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Subject Introduction to Computer, C++

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Semest Summer

# Question No 1

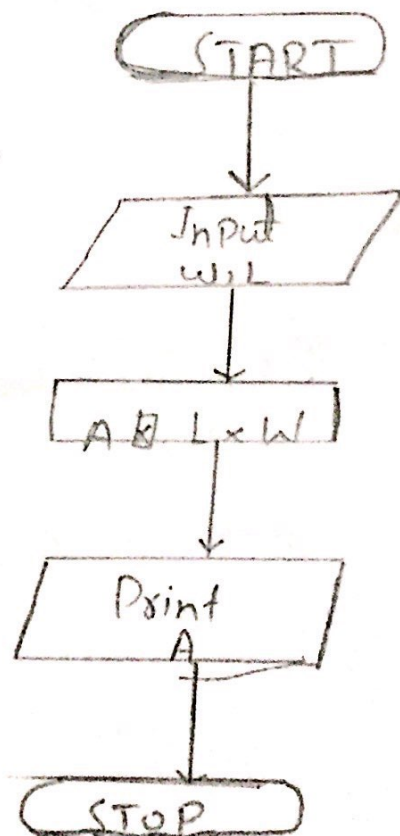
## Part "a"

### 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  $A$



Question No: 1

Part "b"

Types of Error:-

There are three kinds

of errors

- i Syntax errors
- ii Runtime errors
- iii Logic errors

These are error where the ~~computer~~ compiler finds something wrong with your program and you can't even try to execute it. For example, you may have incorrect punctuation, or may be trying to use a variable that hasn't be declared.

## Question No: 2

Part 'a'

### Iostream.h:-

Like the `cstdio` header inherits from C's `stdio.h`, `iostream` provides basic input and output services for C++ programs. `iostream` uses the objects `cin`, `cout`, `cerr`, and `clog` for sending data to and from the standard streams input, output, error, (unbuffered) and log (buffered) respectively.

## Conio.h :-

Conio.h is a C header file used mostly by MS-DOS compilers to provide console input/output. It is not part of C standard library or ISO C, nor is it defined by POSIX.

This header declares several useful library functions for performing console input and output from a program.

# Question "2"

## Part "b"

### MAINTAIN-

Program maintenance is the process of modifying a software or Program after delivery to achieve any of these outcomes.

↳ these outcomes

↳ Correct errors

↳ Improve performance

↳ Add functionalities

↳ Remove obsolete portion

Despite the common perception that maintenance is required to fix errors that come up after the software goes live. In reality most of the maintenance work involves adding minor or major capabilities to existing modules.

## UPDATE:-

An update is a new or fixed software, which replaces older version of the same software.

## EXAMPLE:-

Updating your operating systems brings it up to date with the latest drivers, system utilities, and security software.

Updates are often provided by the software ~~pub~~ publisher free of additional charges.

## Question "3"

### Bugs

- i Any error in Program
- ii Bugs are undesirable behaviours of the System

### Debugs

Fixing errors in Program

- Special Software to help fix Programs
- usually part of IDEs like eclipse

### Syntax Error

- A Syntax Error is a violation of the national rules of the Programming language

- It occurs due to the violation of one or more grammar rules

### Logical Error

A logic error result in potential fault behaviours

- Some logic error are detected by Java VM.



# COMPILER

Software that converts Programs written in a high level language into machine language.

Convert the whole high level language Program to machine language at a time.

Used by C, C++

# ASSEMBLER

Software that converts Programs written in assembly language into machine language.

Convert assembly language program to machine language.

Used by assembly language.

## SYSTEM SOFTWARE

- 1) Computer software designed to provide a platform to other software.
- 2) Manages resource and help to run hardware and application software.
- 3) Runs when the system starts and runs till the end.
- 4) Developed using language like C, C++, Assembly.

## APPLICATION SOFTWARE

- Software designed to perform a group of coordinated function, task or activities for the benefit of the user.
- Perform a specific task according to their type.
- Runs when the user requires.
- Developed using language like Java, C, C++, Visual Basic.

## HIGH LEVEL LANGUAGE

1) It is programmer friendly language

2) High level language is less memory efficient.

3) It is easy to understand.

4) It is simple to debug.

## Low Level Language

It is a machine friendly language.

Low level language is high memory efficient.

It is tough to understand.

It is complex to debug.