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Kelas : 13 IF 2.

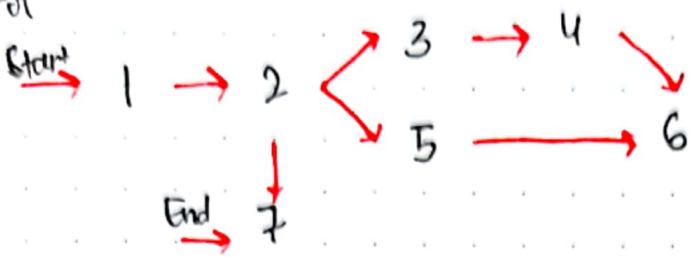
Code 1. & Task 1.

```
1   #include <stdio.h>
2   main ()
3   {
4       int n;
5       pertama =0, kedua =1, next, a;
6       printf (" Masukkan angka: \n");
7       scanf ("%d",&n);
8       printf ("Urutan Fibonacci %od pertama adalah :-\n", n);
9       for (a=0; a <n ; a++)
10      {
11          if (a <=1)
12              next = a;
13          else
14          {
15              next = pertama + kedua;
16              pertama = kedua;
17              kedua ;
18          }
19          printf("%od \n", next);
20      }
21      return 0;
22  }
```

1. Determine what is nodes, edges, and branches, statements.
   - Statements : Baris kode yg melakukan tindakan tertentu.
   - Node : Titik dalam control flow graph.
   - Edges : mewakili alur eksekusi antara node.
   - Branches : titik keputusan dlm program, dimana alur eksekusi dapat berubah tergantung pada hasil dari 1 kondisi

2. Draw the control flow graph of the program

2 Control



3. Condition : for (a = 0; a<n ; a++)
decision : for (a = 0; a<n; a++
return 0.

Condition : next = a ;
decision : else { next = ...
pertama = ...

4. Construct the CC :
if (a<=1), suppose (a <= 1) = c'
Test suite A = C' IS T; C'' IS F, TS-A : +C1 (a=2) and +(2(a=2)
— " B = C'' IS A; C'' IS ~~F~~ TS-B : +((a=4) and +C2(a=0)

else for conditions (a>1) supposed to be C^
Test suite : C'' IS T; C'' IS F, TS-A; +C1 (a=2) and +C2 (a=2)
— " : C' IS F; C'' IS T TS-B ; +C (a=0) and +C2 (a=3)

- For (a=0, a<n: a++) suppose (a ≤ a<n) = C and supposed ~~n=3~~
Test suite A : A (is T & B F : TS-A +C1 (a=0) and +C2(a=w)
— " B : B (is F & C is F = TS-B +C(a=-1) and +C2(a=2)

if (a<=1)

TS A
Statisfied
CC = 100%

C
T
F

TSB
Satisfied
CC=100%

C
F
T

else

C
F
T

for (a = 0,00) = a++2)

TSA

C
T
F

TSB

C
F
T

5 For (a=0, a<n, a++) suppose (0≤ a ≤ n); and suppose = 3
Test suite A = (is T and C is F : TS-A TC1 (a=0) + C2 (a=4)
— " B = C is F and C IS T : TS-B TC1 (a=-1 and +C2(a=2)

5. Sb the table.

if (a <=1)

TSA
Satisfies
CC = 100%

C
T
F

TSB
Satisfied
CC = 100%

C
F
T

else

TSA
CC = 100%
Satisfies

C
T
F

TSB
Satisfied
CC = 100%

C
T
F

For (a=0; a<n; a++)

TSA

C
T
F

CC = 100%
Satisfies

TSB

C
F
T

CC = 100%
Satisfied.

Repeat steps 3 to 5 for DC/D/CC, MC/DC and M-CC
then n=1 so the number of combi is $2^1=2$

is (a <1)
Suppose (a<=1)
C IS T
C IS F

C
T
F

C IS T then D IS T
C IS F then D IS F

Ches Independent Effects

C	D
T	T
F	F

6. DC
D = true
$N_1 \to N_2 \to N_3 \to N_4 \to N_6 \to N_7$.
$N_1 \to N_2 \to N_5 \to N_6 \to N_7$.

D = False
$N_1 \to N_2 \to N_3$

TSA :
C is T and D IS T
C IS F and D IS F

D/CC
If (a <1)
Suppose (a<=1) = C
— if (a<1) = D

MC/DC
If (a<=1)
Suppose (a<=1) = C
— (a<=1) = D

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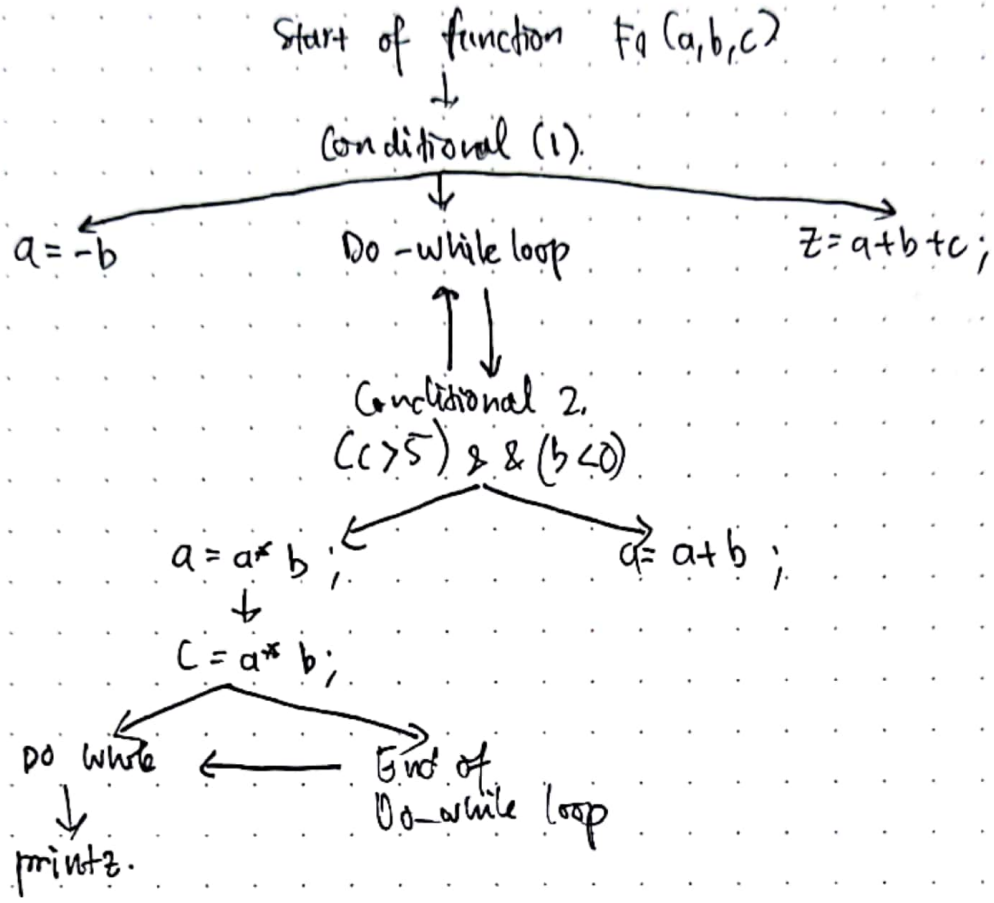
1.



2. 1. (ac 1)

2
3
4
5
6
7 c(z5) && (b<0) , a=1 , b=-1 , c=6
8 , a=1 , b=-1 , c=5
9 , a=1 , b=-1 , c=4
10 a=1 , b=-1 , c=3
11 , a=1 , b=-1 , c=2
12 , a=1 , b=-1 , c=1
13 , a=1 , b=-1 , c=0

3. a. D/C

1. Punya 2 keputusan dalam kode.
2. Punya 3 kondisi
3. Harus T_i mengevaluasi kondisi pertama 1 harus memenuhi (T)

b. MC/DC

1. Meng harapkan setiap kondisi punya dapat yg beda 2 independen thdp keputusan
2. Uji T_i memenuhi kondisi pertama yg 1 kondisi

C M-CC

1. Mengharapkan semua kemungkinan kombinasi kondisi di uji
2. Hanya punya 1 kondisi
3. Berdasarkan Uji Ti persentasenya:

a. D/C = 50%
b. MC/DC = 100%
C. M-CC = 100%