SNS COLLEGE OF TECHNOLOGY

Coimbatore-36.

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COURSE NAME : 19CST101 – PROGRAMMING FOR PROBLEM SOLVING

I YEAR/ I SEMESTER

UNIT – I INTRODUCTION TO PROBLEM SOLVING TECHNIQUES

Topic: Notation (Pseudo Code)

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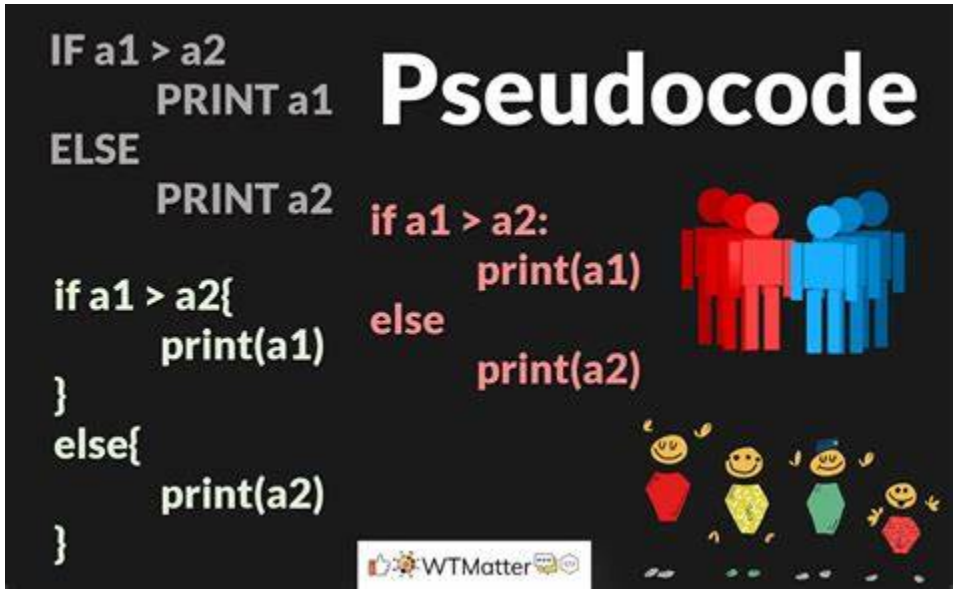
Pseudo Code

What is Pseudo Code?

- Pseudo code consists of short, readable and formally styled English languages used for explain an algorithm.
- It does not include details like variable declaration, subroutines.
- It is easier to understand for the programmer or non programmer to understand the general working of the program.
- It is not a machine readable
- Pseudo code can't be compiled and executed.
- No standard syntax.



Pseudo Code

Guidelines for writing pseudo code:

- Write one statement per line
- Capitalize initial keyword
- End multiline structure
- Keep statements language independent

Common keywords used in pseudocode

begin ... end: These keywords are used to start and finish pseudocode. Begin is the first line and end is the last line of pseudocode.

accept: This keyword is used to obtain an input from a user.

display: This keyword is used to present a result or an output.

if ... else... endif: These keywords are used in decision-making.

//: Comment

Do ... while, for ..., repeat ... until: Represent loop

Pseudo Code

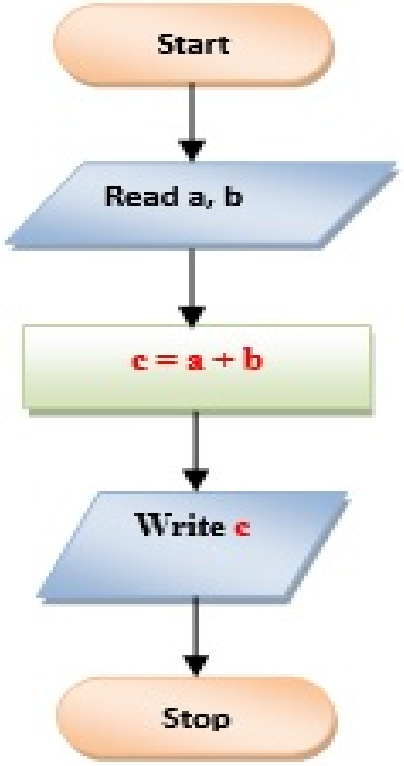
Example for Sequence Method:

To find sum of two numbers

Pseudo code

```
BEGIN
GET a,b
ADD c=a+b
PRINT c
END
```

Flowchart



Program

```c
#include<stdio.h>

int main()
{
    int a, b, c;

    printf("Enter value of a: ");
    scanf("%d", &a);

    printf("Enter value of b: ");
    scanf("%d", &b);
    c = a+b;

    printf("Sum of given two numbers is: %d", c);

return 0;
}
```

Pseudo Code

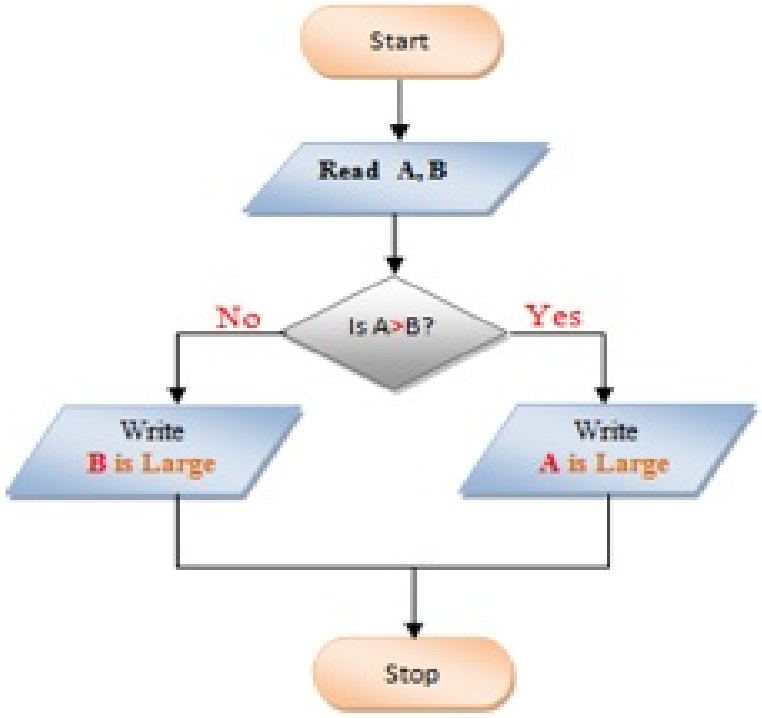
Example for Selection Method:

Greatest of two numbers

Pseudocode

```
PROGRAM PrintBiggerOfTwo:
    Read A;
    Read B;
    IF (A>B)
        THEN Print A;
        ELSE Print B;
    ENDIF;
END.
```

Flowchart



Program

```
#include<stdio.h>

int main()
{

    int A, B;

    printf("Enter values of A, B: ");
    scanf("%d %d", &A, &B);

    if (A>B)
    printf("A is Larger");
    else
    printf("B is Larger");

    return 0;
}
```

Pseudo Code

Example for Iteration Method:

Find the Sum of First Five Natural Numbers

Pseudo code

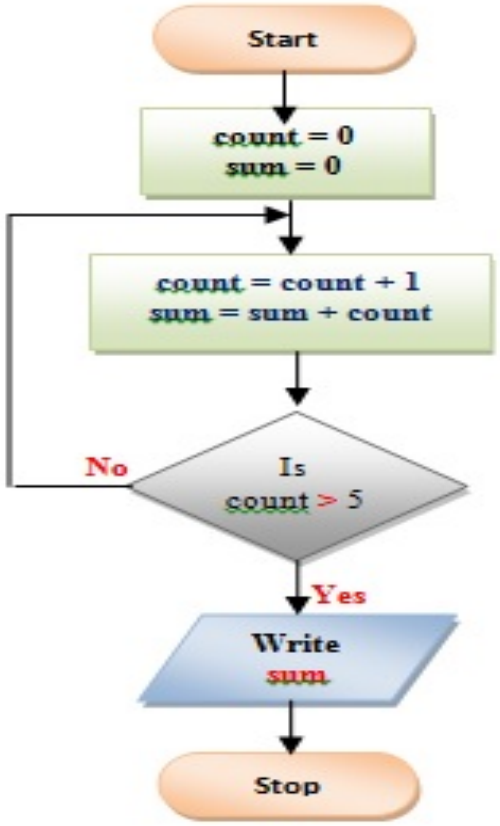
```
BEGIN

NUMBER counter, sum=0

FOR counter=1 TO 100 STEP 1 DO
      sum=sum+counter
ENDFOR
OUTPUT sum

END
```

Flowchart



Program

```
#include<stdio.h>

int main()
{

    int count, sum;
    sum = 0;

    for (count = 1; count<=5; count++)
    {
        sum = sum +count;
    }

    printf("Sum of 1st 5 numbers is: %d", sum);
    return 0;
}
```

Comparisons

Algorithm	Flowchart	Pseudo code
An algorithm is a sequence of instructions used to solve a problem	It is a graphical representation of algorithm	It is a language representation of algorithm.
User needs knowledge to write algorithm.	not need knowledge of program to draw or understand flowchart	Not need knowledge of program language to understand or write a pseudo code.


Thank
you