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Subject

C++ programming.

Q No 1

"a" Design an algorithm and draw a flowchart that will read the two sides of a rectangle and calculate its area.

Ans :-

Pseudo code;

Input the width (W) and length (L) of a rectangle

Calculate the area (A) by multiplying L with W .

Print A

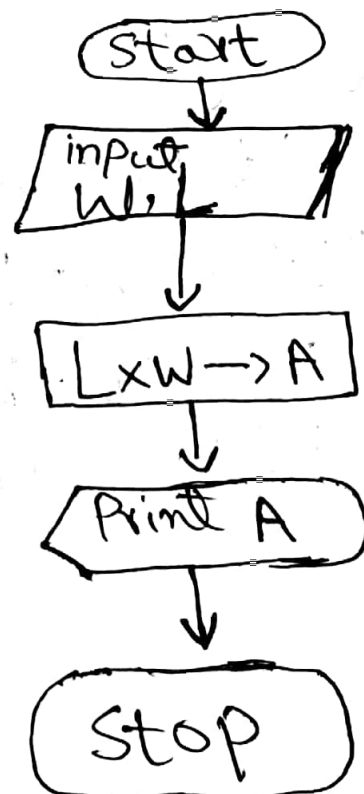
Algorithm and Flowchart

Algorithm;

Step 1: input W, L

Step 2: $L \times W \rightarrow A$

Step 3: Print A .



"b" Name Different type of errors which can occur during the execution of Programme.

Ans:- Syntax errors
Runtime errors
Logic errors

Syntax - Syntax errors are grammatical errors and are detected when you compile the Programme. Syntax errors prevent your Programme from executing.

Runtime - Run time errors occur when you tell the computer to do something illegal.

Runtime error may halt execution of your Programme

Logic error

Logic errors are not detected by the computer

Logic errors cause your results to be wrong.

Q No 2

"a" Why we use `iostream.h` and `conio.h` in C++ programming

Ans

Iostream: Iostream is standard C++ input & output, contain object like `cout`, `cin` & `cerr` work with C++ streams, which are objects that manage i.o. stands for console input/output a window only header which provide C function for console i.o manipulations like `getch` `ungetch` etc.

conio.h: `conio.h` is a header file used mostly by MS-DOS compilers to provide console: input/output it is not part of the C nor is it define by posix. this header declare several useful library function for performing console input & output from program.

"b" What do you understand by the term "maintain and update the program"?

Ans → Maintain & update the program are the modification of a software product after delivery to correct faults, to improve performance or other attributes or to adopt the product to a modified environment. It deal with updating the software according to change in user requirement.

∴ Therefore it is important to write a program that easy to read understand & maintain

There are two types of maintenance.

a) Perfective maintenance

b) Preventive maintenances.

Q No 3

"a" Bug and Debug:-

Debug is (computer science) to search for eliminate malfunctioning elements or errors in something, especially a computer program or machinery while bug is (informal/transitive) to annoy

"b" Syntax error and logical error :-
_{occur}

The syntax error[↑] due to an error in the syntax of a sequence of characters or tokens that is intended to be written in a particular programming language while logical error is an error that occurs due to the fault in the program algorithm or the logic.

c) Compiler and Assembler

Compiler

1) Compiler translates high level programming language code to machine level code.

2) Source code in high level programming language.

3) mnemonic version of machine code.

4) C, C++, Java compilers.

Assembler

1) Assembler converts the assembly level language to machine level code.

2) Assembler level code as input.

3) Binary version of machine code.

4) GAS, GNU assemblers.

d) System Software and Application Software

System Software

- 1) System software is meant to manage the system resources.
- 2) System software is developed in low level language.
- 3) A system cannot even start without system software.
- 4) endowed with a general purpose

Application Software

- 1) Application software help perform a specific set of function for which they have been designed.
- 2) Application software is developed in high level.
- 3) It is not needed to run the system on the whole
- 4) carries a specific purpose.

e) low level and high level languages.

High level

1) It is programmer friendly language.

2) It is easy to understand.

3) It is simple to debug.

4) It is simple to maintain.

5) It is portable.

Low level

1) It is a machine friendly language.

2) It is tough to understand.

3) It is complex to debug.

4) It is complex to maintain.

5) It is non-portable.