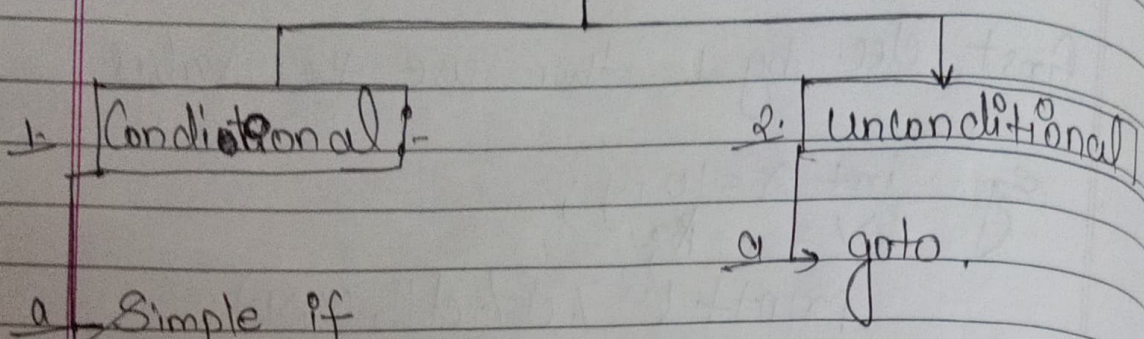


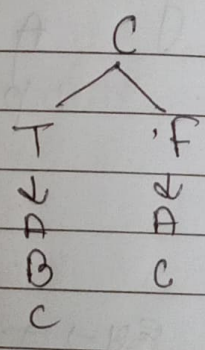
→ Decision Control Statement



- a Simple if
- b if
- c if else if ladder
- d Nested if else
- e Switch case
- f goto.

a. Simple if-

Syntax :-
 if (condition)
 {
 Block A
 }
 optional if block
 {
 Block B
 }
 have 1 statement
 {
 Block C
 }



Eg ①

```

int main ()
{
    int x = 10;
    printf ("Hi");
    if (x < 20)
    {
        printf ("Hellow");
        x = x + 15;
    }
    printf ("%d", x);
}
    
```

⇒ HiHellow25



② $x = 100$

⇒ Hi 100

③

```
{ int x=100;
  printf ("Hi");
  if (x < 20)
    printf ("Hello");
  x = x+15;
  printf ("%d", x);
}
```

Hi 115

④ $x = 10$

Hi Hello 25

⑤

```
{
  int x=10;
  printf ("Hi");
  if (x < 20); // if (x < 20)
  printf ("Hello"); //
  x = x+15;
  printf ("%d", x);
}
```

Hi Hello 25

⑥ $x = 100$

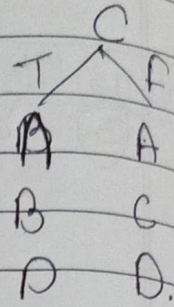
Hi Hello 115

b. if else -

Syntax -

```

      Block A
    if (condition)
    {
      Block B.
    }
    else
    {
      Block C
    }
    Block D
  
```



eg

```

① int main ( )
  { int x = 7;
    printf ("Hi");
    if (x < 10)
    {
      printf ("Hello");
      x = x + 19;
    }
    else
    {
      printf ("Bye");
      x = x - 4;
    }
    printf ("%d", x);
  }
  
```

⇒ HiHello26.

② X = 17

⇒ HiBye13

③

```
{ int x = 7;
  printf ("Hi");
  if (x < 10)
    printf ("Hello");
    x = x + 10;
  else
    printf ("Bye");
    x = x - 4;
  printf ("%d", x);
}
```

error. [if not there without else]

Q. Write a program to input a no. & check if a no. is even or odd.

```
#include <stdio.h>
```

```
int main ()
```

```
{ int x;
```

```
scanf ("%d", &x);
```

```
if (x % 2 == 0) // ((N > 1) < 1 = N) // (N & 1 = 0)
```

```
printf ("Even");
```

```
else
```

```
printf ("Odd");
}
```


Q. WAP to input an year and check year is leap year or not

```
#include <stdio.h>
int main ( )
{
    int y;
    if (y%400 == 0 || y%4 == 0 && y%100 != 0)
        printf ("leap year");
    else
        printf ("not leap year");
}
```

Q.1 WAP to check a person is eligible for voting, or not. If not then how many years.

Q.2 WAP to input two no. & check largest.

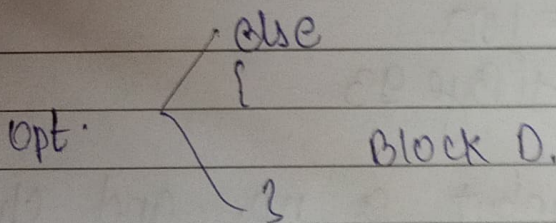
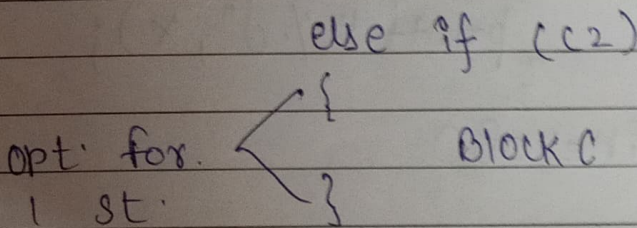
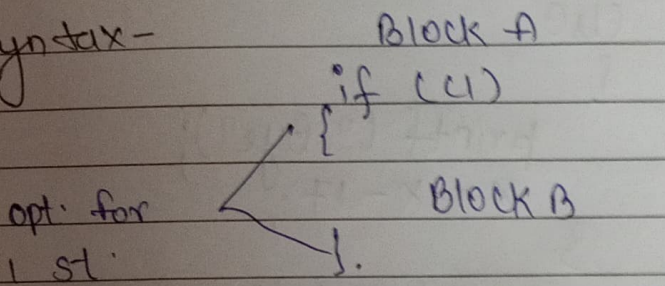
Soln

```
#include <stdio.h>
int main ( )
{
    int x, scanf ("%d", &x);
    if (x >= 18)
        printf ("Person is eligible for voting");
    else
        printf ("Person is not eligible for voting");
        x x = 18 - x;
}
printf ("%d", x);
}
```

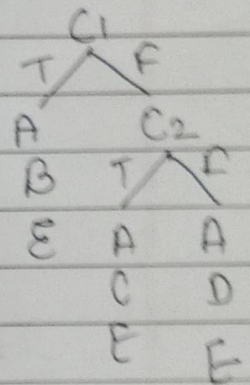

Sol. 2 `#include <stdio.h>`
`int main ()`
`{ int a, b;`
`scanf ("%d %d", &a, &b);`
`if (a > b)`
`printf ("%d", a);`
`else (b > a);`
`printf ("%d", b);`
`}`

c if else if ladder -

Syntax -



Block E.




```
if (x > 0)
```

```
{
```

```
    printf("No. is +ve");
```

```
}
```

```
else if (x < 0)
```

```
    printf("No. is -ve");
```

```
else
```

```
    printf("No. is zero");
```

```
}
```