

①

ID # 7510

ASSIGNMENT

Introduction to Computer Programming
(CS-121)

Question # 1 (a)

Design an algorithm
and draw a Rectangle and
calculate its area

Ans)

Pseudocode :-

→ Input the width
(W) and length (L) of a
Rectangle.

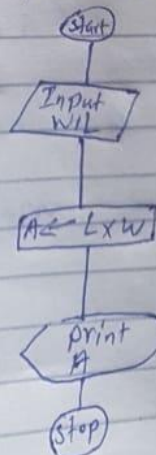
→ Calculate the area (A) by
multiplying L with W.

→ Print A.

Algorithm :-

- Step 1 Input W, L
- Step 2 $A = L \times W$
- Step 3 Print A

Flow Chart



b) Name different types of errors the execution of program!

Ans) :-

Following are the different types of error which can occur during the execution of a program.

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

Question # 2

(a)

Design a

..... message?

ALGORITHM :-

→ Step 1: Input Value 1, Value 2

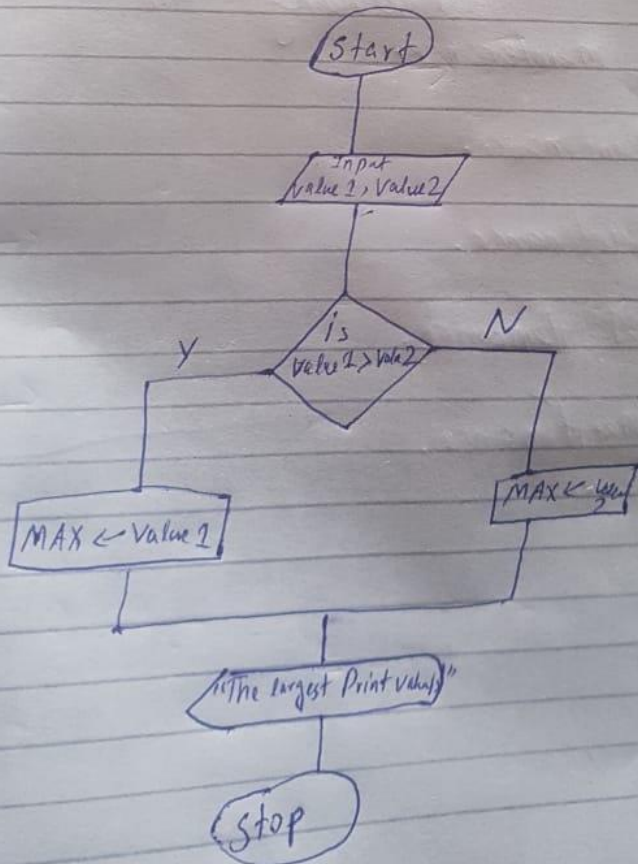
→ Step 2 if (Value 1 > Value 2) then
Max ← Value 1
else

MAX ← Value 2.

end if

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

Flow Chart



Q2#6

What do you understand and update the program?

Ans) :-

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

Types of Maintenance :-

Following are the type of maintenance.

- a) Corrective Maintenance.
- b) Adaptive Maintenance.
- c) Perfective Maintenance.
- d) Preventive Maintenance.

Question #3

Differentiate b/w the following.

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

b) <u>Syntax Error</u>	<u>Logical Error</u>
<p>→ Any violation of rules and poor understanding of the programming language results in Syntax Error. The compiler can detect such errors</p> <p>→ Syntax errors are present in</p>	<p>→ As the name itself implies, these errors are related to the logic of the program.</p> <p>Logical errors are also not detected by compiler and cause incorrect results. These errors occur due to incorrect translation</p>

(6)

the programme then the compilation of the program fails and is terminated after showing the list of errors and the line number where the error occurred.

of algorithm into the programme poor understanding of the programme and the lack of clarity of hierarchy of operators

c) Compiles

1) Software that converts programme written in a high level language into machine language

2) Converts the whole high level language program to machine language at a time.

3) Used by C, C++

Assembler

→ Software that converts program written in assembly language into machine language.

Convert assembly language program to machine language.

Used by Assembly language.

(7)

d) System Software

- 1) Support the use in Computer operations.
- 2) Manages Computer machine resources such as register, CPU, I/O System.
- 3) Written in low level language e.g Assembly language
- 4) Used as long as Computer is turned on
- 5) Performs more than one job or task related at a time (multitasking)
- 6) Control many process at a time.

Application Software.

- Concern problem solving and the use of Computer as a tools.
- Manages operation data such as insert, delete, update and saving.
- Written in high level language such as pascal, C++, VB, Java
- Used only when it's needed
- Perform only one job or take out one time.
- Process done by following step by step at a time.

(8)

e) Low Level language

1) A computer low level language that deals with hardware registers by name known as Assembly language.

2) Assembly language is the best example of low level language this is in b/w machine language and high-level language.

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.

→ The high-level language are much closer to human 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 language are considered high-level because they are closer to human languages.

→ High level language must interpreter, compiler as translator to convert human understandable program to computer readable code (machine code)

