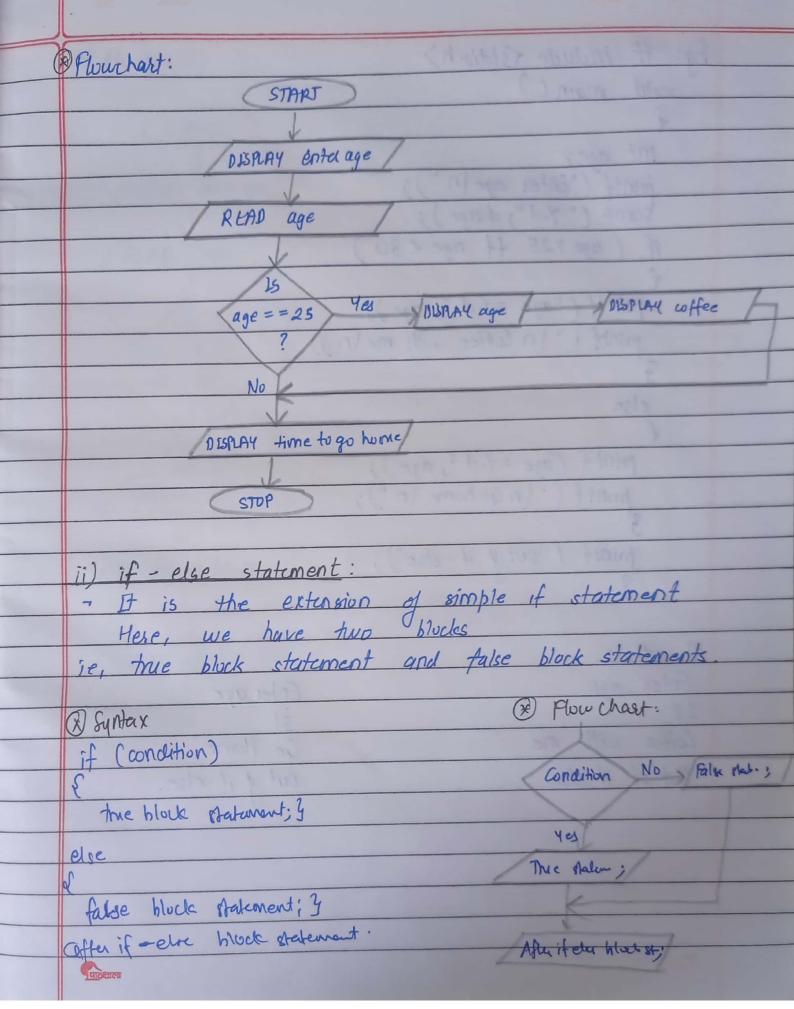
J	
١	# Control Structure:
	Control structure is a way to specify the
	flow of an acottoil in briessans
	flow of sor control in programs.
	It analyzes and chooses in which direction
	a program flows bused on certain parameters and
	conditions.
	There are as follows:
	(i) Conditional statements.
	(ii) Loop datements
	(ii) Break control statements.
Ī	(A): Conditional statement!
	Condition statements are used to make decision
	harad an airan anaditions and alraw andumon.
	based on given conditions and draw conduction.
	In C programming, aundition as statements are g divided
	into of three types: i) if ctatement iv) if else-if ladder
	1) 11 5/4/9/16:
	11) 11 1950 3/4/3/1011
	iii) switch statement
	i) if statement:
	D. Syntax: *) Flowchast
	if Condition)
	statement; Condi
1	after if statements.
1	S 2 S AD HOLE STORY OF THE STOR
	stulement block;
-	A Property of the part of the
	after if statement;

```
Note: i) if single statement after if if, no need to use curly braces

ii) if multiple statement block, put curly braces
          iii) if (condition);
   rested of the statements is printed.
   Eg: (2) # include <stdio.h>
        int age;
        printf ("Enterage: \n");
scanf ("1.d", fage);
       if (age = = 25)
      printf ("Your age is = 1.d &, age);
printf (" In You can go welfee with me In");
        printf ("It's time to go home");
*Outbut s:
Enter age
                                                   Enter age
It's time to go home
                                                  your age is 25
                                                  You can go coeffee with me. It's time to go home.
```

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```
Eg: # include (staio.h)
       printf ("Enter age |n");
scanf (" Y.d", 4 age);
      if ( age 725 44 age < 30 )
       printf ("age = 1-d", age);
      printf (" In Coffee with me (n);
      else
       printf ('age = 1-d", age);
      printf ("(n qo home (n");
       printf ("out of if-else");
*) Outputs!
Enter age
28
Coffee with me
                                         Enter age
31
Go Home
Out of it-else
                                         out of if-else.
```

	*) Plowchart:	
	START	
	Janin de la constitución de la c	
	ALSPLAY Enter age	
	La malanti Ar	
_	/READ age	
	terminated of the state of the same	
	Is .	
	age < 30	
	? (daynalan dan als para)	
	DISPLAY age	
	PISPLAY coffee me	
	estranta del trotat all	
	INSPLAY out of it-elle	
	STUP	
	pelo seguino de la seguino	
	sold to make the same of the s	
	The state of the s	
- 11		

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(iii) Newted-if	Andrews Iv
@ Syntax:	
	20115
if (condition 1)	
e e	- ON MA PARES
if (condition 2)	
<u>}</u>	STR BASE
Inner if -block statements;	
3	
eloe	19 1 2 2 Year
€	352 ms
inner else bluck Malements;	
3	
3	
else	OPAL PRIMARY
outer else block fakments;	
3	are sales Astall
- After neared it block statements;	
-	
- Flowshart:	27 3 1 10 10350 1
- Windition N Outra our block	THE STATE OF THE S
1 Statements;	
Y	
- and 4 linner if block	
tion 2 inner if bluck	
N Construction (1)	Office
statements;	After if block statements;
प्राठ्याला	

```
&: # include (stdiv.h)
    void main ()
    printf ("Enter age & salary (n");

Scanf ("Y-dy-d", 4 age, & salary);

if (age > 50)
     int age, salary;
       if (salary < 6000)
{ salary = salary + 10000; }
      of salary = salary + 5000; 3
    of salary = salary + 3000 3
     pnn+f ("New salary = 1/d", salary);
(*) Output:
                                               Enter age and salary
  Enter age and salary
                                                  68000
   45000
                                                 New salary = 73000
   New salary = 55000
                      Pullmary.
```

(x) Flour chart:	2 A STATE OF THE S
	the section of the section of the
START	The Martin
DIBPLAY enter aged sav	lary /
La contraction of the contractio	The same saling to the same
READ age I salary	Face by " Yorkow I all the
	(036 1460 2
15	
0 > 50 E	- Land - Colored
? Salary=3	salery + 3000;
	Canal Marrie Marrie A
T	5/3
Ts	Frank + major - hope a
Salary < T 60000 ? Salary	- sulary + (0000
	The second of th
F	
salary = salary + 5000	The break and I do that
Her ODPLAY New salony	hitel 6
white the tens	- water to the same of the sam
STUP	false me end play
30023	25
about the note	CALLS CONTRACTOR
# Note: To avoid use of lugical operators as	nested if the can us
lugical operators ds	necessary
	- Joseph - J

```
(iv) else-if ladder:
  It is multipath decision making statement
                                   *) Flowchart:
 *) Syntax:
 if (condition 1)
                                  andition stulement 1;
 & statement L; 3
 else if (condition 2)
   f statement 2; 3
                                         statement 2;
  else if (condition 3)
  of statement 3; 3
                                    Condition Statement 3;
  of else block statements; 3
                                   6. bl-ck - statement;
  after block statements;
                                   agrer block stat
 - This checks conditions from top to bottom.
 - We can use nested if to avoiding use of else-if
  ladder.
Eq: i: # include (stdio. h)
                                      printf ("Grade c");
     void main ()
                                      printf ("avade D");
     of fluat marks;
      printf ("Enter marks (n");
      scanf ("1. 8f", {mails);
     If (marles 780)
     printf ("Grade A");
  dseif (marks 770)
         printf ("Grade 13");
```

(*) Output:
Enter marks Contex marks
89.68
A
@ Flowchart:
CTO NT
START
Distrity enter marks /
READ marks
A constant and the second seco
marks > 80 DISPLAY OFFICE A
marks > 80 DISPLAY grade A
F
Ts .
marks 770 T DBPLAY Grade B
F
15 T
marks 760 DEPLAY Grade C
F
DISPLAY grade D
STOP
L UICOZIICII

```
(i): #include (staio. h)
   void main ()
          Per printf ("Enter any character in any form) in);
           scanf ("1.c", 4c);

if (c>= 'A' 41 c<= 'Z')

{printf("Capital letters In") $\frac{2}{3}; \frac{2}{3}
          else if (c)='a' 44 c<='z')

a printf ("Lowercase letters (n^*); 3

else if (c)='0' 44 c<='g')

a printf ("Numbers (n^*); 3

else
            Spantf (" special symbols "(n") }
@ Output:
                                            Enter any character.

*

special symbols.
Enter any character
B
Capital letters
```



	@ Flowchart:	
	CTNDT	_
	START	
	013PLAY enter character	
	READ C	
	E F AN COMMENT OF THE PARTY OF	
	15	
	CZ='A'11 TOBPLAY capital	
	?	
	F.	
	C)= 'A' T	
	4+cc='z' DISPLAY omall	
	7	
	F	
	13	
	DISPLAY NUMBERS	
	CC=13.	
	F	
	nssplay special symbols	
	CTOO	
,	STOP	
-		
-		
	L UIS PICHI	

(V) switch - It is multi-way destr desicion toking statement faster than if-else ladder. (*) Flowchart: & Syntax! switch (expression) expression 4 Code 1 case value a: block statement a; break; Code 2 care value b: bluck fatement b; break; default defaultande default statement; Statement 21, statement x; Here, case value takes only character or integes value break! takes you out of the switch. Not writing break means all statements will be executed. -) default can be written anywhere and it is not complusory. - default is executed at last. - we can't sheek with relational and lugical specutors.

```
G: #include (stdio.h)
     void main ()
     char c;
                                        - we an use (string-h)
     printf ("Enter a characterin");
                                        header file to convert
     sant ("/-c", 4c);
                                       to upper lower care and
     switch (c)
                                        check.
                                        + more suitable.
      case value (a):
           printf ("Vowel");
            break;
       case (e):
       Case (i):
       care 101:
       care lu':
                   printf ("Vower")
                   break;
      default
         printf("Not a vawel");
@ Output
Enter a character:
                                    Enter character
                                    a
 Not a nowel
                                     Vowel.
```

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