

Class test-1

Syllabus:- introduction to c

Suggestions:

1. Write two main Difference Between Structured Vs Unstructured Programming
2. Write four main Differences Between C, C++ and Java
3. Write three drawbacks of C Programming Language
4. Write five Applications of C Language
5. Write Simple C Program's Structure (header file, main function, variables, comments, i/o, return statement)
6. What do you mean by Compilation process in C? write the steps of compilation process.
7. Rules to Name an Identifier in C
8. Escape Sequence in C(\n, \t, \\\, \', \") . how they work? Explain with c-program along with output.

Q-1: Write two main Difference Between Structured Vs Unstructured Programming

| Structured Programming | Unstructured Programming |
|--|---|
| It is basically a subset of procedural programs. | It is basically a procedural program. |
| In this, programmers are allowed to code a program simply by dividing the program into modules or smaller units. | In this, programmers are not allowed code divide programs into small units. Instead, the program should be written as a single continuous block without any breakage. |
| It is more user-friendly and easy to understand as compared to unstructured programming. | It is less user-friendly and little hard to understand as compared to structured programming. |

Q-2:- Write four main Differences Between C, C++ and Java

Differences Between C, C++ and Java

| S.N. | Basis | C | C++ | Java |
|------|-----------------------|--|---|--|
| 1 | Origin | The C language is based on BCPL. | The C++ language is based on the C language. | The Java programming language is based on both C and C++. |
| 2 | Programming Pattern | It is a procedural language. | It is an object-oriented programming language. | It is a pure object-oriented programming language. |
| 3 | Approach | It uses the top-down approach. | It uses the bottom-up approach. | It also uses the bottom-up approach. |
| 4 | Dynamic or Static | It is a static programming language. | It is also a static programming language. | It is a dynamic programming language. |
| 5 | Code Execution | The code is executed directly. | The code is executed directly. | The code is executed by the JVM. |
| 6 | Platform Dependency | It is platform dependent. | It is platform dependent. | It is platform-independent because of byte code. |
| 7 | Translator | It uses a compiler only to translate the code into machine language. | It also uses a compiler only to translate the code into machine language. | Java uses both compiler and interpreter and it is also known as an interpreted language. |
| 8 | File Generation | It generates the .exe, and .bak, files. | It generates .exe file. | It generates .class file. |
| 9 | Number of Keyword | There are 32 keywords in the C language. | There are 60 keywords in the C++ language. | There are 52 keywords in the Java language. |
| 10 | Source File Extension | The source file has a .c extension. | The source file has a .cpp extension. | The source file has a .java extension. |

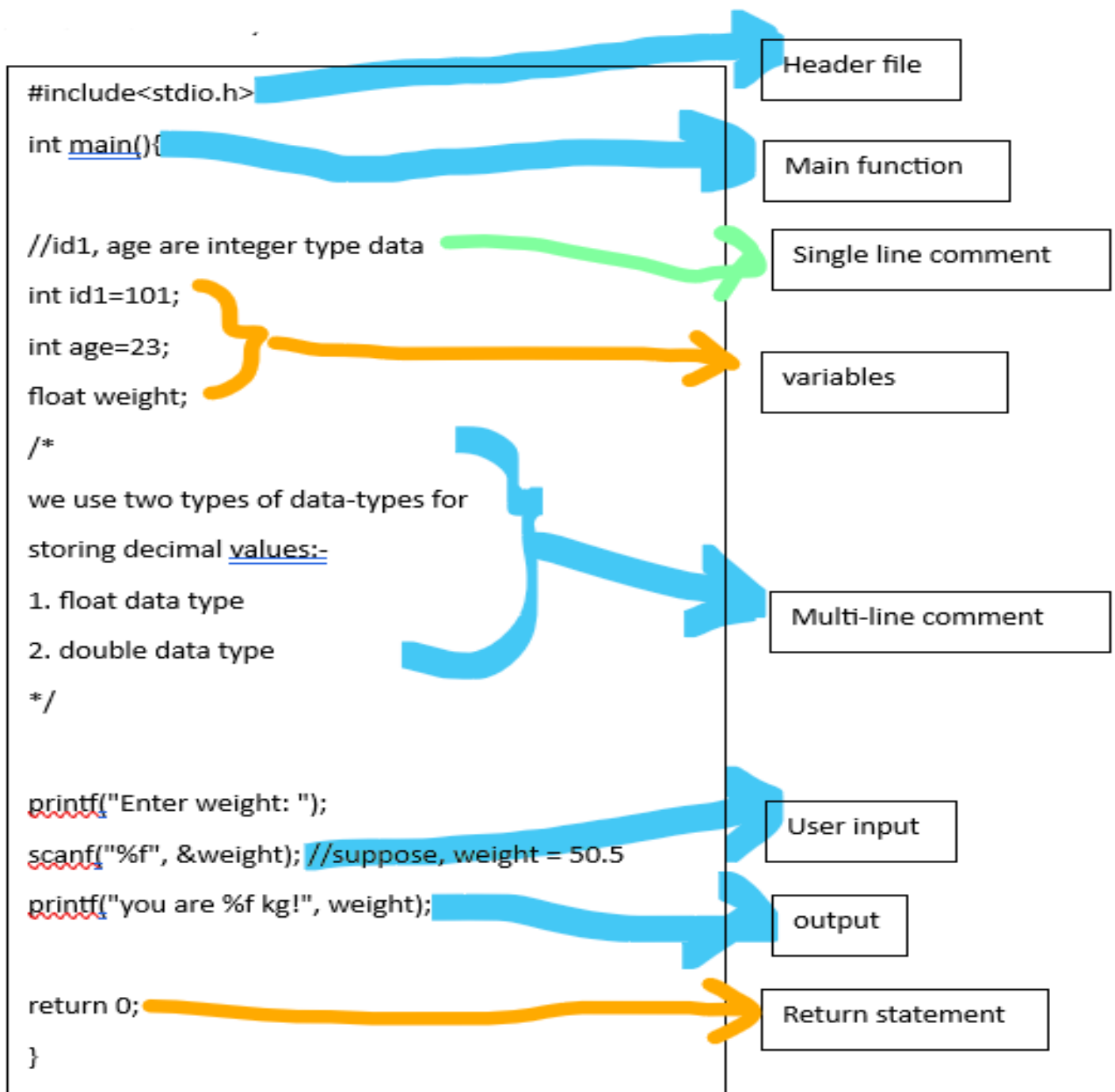
Q-3:- Write three drawbacks of C Programming Language

1. No Object-Oriented Feature
2. No Garbage Collection
3. No Exception Handling

Q-4:- Write five Applications of C Language

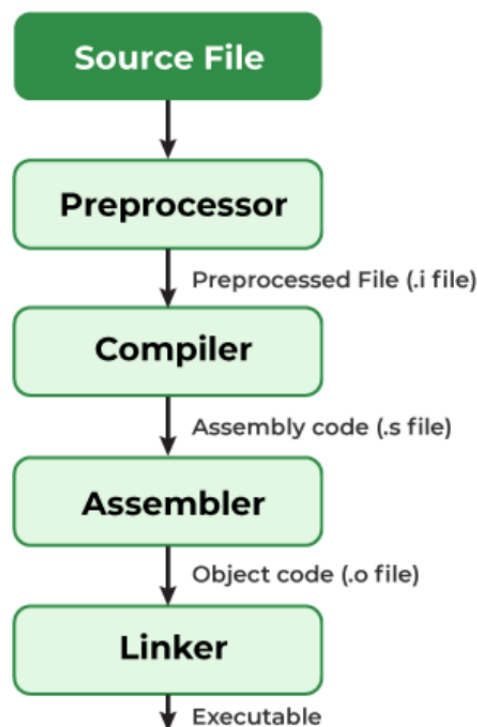
1. System Programming
2. Embedded Systems
3. Database Systems
4. Networking Software
5. Game Development

Q-5:- Write Simple C Program's Structure (header file, main function, variables, comments, i/o, return statement)



Q-6:- What do you mean by Compilation process in C? write the steps of compilation process.

The compilation is a process of converting the source code into object code. It is done with the help of the compiler.



Q-7:-Rules to Name an Identifier in C

C Identifiers

Identifiers are unique names that are assigned to variables, structs, functions, and other entities.

Rules to Name an Identifier in C

1. An identifier can include letters (a-z or A-Z), and digits (0-9).
2. An identifier cannot include special characters(/,<,>,*!,~,#,@,\$,%^^,&*) except the '_' underscore.
3. Spaces are not allowed while naming an identifier.
4. An identifier can only begin with an underscore or letters.
5. We cannot name identifiers the same as keywords because they are reserved words to perform a specific task. For example, printf, scanf, int, char, struct, etc.
6. The identifier must be **unique** in its namespace.
7. C language is case-sensitive so, 'name' and 'NAME' are different identifiers.

✓ Number, num=2, val, VAL=23, number1,number2, a1,a2,
✗ lnum, #val, ^list, \$name, ~age, &age

✓ _num1, num1_, customer_list, customer_list1
✗ lnum_, customer-list, l_num,

✓ customer_list
✗ customer list

✓ INT, PRINTF, CHAR
✗ int = 0, printf=0,

✓ name=0, NAME=0, Name=0, NaMe=0, NAME=0,nameE=0

Q-8: - How these Escape Sequence in C(\n, \t, \\\, \', \") work? Explain with c-program along with output.

```
#include<stdio.h>

/*
\n --> insert a newline at the end of line
\t --> print four spaces
\\ --> print one \
\' --> print '
\" --> print "
*/

int main(){
    printf("ex-1: insert newline.\n");
    printf("ex-2: printing \t spaces.\n");
    printf("ex-3: print \\ backslash\n");
    printf("ex-4: print \' single quotation\n");
    printf("ex-5: print \" double quotation\n");
    printf("ex-6: \"Hello\" \t \'World\' \n");
}
```

output:

ex-1: insert newline.

ex-2: printing spaces.

ex-3: print \ backslash

ex-4: print ' single quotation

ex-5: print " double quotation

ex-6: "Hello" 'World'