BRANCH CONTROL STATEMENTS => 8 00 720 -> if 400 > if else -> nested if -> else if ladder 1.4:-FLOW CHART ! -SYNTAX :-FAILSE CONDITION if (condition) TRUE TRUE BLOCK STATEMENT True Block Statements

NEX T

EX: main () 2 float a, d=0; - printf (" enter amount: "); scanf ("'(+", da); if (a>500) d=0.1; 1=1 - 1 d; printf ("1.1"), a); 2. if -else '-FLOW LHART :-FALSE CONDITION it (condition) FAISE BLOCK TRUE BLOCK Vill Block Statements SCACEME NT STATEMENT else NEXT False Block Statements

```
EVEN /ODD :-
-> mum ()
    frintf (" enter number: ");
     scanf ("1.0" da);
                                       if (a7.2!=0)
     If (A1.2==0)
                                        printf (" odd No ");
        fountly (" even No ");
-> main ()
   f int a;
     point ("Enter number: ");
      Scary (" 1.0", La);
      of (a 1. 2 == 0)
                                    print (" 7. 0 is an
       printf (" even No ");
                                            even No 11, LU);
                                    else
       else
                                   {printf (" 1.d is on
       I print (" odd No!");
                                            odd No " fa);
```

A, b, C nated - if 3 muin () int a, b, (; printy (" Enter a, b, c"): Scanf (" 1.2 1.2 1.2", da, db, tc); ·4 (d > b) if (a> c) { points (" ais sig "); else { purily (" & is big "); else if (6>c) E printe ("b is big"); else Eprindt (" cis big ");

abo -> main () { ind a, b, c; pountf ("enter a, b, c"); Scanf (" Y. d 7.d 7.d 1.d", da, b, d c); if (b > c) 4 (3 > 1) { points ("b is big"); elel { wints ("a is big"); else if (A>C) c> s { points ("a is big"); else { points ("cis big");

```
-> main ( )
                                      d bc
   int a,b,c;
   prints ("enter a, b, (");
    scanf ("7.d 7.d 7.d", La, Lb, Lc);
     4 (u>c)
          y (a>b)
           { point (" a is big");
             print ("b is big");
       else
            if (b>c)
             E print ("bis big");
             elel
               printly (" ( is big ");
```

```
if- Statement EXAMPLES =>
1. Main ()
     int a, b;
    fountf ("Enter the value of a; ");
     Scanf ("1.0", 4a);
   founty ("Enter the Value of b: ");
     scanf (" 1.d", 1 b);
     每年(426)
           printly 1" a is greater than b");
         if (a < b)
           printly (" bis greater than a");
         if (1 == b)
           points (" a is equal to b");
2. main ()
       pointf ("enter the Value of a: ");
        scanf ("1.0", da);
        uf. (1 >0)
             print (" ". d is a positive number 1 m", 1);
```

```
if - else: -
1. main ()
     foundf (" Enter the Value of a; ");
      scarf ("7. Q", & a);
       if (a > 0)
           point ("/, d is a positive number (n', a);
            printf (" 1.0 is not a positive number ( m', a);
        else
2. Leap Year;
 main ()
  f int a;
     joint ("Enter a year:");
      scanf (" 7.0", La);
       4 (( a/. a == 0 & & a /. 100! = 0) 11 (a/. 400==0))
          wintly (" 1. 0 is a leap year (m", year a);
        else
        { paidf ("1. d is not a leap year \ m", a);
```

Nested-il :-1. main () int so u; point ("Enter the value of a; "); Scanf 1"7.0", +a); if (a>0). if (11/2==0) { prints (" 1. d is an even relimber (m", a); & else f printly (" " d is an old number (m", a); } else fruintf [" 1, d is not a positive number \ m", a); if else: that th's printf ("Enter a character: "); scanf ("1.0", t ch); if (ch == 'a' 11 ch == 'e' 11 ch == (i" 11 ch == 'o' 11 ch == (u' 11 ch == (A' 11 ch == (E' 11 ch == (1 11 Ch== '0' 11 Ch== (U') fruinty (" Y.C is a voud In'; ch): else printf (" ". c is a constant (m", ch);

```
Nexted - it :-
1. Ebs main ()
   I int year;
     printly ("Enter year: ");
      scanf ("1.0", & year);
      if (year 1.4==0)
      t if (year 1:100! = 0)
         if (year 1/. 400 == 0)
            { points ("1.d is a leap year \n", year);
            point (" I d is not a leap year 1 m", year);
                                   of the said to be
            wint ("1.d is a leap year 1m", year);
            prints ("1.0 is not a leap year In", year.);
```

2. 11 Grading System Using nexted-it > int main () flood marks: frientf ("Enter your marks: "); scanf (" 1. +", & marks); 4 (marks > = 95) fount (" grade: 0 1 m"); else if (marks > = 90) { pointy (" (prade: A (M')); else if (morks > = 80) 1 pointy (" grade: B(m"); elel if (marks >= 70) fourilf ("Grade: (\m')) else if (murks > = 60) paint (" grade: Din"); pointly ("brude: F. In");

```
3. Sorting 3 numbers thing nexted if ()
, int main ()
      int num, num 2, num 3;
       found (" Enter num 1: ");
       scanf ("1.A", & mumi);
        foundf ("Enter num 2; ");
        scanf (" 7.d", & num 2);
        printf ("Enter num 3: ");
        sconf ("1.0", 4 mm 3);
         Ur ( Mum 1 > = Mum 2 )
           il ( Mum 1 > = Mim 3 )
             found (" largest no is: 1.d \ m"; num 1);
           else
            { points ("ranguet no is: 1. Q1 n", num 3);
         else
            if ( mum 2 ? = mum 3 )
               wind (" wyest no is: "/d m", num 2);
             eles
              fount ("largest no is: "/d 1 m", num 3);
         3
```

```
07-05-24
 if - else:,-
-> muin ()
      int a, b, c, d;
      friendly ("Enter a, b, (");
       scanf ("7.27.27.27.2", 40, 46, 40),
       1= b*b-4*a*c;
          if (d==0)
              printf (" Real & Equal");
           else
               if (d>0)
               printf (" Real & Not equal");
               else
               printy (" imaginary");
           Uf (d>=0)
            f if (d==0)
               { point (" Real 4 Equal");
               else
                 painty (" real & Not equal");
```

```
-> muin ()
   int gen, age;
    float dut, charge;
    pointf ("Enter I for male 2 for female:");
     scanf ("7.d", & gen);
     pounty ("enter age");
      Scanf ("7.d", kage);
     . found (" enter dut to travel")
      Scanf ("10+", 4 dust);
         if (yen = = 1)
          if loge >12)
           charge = 1;
           1 thurse = 0.5;
          charge = charge * dist;
          point ("charge is = 1.4", charge);
```

-> main () gen = 1 => charge = 0 int gen, age; float dut, charge; charge adding; fried ("Enter 1 for male 2 for female"); LUUL 200. Scant ("1.0", 4 gen); wintf ("enter age"); scanf (" 1.d", Ange); printf ("enter diet to travel"); Scanf ("7. f", 4 dist); if (gen = = 2) {
 if (age > 12) { though = 1; f thange = 0.5; charge = 0; charge = charge * dist; point (" though is = 1. f", charge)

2 main () { unt units & , RC float charge; frientf (" Enter no of units: "); scanf ("1, d", & units); pointf ("Enter I for WRC 2 for no WRC"); Scanfille 1. d", & RC); life (units () if (units > 200) charge = (unit - 200) * 5; charge = 0 Cheege = units +5 pritt ("1.5", charge);

-> main () charge = (units - 200) # 5 { int units, wec; NO WRC float charge; charge = Unity 5 brands ("Enter no of units!"); s canf (" 7. d", & units); townity (" Enter 1 for wec 2 for me wec"); scanf ("1.d", 4 R (); if (wr (= 1) M F | WRL cut=10001if (units > 200) CONT: 500 (UN) Cart - 1000 [m charge = (Units - 200) * 5; charge = 0; else charge = Units * 5; printf (" 1. f", charge);

```
08-05-24
 main ()
  { int gender, wec, cost;
     fountf ("Enter 1 for male 2 for female");
      scanf ("1. d", & gen);
      jountly ("Enter 1 for WRC 2 for no WRC");
      scanf (" 7. d", 4 wec);
        if ( arke = 1)
            4/1 WR(==!)
                wet = mas cost $ 1000.
             the else
              til (gen == 2)
                  if (WR(=1)
                    wet = 500;
                   else
                     West = 1000;
         printf (" /. d", cost );
```

```
-> min ()
    ent gender; Ic;
    float charge = 0;
     printf ("Enter: for male 2 for female");
     Scanf ("1.d", & gender);
     jounts ("Enter 1 for wec 2 for mo wec");
      scanf ("1.0", & rc);
         il (geniter==1).
            charge = 1000;
              if (nc=1)
               charge = 500;
                charge = 1000
      prints (" charge is = 1-+", charge);
```

```
7 main ()
  int m;
      printf ("enter a ma; ");
      scanf ("1.d", km);
         if (M==1)
             print ("one");
           else
              if (M== 2)
               & printf (" (mo");
                else
                1 if (m = = 3)
                  { printf ("Three"))
                    1 if ( m = = 4 )
                     { point (" four")
                      Eddness)
                       { point (" Eine or allowe");
```

```
Clse-if Ladder:
SYNTAX =>
    if (condition 1)
         True Block Statement
     else if (ion 2)
               TBS
           else if (con 3)
                    TBS
                  else if (con 'm')
Ex:-
   main ()
     int m'
      winty ("enter a no").
                                            printf ("5 or above")
      scanf (" ".d", 4 m);
         if (m==1)
             point ("one");
          else if (M== 2)
              founds (" aus ");
             else it (n==3)
               friells (" Three ")"
                 else if ( n = = 4 )
                   fount ( " Four ").
```

else it colder: .main () I int m; pountf (" Enter a mo; "); scanf (" 1.0", & m); Ur (m== 1) prints ("Monday"); elle if (M==2) point (" Toursday"); else if (m==3) printly (" Wednesday "); ll if (n==4) pointf ("Thursday"); theils (m = = 5) fourth ("Friday"); else if (M== 6) wuntf ("saturday")) wurth ("Sunday");

-> main() int a, b, c, choise; frintly ("Enter a, b:"); sconf ("1.d 1.d", 44,46); fraint ("Enter your choise prom 1 for add 2 for sub 3 for Mul 4 for div "); Scanf ("1. d", & chaire); if (chaire = = 1) write in :_ 4 nested if wintf (10.10", c); else if (chaire = 12) c= a-b; printly ("10", c); else ils (Choûe = = 3) c= a 4 b; fruit (" ".d", (); else if (choise == 4) f. c= a/b; frintly (".1.d", c); printy (" Invalid choire");

```
Fusing it stalements:
main ()
       foundf ("Enter a number: ");
        scant ("1.1.0", 4 m);
        if (m==1)
           points (" monday (m");
         if (m==2)
           wantly I" tuesday (m");
          if (M==3)
          { wint ("wednesday (n");
          if (m== a)
          ! printly (" Thursday (m");
           If ( m = = 5 )
           printf ("Friday \m');
           il (m==6)
            E wind (" saturday (m");
           if (m==7)
              printly ("sunday (m");
             If (MZI (IM > 7)
               point (" Invalid number (m');
```

```
2. Using Nested if statement:
-> int main ()
      int m;
        frantf ("Enter a number: ");
         Scanf (" 7, d", & m);
          if (n==1)
             printf ("Monday m"))
           else
            } ¥ (m== 2)
            I point ("Tuesday (n"));
             felse {
                  Uf (m==3)
                   1 points (" wednesday (m");
                   3 else q
                          if. (n==4)
                          f printly (" Thursday ( M'))
                            else &
                                il (1==5)
                              . I printly ("Friday (M");
                                else [
                                     if (m == 6)
                                    [ point ("saturday ( n"))
                                    else {
                                         il, (M==7)
                                         { brinlf ("sunday " m");
                                           { pointly ("Invaled number ("");
```

```
very if Statement:
-> int main ()
      float a, b, c, choice;
       pounds ("Enter a: ");
        scanf ("7. +", ka);
        printly ("Enter b: ");
         scanf ("1.7", db);
         wirilf ("1- Addition (m");
          fruit (" 2- Subtraction (m");
          printf (" 3 - Multiplication ( m");
          found ("4- Division . (m");
          pounty (" Enter your Chaid:
           Scanf ("1.+", & chaire);
            if (thore = = 1)
             i c = a+b;
                 wantf (" Addition is: 1.f \m", c)
             if (Chain = = 2)
                  C= A- b;
                  wint (" substruction is: "/+ (m", C);
              if ( Chair == 3)
                   (= a x b;
                   point (" Multiplication is: 1+1m", ();
                il, ( Chara = = 4)
                { c= a/b;
                    point ("Division is: "If In", c);
                  il (Choice <1 11 Choice > 4)
                    fount ("[NVALID Chaire LM");
```

```
Using Nested if Statement!
"> int main ()
     float a, b, c, choice;
      fruitf ("Enter a: ");
       scanf (" 1.f", ka);
       printy (" enter b: ");
       Scanf (" 1. +", & b);
       print ("1- Addition (M");
        fring ("2-Sulitraction (M");
        printly ("3 - Multiplication (M");
        points ("4 - Division (M");
         prints ("Enter your Choice: ");
         Scanf ("'L.F", & chaire);
          if (Chaire == 1)
              C= a+b'
              printf ("Addition is: 7.7 (m", C);
            3 elle q
                  if ( Uhine = = 2)
                   { c= a-b;
                      printly ("subtraction is; 1.71m", ();
                   else
                       if ( Chairl = = 3)
                          ( = a * b ;
                          fruit ("Multiplication is: 1.+ (m") ()
                        ells
                             if (chaire = 4)
```

```
c= 1/b;
pountf l''Division is: 1/.7 (m", c);
       printly ("INVALID CHOICE IM");
```

```
09-05-2024
 main ()
     int S1, S2, S3, S4, S5, avg;
     printly ("enter 5 sub marks: ");
     scant ("1.0".0".0".0".0", &81, &52, &53, &54, &55);
      mg = (SI+S1+S3+S4+S5)/5
                                              By using only it
     4 (aug >= 70)
     point (" dist");
                                            if ( and > = 70)
                                           wundf ("deit"):
    elseif (avg > = 60)
                                           if (aug 270 klaug >= 60)
      printf ("first");
                                           print ("first");
     elvif (avg > = 50)
                                           if (my 60 dhang >=50)
       printf ("second");
                                           found ("second");
                                           if (my 250 & Larg >= 40)
      elect ( mg > = 40)
                                            pantly ("Thered");
        frint (" Third");
                                            4(mg (40);
                                             printf (" Fail").
            frind ("Fail");
```

98-08-509A Quadratic equation; d=b2-4ac y - else => -) main () int a; b, c; d; fruit ("inter values a, b, c: "); Scainf [" 1. d 1. d 1. d 1. d 1, d u, 4 b, 4 c); d=b*b-4*A*C; if (d==0) { point (" Real of Equal"); else if (d >0) fountf (" Real 4 Not equal"); else f sprint ("imaginary");

```
-> mais ()
      int a, b, c, d;
      printly (" Enter values a, b, c;");
       scant 1" 7.0 1.0 1.0", aa, +2, +0);
        d=b*b-4*u*c;
          A (d>=0)
            if (d==0)
                painty (" Real & equal");
             elle
               { pointf (" Real 4 Not educal");
            else
               printf (" imaginary");
```

```
it - elle it
-> main()
     int a, b, c, d;
      printy ("enter values a, b, c; ");
      s canf ("7.0", 0", 0", 0 a, 16, 40);
       dest if (a>bd+a>c)
       print (" a is big ");
       else if (b>c)
        printy (" & is big ");
        else
        print ("( is big");
  ill
-> main ()
   E int a, b, c, d;
      pounts (" Enter values a, b, c:");
       Scanf ("1. d. 1. d. 1. d. 1, 44, 46, 40)
       ifta>bbda>c)
         found ("a is big");
        4( b>ab4 b>c)
           point (" b is big")
        if (c>a& 4 (> b)
          " wind ("( is big");
```