makes a token. For example, this is a list of tokens, separated by semicolon: 123;321;ABCThe term token is frequently used in context with lexical analysis, an early stage in language compilers and interpreters. A C compiler, for example, subjects the input (source code) to the preprocessor first. This removes all source code comments, makes "macro" substitutions and evaluates sections of conditional compilation. The preprocessor's results are then subject to lexical analysis, which consists of separating the source into tokens, then classifying them into categories such as "keyword," "decimal number," "variable reference," etc. The standard C runtime library also contains a strtok() API that helps breaking textual input into tokens.

Q.4. Explain about backslash characters in C.

ANS:-

1. Although it consists of two characters, it represents **single character**.
2. Each escape sequence has **unique ASCII** value.
3. Each and Every combination starts with **back slash**()
4. They are **non-printable** characters.
5. It can also be expressed in terms of **octal digits or hexadecimal** sequence.
6. Escape sequence in character constants and string literals are replaced by their equivalent and then adjacent string literals are concatenated
7. Escape Sequences are preprocessed by **Preprocessor**.