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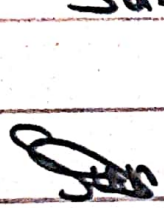
Section A

Subject Introduction to Computer programming



Q.No2(a): Design an algorithm and draw a flowchart that will read the two sides of a rectangle and calculate its area.

## Psendocode:

→ Input the width (W) and lenght (L) of a rectangle.
→ Calculate the area (A) by multiplying (L) with W.
→ print A.

**Example:** Algorithm

step 1: input W.L
Step 2: A ⊠ LxW
step 3: print A.

QNo1 (b):

## Errors in program.

There are three kinds of errors that can occur in program.

(i) Syntax error
(ii) Run time error
(iii) Logic error

These are the errors where the complier find something wrong with program and you can't even try to execute it.

**Example:**

You may have incorrect punctuation, or may be trying to use a variable that has not been declared.

**(i) Syntax error:**

It is an error in a computer science or programming language caught by compiler and program must fixed them before program is complied and then run.

**(ii) Run time error:**

An error that occur while the program is running. The term is often used in contrast to other types of error such as syntax error and compile time error.

(iii) logical error:

logical error is a bug or mistake in program source code that result in incorrect or unexpected behaviour. It is a type of Run time error that may simply produce wrong output or may cause a program to crush while running.

## Question No 2 (a).

## Answer:

Like the casttio header, inhereted by C's stdio.h iostream provide basic input and output service for c++ program. Iostream uses the object cin, cout, cerr and clog for sending data to and from the standard stream input, output error (unbuffered) and log (buffered) respectivly.

conio.h →

h is c header file used mostly by MS → Doc Complier to provide console input / output. It is not part of C Standard Library or ISO C, nor it is identified by posix. This header declares several use for Library function for performing "console input and output from program.

# Question No 2 (b)

## Update:

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

## Example:

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

Update are often provide by the software publisher free of additional charge.

## Maintain:

Program maintinance is the process of modifying a software or program after delivering to achieve any of these outcome;

(i) correct error
(ii) Improve performance
(iii) Add functionalities
(iv) Remove absolute portion

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

## Types of Maintanence:

(i) Corrective Maintanence
(ii) preventive Maintanence
(iii) Adaptive Maintanence
(iv) perfective Maintanence.

## Question No (3)

(a) Differentiate between the following

### Bug:

(i) Bug is informal / transitive to annoy.
(ii) Most bug arives from programming
(iii) Bug keeps a computer program from working correctly.

### Debug:

(i) Debug is to search for and elimination malfunctioning element or error and something.
(ii) Debuging is process of detecting and removing of existing and potential errors.
(iii) Debuging is used to find and resolve bugs or defect.

(b) Syntax error:

A syntax error is an error in the syntax of a sequence of characters or token that is intended to be written in a particular programming language.

Logical error:

A logical error is an error in a program that cause it to operate incorrectly but not to be terminate abnormally.

part (C):

Complier:

(i) Translate high-level language into machine language (code)
(ii) Translate all the code at the same time.
(iii) Only needed once to create and executable file.

Assembler:

(i) Translate assembly language into machine code.
(ii) Uses the processors instruction set to convert.
(iii) Run quickly as conversation between two low level language is just reliant on the processors instruction set.

part (d):

**System software:**

(i) Computer software designed to provide a platform to other software.

(ii) Manages resources and helps to run hardware and application software.

(iii) Run when the system starts and runs till the end.

**Application software:**

(i) Software designed to perform a group of co-ordinated functions, ~~tasks~~ tasks or activities for the benefit of the user.

(ii) perform a specific task according to their type.

(iii) Runs when the user require.

part (e):

**High Level Language:**

(i) It is programmer friendly.

(ii) High level language is less memory efficient.

(iii) It is easy to understand.

(iv) It is simple to debug.

(v) It is simple to maintain.

## Low level Language:

(i) It is a machine friendly Language.
(ii) low level Language is high memory efficient.
(iii) It is tough to understand.
(iv) It is complex to debug Comparatively.
(v) It is complex to maintain comparatively.

The
End.