ASSIGNMENT

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Subject:- Introduction To Computer Programming. (CCS-121)

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DATE:: 21st, APRIL, 2020

SEMESTER:- SENIOR.

ASSIGNMENT.

Introduction To Computer Programming (CS-121)

Q1)(a): Design an algorithm and draw a flowchart that will read the two sides of a Rectangle. And calculate it's area.

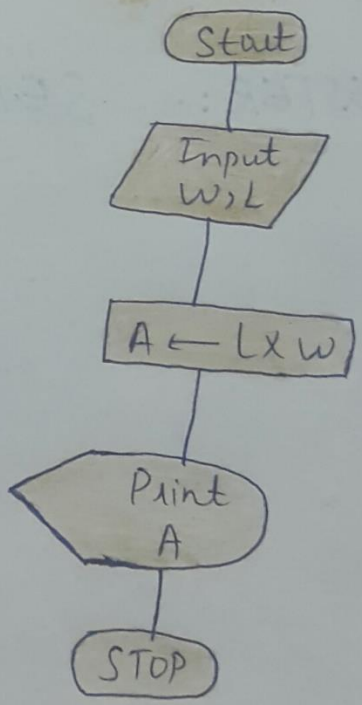
Pseudocode.

→ Input the width (W) and length (L) of a Rectangle.
→ Calculate the area (A) by multiplying L with W.
→ Print A

Algorithm.

→ Step 1 : Input W, L
→ Step 2 : A ← L x W.
→ Step 3 : Print A

Flowchart.



b) :- Name different types of errors which can occur during the execution of a program.

Ans:- Following are the different types of errors which can occur during the execution of a program.

1) Syntax Errors
2) Run-time Errors
3) Logical Errors
4) Latent Errors.

QNo:2(a). Design an algorithm that reads two values, determines the largest value and prints the largest value with an Identifying message.

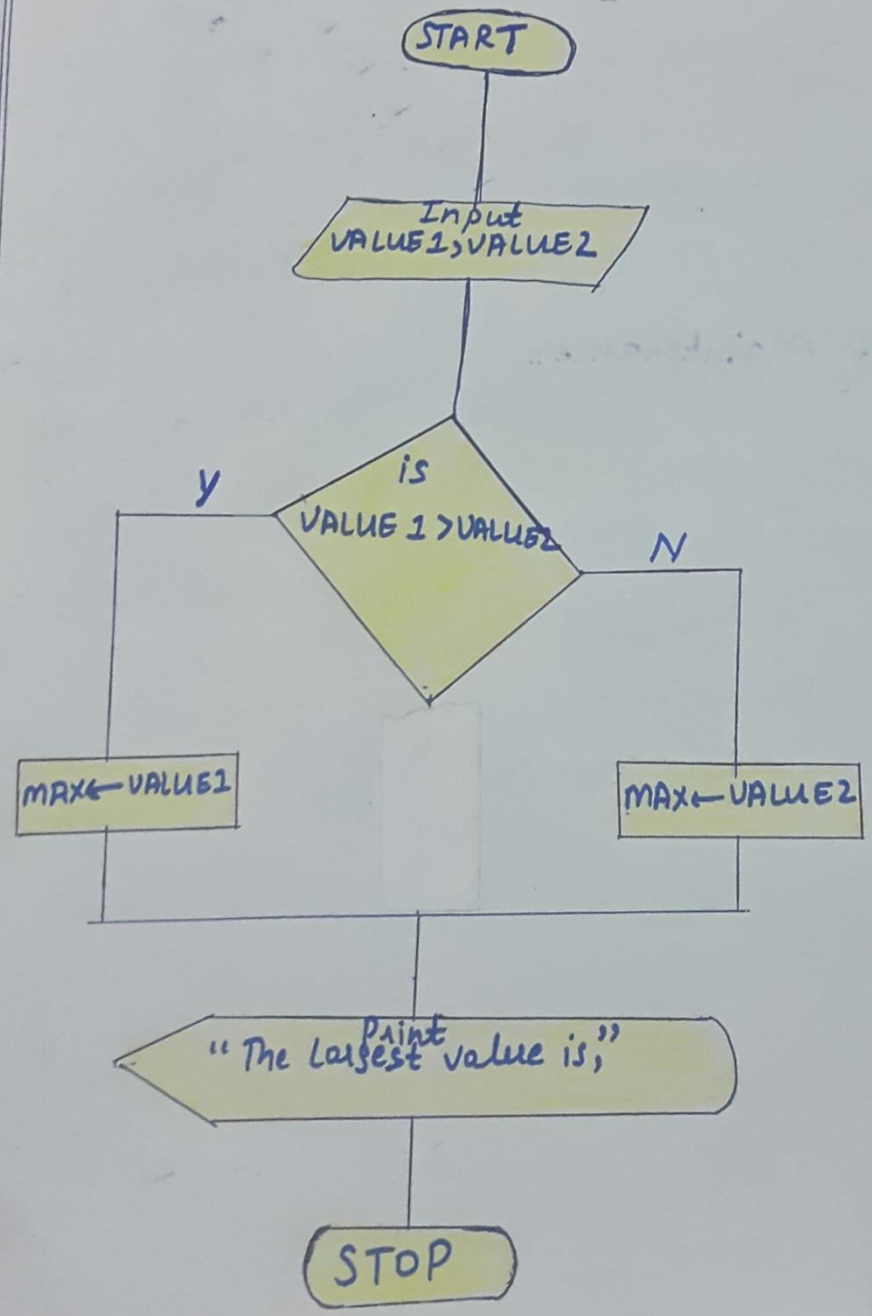
ALGORITHM:-

→ Step 1: Input Value 1, Value 2.

→ Step 2: if (VALUE1 > VALUE2) then
MAX ← VALUE1
else
MAX ← VALUE2
endif

→ Step 3: Print "The largest value is", MAX.

FLOW CHART


START
Input VALUE1, VALUE2
is VALUE 1 > VALUE2
Y
N
MAX ← VALUE1
MAX ← VALUE2
Print "The Largest value is,"
STOP

QNo:.2.b):.. What do you understand by the term "Maintain and update the program."

Ans:.. Maintenance and update are the modifications of a software product after delivery to correct faults, to improve performance or other attributes, or to adapt the product to a modified environment

Types of Maintenance:.

Following are the types of maintenance.

a):- Corrective Maintenance

b):- Adaptive Maintenance

c):- Perfective Maintenance

d):- Preventive Maintenance.

QNo:3/:- Differentiate between the following.

a):-

Bug	Debug.
→ Bugs are errors in code of your program that make your program function improperly	Fixing bugs is called Debugging.
→ Bugs are undesirable behaviour of the system.	→ Debugging is the process of understanding the behavior of the system to facilitate the removal of bugs.
→ Bugs are requirements, architecture, design and implementation errors in software system.	

b):

Syntax Error	Logical Error
→ Any violation of rules and poor understanding of the programming language results in syntax Errors. The compiler can detect such errors. If syntax errors are present in the program then the compilation of the program fails and is terminated after showing the list of errors and the line number where the error occured.	→ As the name itself implies, these errors are related to the logic of the program. Logical errors are also not detected by compiler and cause incorrect results. These errors occur due to incorrect translation of algorithm into the program, poor understanding of the program and the lack of clarity of hierarchy of operators.

c).

	Compiler	Assembler.
1)	→ Software that converts programs written in a high level language into machine language.	→ Software that converts programs written in assembly language into machine language.
2)	Converts the whole high level language program to machine language at a time.	Converts assembly language program to machine language.
3)	Used by C, C++	Used by Assembly language.

d).

	System Software	Application Software.
1)	Supports the use in computer operations.	Concern problem solving and the use of computer as a tools.
2)	Manages computer machine resources such as register, CPU, I/O system.	Manages operation data such as insert, delete, update and sorting.
3)	Written in low level language eg: Assembly language.	Written in high level language such as pascal, C++, VB, Java.
4)	Used as long as computer is turned on.	Used only when it's needed.
5)	Performs more than one job or task related at a time (multitasking).	Performs only one job or tate at one time.
6)	Control many processes at a time.	Process done by following step by step at a time.

e):-

Low Level language	High Level Language.
1) A computer low level language that deals with hardware registers by name known as Assembly Language	→ The High-level language are much closer to human language.
2) Assembly language is the best example of low level language, this is in between machine language and high-level language.	→ A programming language such as C, FORTRAN or Pascal that enables to write programs which is understandable to programmer (Human) and can perform any sort of task, such languages are considered high-level because they are closer to human languages.
3) A low level language does not need a compiler or interpreter to run the program, the processor run low-level code directly.	→ High level language must interpreter, compiler or translator to convert human understandable program to computer readable code (machine code).