Time: Date: / /

He why and when do we use the # define dinective?

In the C programming language, the # define directive allows the definition of macros within but source code. These macro definitions allow constant values to be declared for using in our code.

Macro definitions are not variables and cannot be hanged by our priogram code like variables. We generally use this systax when creating constants that represents numbers, strings on expressions. The systax of using #define in the c language is:

#define CNAME value.

#define CNAME (expitession)

Herre, ICNAME contains the name of the constant.

Most c programmers define their constants

names in uppercase value constains the value of
the constant. Here, expression means whoose
value is assigned to the constant. The expression
must be enclosed in parentheses if it contains
operators.

Example: #define AGIF 10 Inling

Hdefine AGIE (20/2)

in this priogram, we are using the Hinduds

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ine	ditective 2 paugrant pripromunipony 2 ant out
-ridtin	-> In the c programming language, the #include
woll	directive tells the prephocesson to insert the
اسرد	contents of the another file mto the soccrece
of be	code. Include directive are typically used to
15. We	include the Cheader files for c functions
410.014	that parce held outside of the current source
560155	that repriesents numberry, strangs are exit
: 513	the syntax for the Hinclude directive in the
	c language is:
1	tinclude l'Eheader die
	Here headentile contains the name of the
ant.	header file that we wish to include. A header
a	file is a C file that typically ends in his most
	The state of the s
	120 f 771 72 7311 11 1 1 X Y)
	Part of the property of the pr
Sur	must be energy; id to = must this openatous.
	printfolly the rescult is 1/d" suming
	reteurned into Action of the Conjugation
	11 010 1010 1010 1010 11
	In this program, we are using the #include
None and	in

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is required to use the printfistandard c library Junction in our coldensmin

He What does void main (void) mean?

Herre, the void main() indicates that main()

Junction will not freture any value The void in

parcenthesis (void) means that the main function

when our programis simple and it is not aging to terminate deforce ineaching the last line of the code on the code is enrion that we can use

the void main ()

the what do we need to use comments in Programs?

In computer programming language, a comment is a programmer readable explanation in the source code of a computer program. They are added with the purpose of making the source code

easier for humans to understand. And generally

ingnorred by the compilers and the interspreters.

A comments starts weith a slash asterisk (/\*) and it ean

be anywhere in out program. comments can

span several lines within our c program.

The syntax of a commenting

1\* comment goes here \*/

Sub: directive to melude the st dint on with and is required to use nithing a retaindance to bonard comment of rup of nothing comments are also be in single unesh both to Example Mthis is a single line comment roit singli line comments are started with double slash.] of program. ort morce sections shown in figure son Permanentation Section guage, a comment att is a programming thinglude) or program is a program is a programming the section is the pefinition section of making the sometimento added with the Easien for moitas moitail declaration section 10 maison . 219 to main() function section pomoubui A commonts stantsquoith a start asterisk (14) and it en (t/) and it can its of moitings xann comments can be anywhere span serenal unes as on c progream. supprogram section xptry2 out \* comment goes here \*/

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is the part of the priog	ram where the programm ted with the program.		

Link section: This part of the priogram code is used to declare all the headern files that will be used in the priogram.

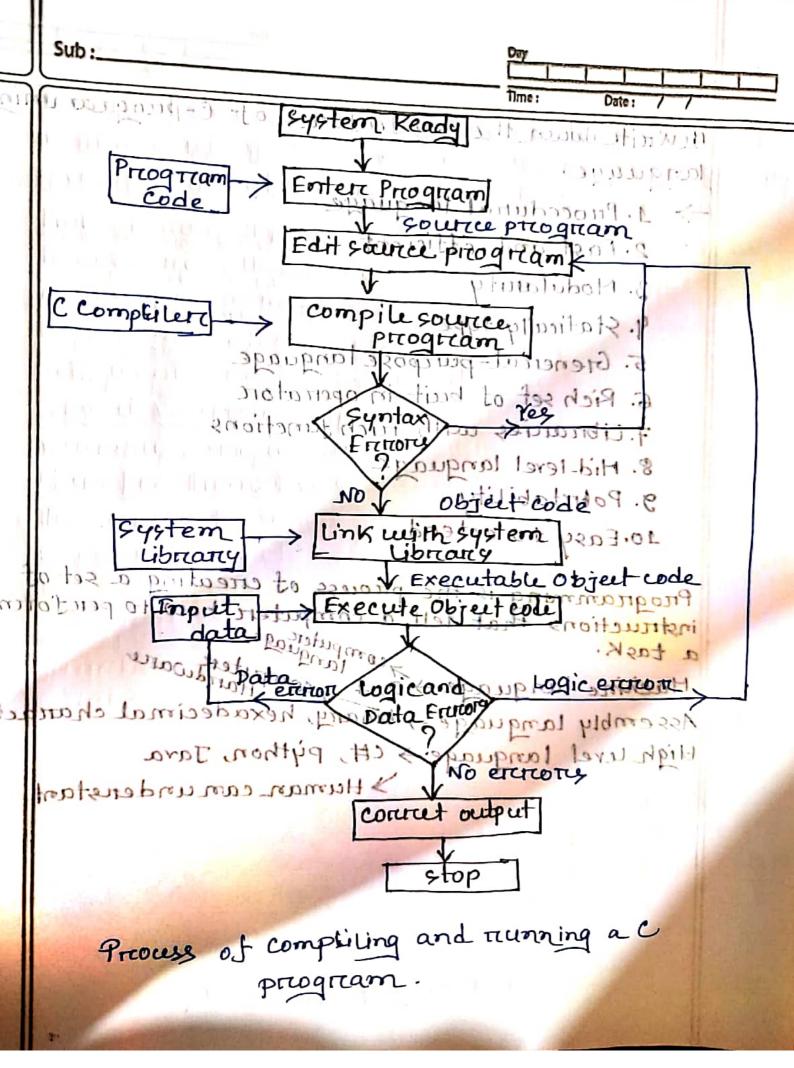
Definition section! In this section, we define different constants like #define PI 3.1416

Global Variable selection: In this part, the global variables are declared. Like int a =7;

Maintunction: Every C progream needs to have the main function. Each main function contains 2 parts. A declaration part and an execution part.

subpringram section: All the user defined function are defined in this section of the program.

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The Hood many steps wereled	och Ladican Consol
Executing a ciprogramia	It to hond agh si
> Executing a program were	itten in c involves
a service rof steps. These are	Link Section: This
11 Creating the program	to declare all th
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3. Linking the proogramuer	thattune tions in 13
14. Executing the proof train.	different consta
elections in this part, the q	Global Varciable S
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The Write down the key teatures	af (	2 - PIT	опта	mmina	3
language.		1	7.5		3
> 1. Procedural language	Kin-In	mr.	. Fr		
	,	36	(1)		
2. Fast and edicient his	-			4	3
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5. Grenerial-puripose langue	000				
6. Rich set of built-in operation	ALC AC			V	
7. Libraries with tuch func	tions				
8. Hid-level language	1 1 1				
9. Potretability					,
10. Easy to lextendin Mill	1 60	7-17			
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rugiranz.	q				
ACT .				(1	

Sub: 41 Write down the Character Test Functions > some character test functions are following in table: Function and Is can alphanumeric character? isalnum (c) isalpha (c) i otori Is can alphabetic characters? Tric a digit ? I in trung brieft isdigit (c) 2209 21 13°C Lower Case letter 20121 islower(c) Is c a printable character? isprcint (c) ispunct(c) ong > Is ca punctuation mark? Is c'à white space character? Is c'a appercase letter ? HW Hatris Formatted Input ? Explain bon > In c priogramming, scanfe) is one of the commonly essed function to take input, from the user. The scant () function regards formatted input such as forematted input function scant (), is used to take various inputs from the user to This type of Junction can help to display the output to the user in different formats using the format specifieres. Formatted input function support all data types like int, float, char, double and armany morre.

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		nme :	Date: /	
	For example 1 test matamaxa not	arran th	Write du	1P
1 5	rienallat 15:45 2001230 John 300+			of a
	Herre, this line contains three	e pier	ces of	data,
	arranged in a particular for	orem.	The fist	firest \$
62	part of the data should be	read	into a	-
	Variable of loat of the second i	nto iz	it) and	the
	third part into chart This is	poss	ible in	4
	using the scant function sc	ant n	neans	ાં ં
	Je Can formated.		preint (c)	2
	Scant Contractionis used in	Prog	tion of	ort
6	meading on taking any valu	e fre	om the	21
·	keyboared by the user This	June	tion is	declared
	in stdio. h (neader file), that's	why	it is a	150
mm	predefined function. In scan	AN OH	unction	n, we
0	use address of operatorics	) webi	ch is a	sed
2	to storce the variable value location of phat value	onit	ne me	morcy
	location of that voicable.	The go	emetral	500
Ne_	offormat of scanf () is	,	Sparoog.	Ney
420	searth Friematiconiden! . A.	input	matted	not Cum
	on the output to the user in	lasit	and touch	China Count
.5)	Secont ( Control & treing " & ourga	y an	92,120	Garign) i
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. 95	chare, double and asmany mos	tooll	maries	101
			. (.,., 3	AD

example: 10 1 July 11 24 2 may 1 1 20 mg "Hindude Lettionly 1900 on the to see in main () ( barre a gailines alices within all typora it was in barre to to the to pay of emotoring of testar paints flood bi prants ("Enter integer and then a float: "); scanf ("1.d. 1.1", Bo, Bb); Illaking multiple inputs prints ("You enterced !d and 15", a b); ercetureno put determ tour han essage recieving the input in the come muched. is the reading will be defendantly studies Emteruintegery and then a dloat: 300 tonse You enterced 3 and 3.400000 point where 5. When seasiching for a value, seamed in tine boundaries and simply looks for the next appropriate characters. 6. When the field width specifiest Wis used, it should be lange enough to contain the input data size.

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300 1	Time: Date: / /

ALSome Points to remember while using scanf ()

> Some of the general points to keep in mind while writing a scanf () statement:

1. All function arguments, except the control string must be pointers to variables.

2. Formatispacifiers contained in the control string, should match the arguments in order.

Input data items must be separated by spaces and must match the varuables reciering the input in the same order. 4 The reading will be terminated, when scanf encounters a mismatch of data of a character that is not valid for the value being read.

5. When searching for a value, scant ignories time boundaries and simply looks for the next appropriate characters.

6. When the field width specifier wis used, it should be large enough to contain the input data size.

Sub:

II Rules Paro scanf () quin bottomint di Induit > Each variable to be read must have a foremat > Force each Fortimal specifiers, there must be a variable address of proper type. - Any mon-whitespace characters used in the foremat straing in ust have matching in the 4 He boromat 'specificate: Thatagrainst site The sant reads until ight who the storages - A white space character lis dound in a + manpoumericispecification well () tring The maximum numbers of characteris character, strang et bager regad organiste, retionals An ermora is detected on - The end of the is reached burnlook The syntax of prints () sunction is print ("format specifier", vant, vance, Example in ain () 1 int a = 20; float 5 = 30.05; print ("1.d.15", a, b) ill display one

output: 20 30.0500000

419	Day		1		
Sub :	Time :	Date :	1	/	

As what is formatted output? rexplain and It The c language comes with standared as Junction print () so that a priog rammer can perform formatted output in a program. This type of function can help to display the output to the user in different toronat using the format specifiers. This function supports all data types like int, float, chan double and many Amore stilles A printf() tunction is used in a c program to display any value like Hoat, integers characters, string etc on the scruen. It is a prudefined function that is already declared in the stato h (header file). the syntax of prints () function is: printf ("format Specifier", varil, vari2, ..., Varin); Example: main () 1 int a = 20; float b = 30.05; printf ("1.d.1.f", a, b); Il display multiple return 0; output: 20 30.0500000

	Day	Day		
Sub:				
	Time:	Date: / /		

the control strong consists at following three types -> Lordality affection is wengens to took 1. characters that will be printed on the server as they appear. Phinis sit is the and 2 Formal specifications that define the output format tore display of each item. 3. Escape sequence characteres such as milt and print never supplies a newline automatically. an newline of space can be introduced by the help of a newline chattacter in in rangely names in the printed and 3. Preint special mess confes "Datafrance special condition oce ("my mine) the inapport. 4. Introduce blank lines between the importiont sections of the output. Example: prints ("a=+d|t b=-1.d", a, b); printf ("a=1.41m b=1.4", a,b);

preintf ("code It Name It Age In"); praints ("Enter your name In");

20 The Enhancing the readability af output, -> Readability at output is very important. The correctness depends on the solution

procedure, the clarity depends on the way

the output is priesented tollowing are

some of steps that we can take to impriore

the clarity and hence the treadability and

understandability of outputs:

to motup anilower of soldque setween two

1. Provide enough blank space between two

the help of a mewhat chanachershapping

2. Introduce appropriate headings and variables names in the output.

3. Print special messeages "whenever a special condition occurs in the noutput.

4. Introduce blank lines between the

important sections of the output.

Example: prints ("a=1.d | t b=1.d", a, b); printf ("a=1.dln b=1.d", a, b); printf ("code It Name It Age In"); prints (" Enter your name In");

Sub:\_\_\_\_\_

The getchand takes tollowing form:

variable name = getchar();

variable—name is a xil valid C name that has been declared as chart type. When this state—ment is encountered, the computer waits until a key is priessed and then assign the character as a value to getchard). For example,

mame = getcharce)

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to output multicharactient straings 9 hours
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character thom the standard input unit (usu
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ment is encountered, the computer was started that the computer was
until a key is priessed, the computer win this sharacter as a value to get character as a sign.
character as a value to get charct).
chart names:
mame = getcharce)
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