06/10/23

4) Functions

Functions are used to break an algorithm into parts, construct each part separately and then integrate the parts to the complete algorithm.

(or)

A function is a block of organized, reusable code that is used to perform a similar task of some kind. Functions will avoid repetition of code. It is easy to debug, test and understand

Functions reduces size and development time of the ~~time~~ program.

Notations are a system of characters, expressions, graphics or symbols used in problem solving process to represent technical facts.

Example : > Psuedo code
> Flow chart

PSUEDO CODE

PS 1.1

```
READ A, B
COMPUTE Sum C adding A and B.
PRINT Sum C
```

* PSUEDO CODE is a English like language, short, readable and formally styled. Psuedo code cannot be compiled or executed. There is no standard syntax. It is used to understand the general working principle of the program. It is not a machine code. Psuede code uses some keywords.

Input → INPUT, READ, GET, PROMPT
Output → PRINT, DISPLAY, OUTPUT, SHOW
processing → COMPUTE, CALCULATE, DETERMINE, ADD, SUBTRACT, MUTIPLY, DIVIDE.
To initialize → SET, ASSIGN, INITIALISE.
Incrementing → INCREMENT
Decrementing → DECREMENT

The keyword should be capitalised. Three control structures are used in pseudo code.

i) Sequence - The statements are executed one after another. In the same order. as they are written from top to bottom.

Eg: Refer previous Page (PS 1.1)

HW : Algorithm & Pseudo Code
i) Sum of 3 nos ii) Averge.

Al i), ii)

i) STEP 1 : START
STEP 2 : Read values of variable n_1, n_2 and n_3
STEP 3 : Compute ~~total~~ = $n_1 + n_2 + n_3$
STEP 4 : ~~Display~~ ~~total~~ Compute Avg = total/3
STEP 5 : Display total
STEP 6 : Display Avg
STEP 7 : END

Ps i, ii)

ii) START
READ n_1, n_2 and n_3
COMPUTE tot = Sum of n_1, n_2 and n_3 as tot
COMPUTE tot DIVIDE by 3 as Avg
DISPLAY tot
DISPLAY Avg
END