Adam Mukharil Bachtiar

English Class

Informatics Engineering 2011
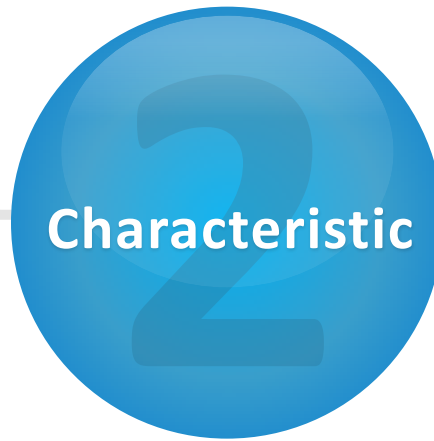
Algorithms and Programming

Sequential Structure

Steps of the Day

Definition

Characteristic

Exercises
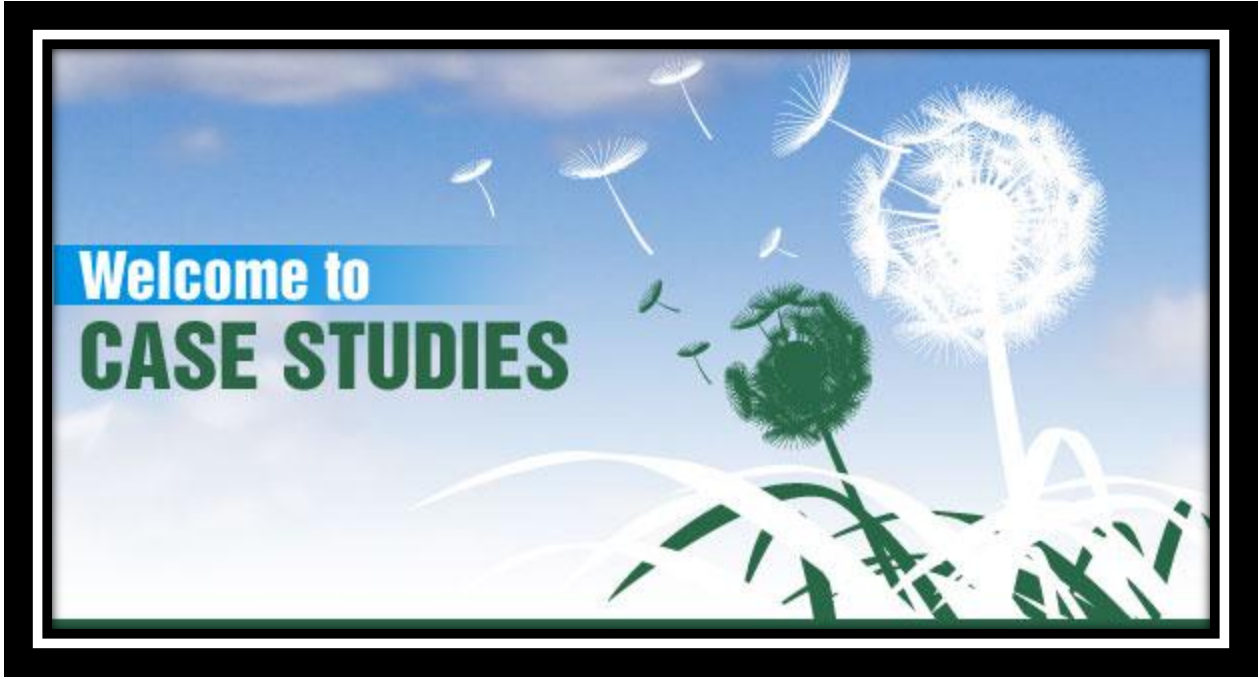
Let's Start

1 Definition

- **The simplest** and **basic** structure in algorithm.

- Instruction was processed in **sequential way**
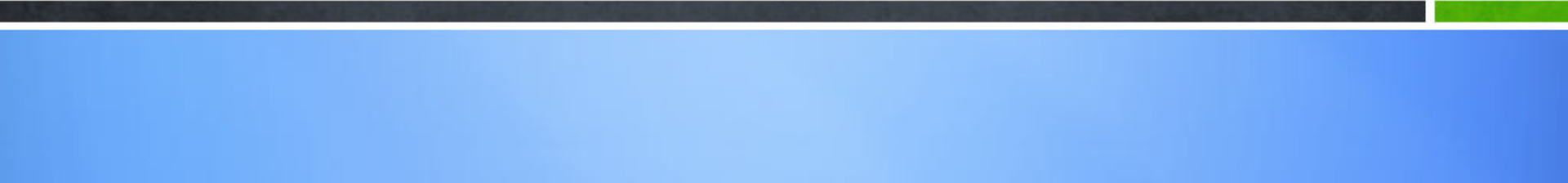
  (top down approach).

2 Characteristics of Sequential Structure

All about Sequential Structure

- Each instruction was processed **one by one**.

- **No repeateance** in each instruction.

- The last instruction is **the end of algorithm**.

- Sequence of instructions **is same** with

  sequence of instructions in Algorithm

Welcome to CASE STUDIES

Case of Employee's Salary

UNIKOM has **n employees** with salary asumptions such as:

- Salary of each employee was **equal** each other.

- Salary was counted by **basic salary + allowance - tax** .

- The tax is **10 % from basic salary** before added by allowance.

- Allowance is **20% from basic salary**.

- Basic salary **can be changed**.

Calculate salary that UNIKOM must be pay to all employees, detail of tax, and detail of allowance for each employee

Algorithm of Employee's Salary

```
1    Algoritma Gaji_Karyawan
2    {I.S: Jumlah karyawan dan Gaji pokok diinput oleh user}
3    {F.S: Menampilkan gaji, pajak, dan tunjangan karyawan}
4
5    Deklarasi:
6      gaji_pokok,gaji,jml_gaji:real
7      pajak:real
8      tunjangan:real
9      jml_karyawan:integer
10
11   Algoritma:
12     input(jml_karyawan,gaji_pokok)
13     pajak←0.1*gaji_pokok
14     tunjangan←0.2*gaji_pokok
15     gaji←gaji_pokok+tunjangan-pajak
16     jml_gaji←gaji*jml_karyawan
17     output('Pajak perorang= Rp. ',pajak)
18     output('Tunjangan perorang= Rp. ',tunjangan)
19     output(Gaji ',jml_karyawan,' orang karyawan= Rp. ',jml_gaji)
```

Pascal Code of Employee's Salary

```pascal
1    program Gaji_Karyawan;
2    uses crt;
3
4    var
5        gaji_pokok,gaji,jml_gaji:real;
6        pajak:real;
7        tunjangan:real;
8        jml_karyawan:integer;
9
10   begin
11     write('Masukan jumlah karyawan: ');readln(jml_karyawan);
12     write('Masukan gaji pokok    : ');readln(gaji_pokok);
13     pajak:=0.1*gaji_pokok;
14     tunjangan:=0.2*gaji_pokok;
15     gaji:=gaji_pokok+tunjangan-pajak;
16     jml_gaji:=gaji*jml_karyawan;
17     clrscr();{untuk membersihkan layar}
18     writeln('Pajak perorang     = Rp. ',pajak:0:2);
19     writeln('Tunjangan perorang = Rp. ',tunjangan:0:2);
20     writeln('Gaji ',jml_karyawan,' orang = Rp. ',jml_gaji:0:2);
21     writeln();
22     write('Tekan sembarang tombol untuk menutup...');
23     readkey();
24   end.
```

3 Collection of Exercises

Exercises of Sequential Search

Create the algorithm and pascal code to:

- Around and area for 4 2-dimensional space

- Around and area for 3 3-dimensional space.

Create the algorithm and pascal code to show curriculum vitae in paragraph style.

THANK YOU

GRACIAS

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