Lesson- 2

Decisions in C

Slection in C

Decision Making

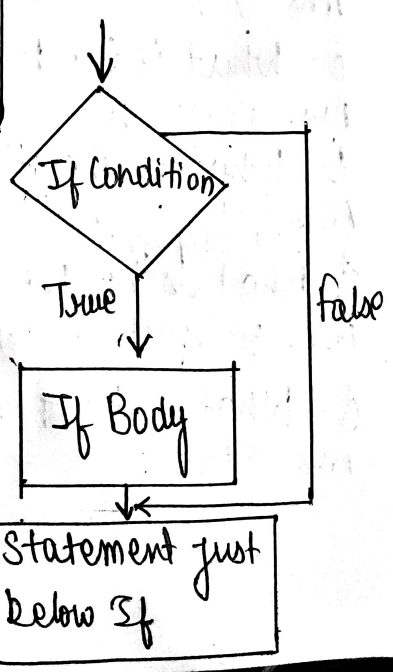
- If
- If else
- If else if
- Nested if
- Switch

```
If
If (condition)
{
  // true
}

If else
If (condition)
{
  // true
}
else
{
  // false
}

If else if
If (condition1)
{
  // true
}
else If (condition 2)
  // true
}
else
{
}

Nested if
If (condition)
{
  If (condition)
  {
  }
  else
  {
  }
}
else
{
  If (condition)
  {
  }
  else
  {
  }
}

Switch (expression)
{
  Case 1:
    break;
  Case 2:
    Break;
  Case 3:
    Break;
  default;
}
```

- If Condition.

Syntax

```
If (condition)
{
  // Statements to execute if
  // condition is true
}
```



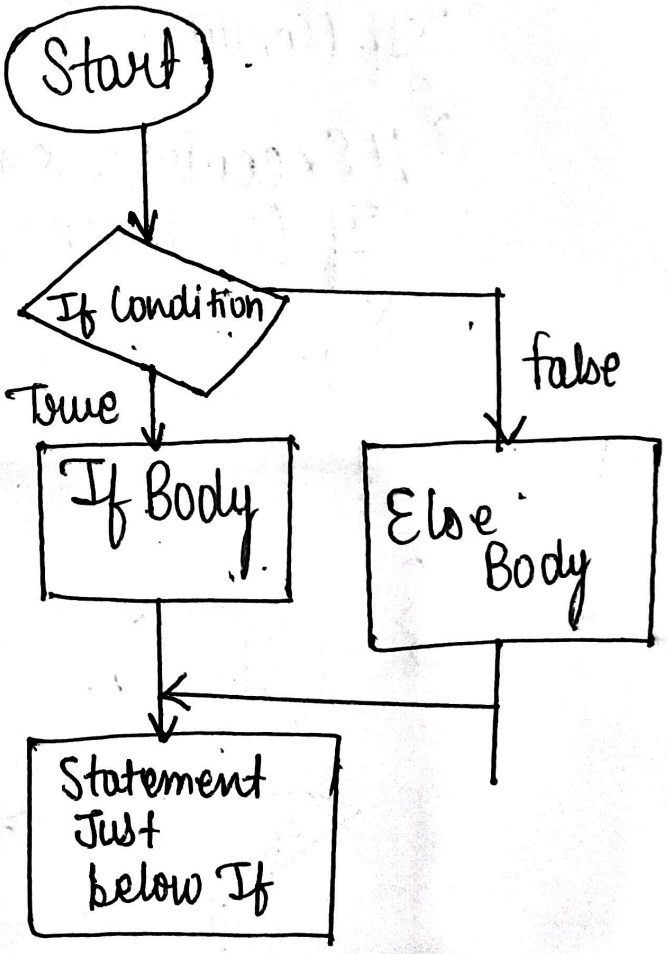
- If example

```
// C program to Illustrate If statement
#include <stdio.h>
int main()
{ int i= 10;
  If (i>15) {
        Printf ("10 is greater than 15");
    }
    Printf ("I am Not in If");
}
```

- If - else in C

Syntax

```
If (Condition)
{
// Executes this block If
// Condition is true.
}
else.
{ // Executes this block If
// Condition is false.
}
```



- If and else example

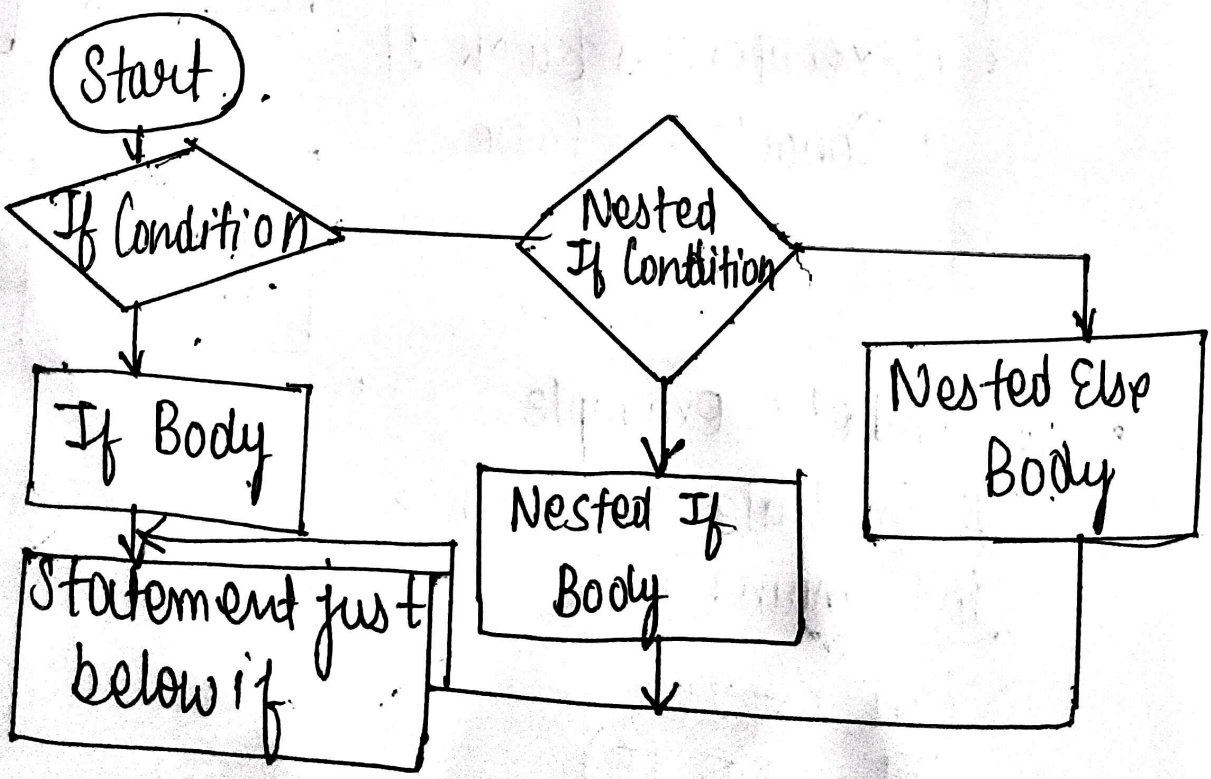
```
# include <stdio.h>
int main()
{ int i=20;
  If (i<15)
```

```
{ Printf("i is smaller than 15");
}
else {
    Printf("i is greater than 15");
}
return 0;
}
```

- Nested If in C

Syntax:

```
If (Condition 1)
{ // Executes when condition 1 is true
  If (Condition 2)
  { // Executes when condition 2 is true
  }
}
```



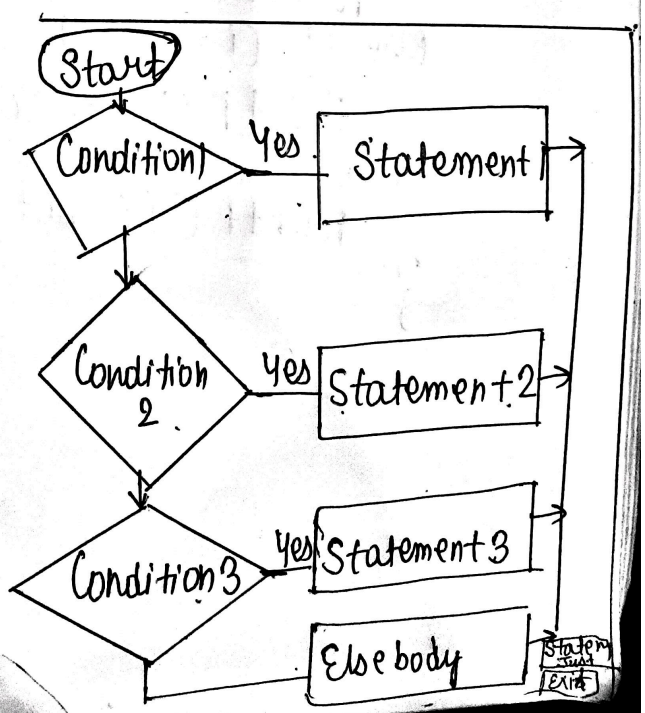
- Nested If example in C

```
int main()
{ int i=10;
  if (i==10) {
     //first If statement
     If (i<15)
        Printf ("i is Smaller Than 15\n");
     // Nested -If statement
     // Will only be executed If statement above
     // is true
     If (i<12)
        Printf ("i is smaller than 12 too\n");
     else
        Printf ("i is greater than 15");
  }
  return 0;
}
```

- If-else If Ladder in C

Syntax

```
If (condition)
    statement;
else If (condition)
    Statemen;
.
.
.
else
    statement;
```



- If-else-if Ladder example in C

Syntax:

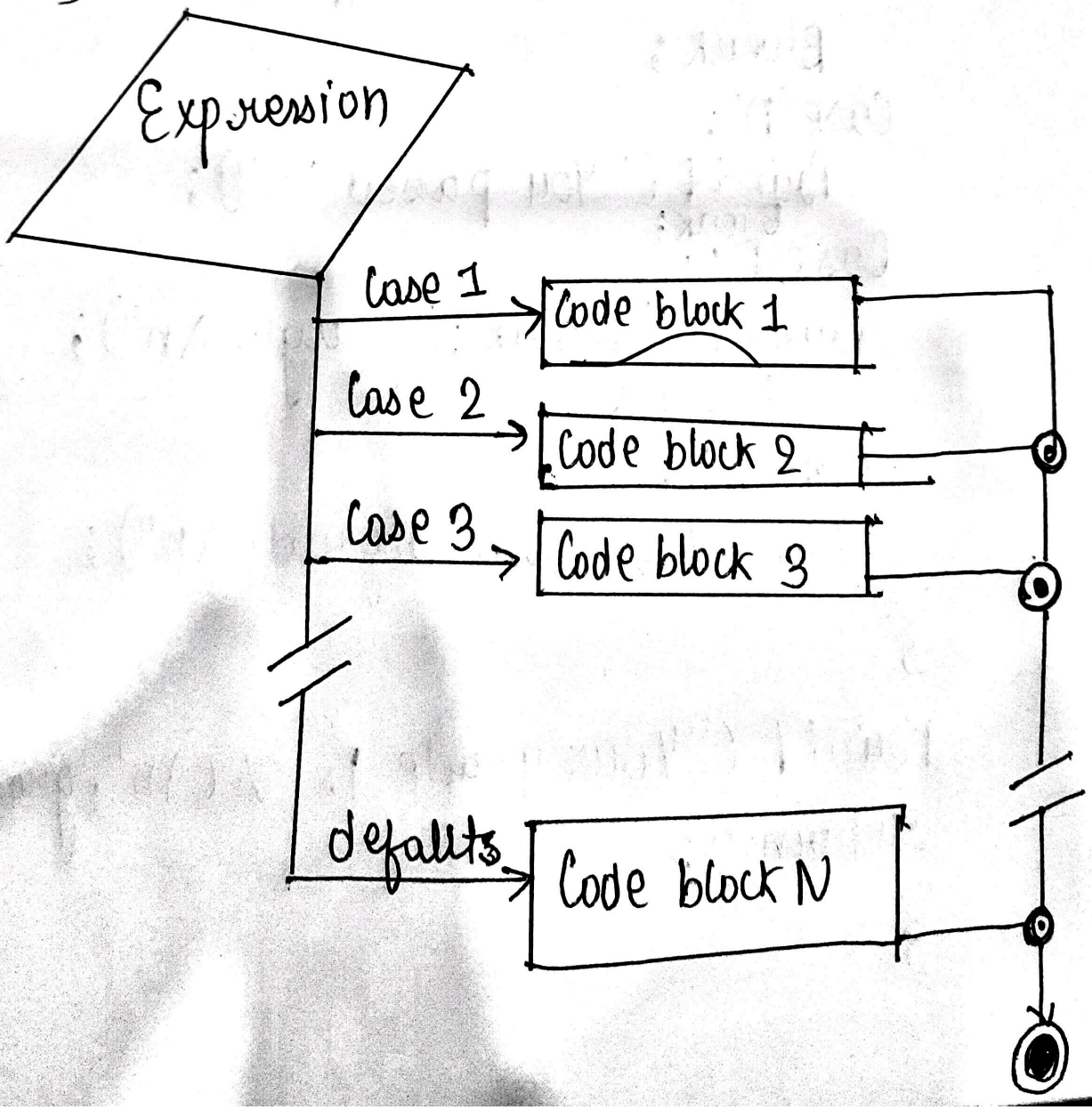
```
If (condition)
    statement;
else if (condition)
    statement;
    .
    .
    statement;
```

// C Program to Illustrate nested-If statement

```
#include <stdio.h>
int main()
{ int i=20;
 If (i==10)
    Printf("i is 10");
 else if (i==15)
    Printf("i is 15");
 else if (i==20")
    Printf("i is 20");
 else
    Printf("i is not present");
}
```

- C - switch

```
Switch ( expression)
{ case constant - expression :
   statement(s);
  Break;/* optional */
 case constant - expression :
   statement(s) ;
  Break ; /* optional */
  /* you can have any number of case statement */
 default : /* optional */
  statement (s) ;
}
```



- Switch statement example

```
#Include <stdio.h>
int main()
{/* Local variable definition */
Char grade = 'B';
Switch (grade) {
   case 'A':
    Printf("Excellent!\n");
     Break;
  case 'B':
  Case 'C':
    Printf ("Well done \n");
     Break;
  Case 'D':
    Printf("You passed \n");
     Break;
  Case 'f':
   Printf ("Break try again\n");
      Break;
   default:
    Printf ("Invalid grade \n");
}
Printf ("Your grade is %C\n", grade);
return 0;
}
```