

NAME * M. RIFAQ

ID * 6871

Section * E

Subject * C++

Submitted * Engr; ASHRAF ALI

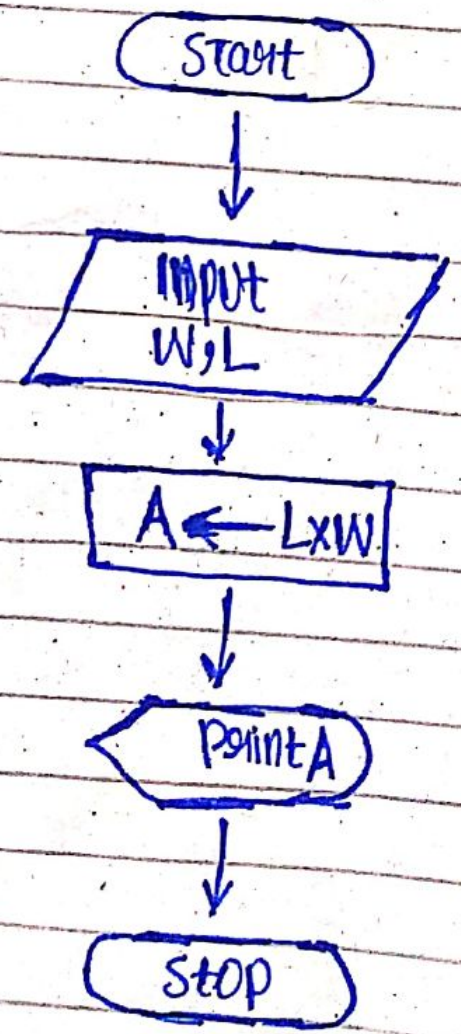
Date * 25/08/020.

Ans: 01; Algorithms and Flowcharts;

- Input the width (W) and length (L) of a rectangle.
- Calculate the Area (A) by multiplying "L" with "W",
- Print "A".

Algorithm;

- Step: 01; Input W, L
- Step: 02; $A \leftarrow L \times W$
- Step: 03; print A.



Ans: a;

Types of Errors

* We distinguish between the following types of errors.

i; Syntax errors

ii; Semantic errors

iii; Logical errors

* From the point of view of when errors are detected we distinguish;

i; Compile time errors.

ii; Runtime errors

i; Syntax errors

Syntax errors are due to the fact

that the syntax of the language is

not respected. e.g ;

- Missing Semicolon.
- Error in expressions.

"2"; "Semantic Errors";

Semantic errors indicate an improper use of program statements.

e.g;

- Use of Non-initialized.
- Type Incompatibility.
- UNKNOWN references.
- Errors in expression.

"3"; "Logical errors";

Errors due to the fact that the specification is not respected. e.g;

- Errors in the performed computation.
- Non termination.

(1) ; **Compile time errors;**

Syntax errors and static semantic errors indicated by the compiler.

(2) ; **Runtime errors;**

Dynamic semantic errors and logical errors, that can not be detected by the compiler (debugging).



ANS 02

We use the `iostream.h` & `conio.h` used in C++ because.

`iostream` is standard C++ input and output contain object like `cout`, `cin`

& `cerr` work with C++ streams which are object that manage

`io.h` standard for "console

input output a window only

header which provide C function

for console IO manipulation like

`getch` `ungetch` etc.

`conio.h` is header file used

mostly by MS-DOS compiler

to provide console input/output

it is not part of the

C Standard Library or ISO C

Standard by POSIX this

header declare several useful

library function for performing

console input/output

from program

ANS 02 B

Maintain and Update

Program.

maintain and update are the

modification of software product

after delivery to correct

faults to improve performing

or other attributes or to adopt

adapt the product to a

modified environment.

* maintain and update the program

involve modifying a programme to

to remove previously undetected

error and to keep it up to

date as government regulation

of company policies change

therefore it is important to

write a program that is easy to

to read understand, and maintain.

Q No. 3

(a) Debug.

is that debug (Computer Science) to search

for an eliminate malfunctions

elements are error in something

especially a computer programming.

- debugs are undesirable behavior of the system.

- A moth caught in relay in early computer system

⇒ Bug, Bug is (informal, transitive)

- Bugs are undesirable behavior to annoy of the system
- Bugs are requirements architectural.

(b)

Syntax error

Logic error

1) Syntax errors are "grammatical" errors and are detected when you compile the program.

occur when the programmer uses an incorrect calculation or leaves out a programming procedure.

2) Syntax errors prevent the program from executing.

Logic errors are not detected by the computer.

3) Violation of rules of the programming language.

Logic errors cause your results to be wrong.

(e)

Low level lang

High level language

- i) Computer language consisting of mnemonics that directly correspond to machine language instruction
- ii) very close to machine language
- iii) Concentrate on machine architecture
- iv) faster
- v) no need to compile
- vi) more efficient

- Basically Symbolic language that use english words and mathematical symbols rather than mnemonics codes
- machine independent programming language
 - Concentrate on the logic problem
 - low speed execution.
 - need compiler
 - translate into code.

(d)

application Software

- 1) those Software which perform task of computer
- 2) perform only a single task
- 3) Help users solve particular programs
- 4) In most cases application Software reside on the computer hard disk

System Software

- Software which use to perform functionally of the computer
- it perform more than 1 program
 - help hardware component work together and provide support.
 - make operation of computer more effective and efficient.

(C)

Compiler

- 1) Software that convert program written in a high level language into machine language.
 - 2) Convert the whole high level language program to machine language at a time.
- used by C, C++

Assembler

Software that convert program written in assembly language into machine language.

Convert assembly language program to machine language.

used by assembly language.