Asked	ter to class data member """  3 years, 1 morth ago Modified 6 morths ago Viewed 1898 times  I came across this strange code snippet which compiles fine:		
R 149	class Car ( publics   publics   publics   publics   publics   public   publ		
	)  Why does C++ have this pointer to a non-static data member of a class? What is the use      C++   data   painters   C++-   data		
	Share Edit Follow Flag  A Heav's where I found it, confused me too, but makes sense none <u>confused me confused from the found in the fo</u>		asked Mar 22, 2009 at 9:03 Ashwin Nanjappa 72.3k • 76 + 202 • 288 E Jul 12, 2012 at 6:03
18 Ar			by: Highest score (default)
226	It's a "pointer to member" - the following code illustrates its use:  **include classrams stage ammages att; class Cm philis; int speet(; ); );		
49	);  (and Cartiforms + Kintingness)  Cart (1)		
	cost of "Named is " or CL-speed or endi;  This may be a considered or the cost of the cost		
	once again producing an example in a small space defeats me. The following is my best (ut ghost processing bloom applying a user-selected member function to an object  wold Apply Somclass * c., wold (Somclass:"*dex()) (  // do brity pre-stall processing (c-*free()) / crall same application  for the stall of the stal	ntested) try - an Apply function	that would do some pre
	) The parentheses around sometimes are necessary because the operator has lower precisions for follow flag.	edence than the function call og edited Jul 31, 2015 at 2057 Oktalist 13.7k • 3 • 43 • 60	annered Mar 22, 2009 at 9:13
	]		a templated callback that stores a
	A   There is a presty cool example of pointer-to- <b>data</b> member usage in a template function in this cool	ode – alveko Jun 6, 2013 at 22:43 🖈	
105	This is the simplest example I can think of that conveys the rare cases where this feature is **Exclude class traces class band ( public company) bit company; bit company; bit company;	pertinent	
	<pre>int court_fruit(bend * begin, bed * end, int bedi:"fruit) {     int court * 0;     for (bend * threator * begin; iterator !* end; ** iterator)     return most; } </pre>		
	the main's bodd(2) = (		
	or registry?; ristion 6; } The thing to note here is the pointer passed in to count, fruit. This saves you having to write Share Edit Follow Flag	e separate count_apples and co	nunt_oranges functions.
	Shouldn't it be (Books applies) and (Books arranges ) (Books applies) and (Books arranges )     Who are a supplier and (Books arranges ) (Books arranges and (Books arranges))     Should supplier and (Books arranges) (Books arranges) of an object the point to something in the combination is allowed with the 10% operator1	mbers of a class. They need to be cor ohn McFarlane Mar 30, 2014 at 20.5	mbined with a pointer to an actual
	A Table Spor very much for this very fluctuative example filterathesis. Tribit is all don't fully und file. If the parameter man of this expression of this law port 1, 2012 or 1, 2014 or		
67	Another application are introduce lists. The element type can still the list what its next/prev journal still use existing pointers:  // way this is to some existing structure. And we want to use // a list. to see noticil it that the next pointer struct equal to the still structure of the still st	pointers are. So the list does no	t use hard-coded names but
	int dat; apple * max; };  **staple exact;  **staple exact;  **staple example of a minimal introduce list. Onlid specify the  // manhor pointer as template argument two, if we wanted:  // memplete-pointer as template argument two, if we wanted:  // memplete-pointer as 'template argument two  struct lists ( %: "template")		
	<pre>void min(T No) (</pre>		
	ne mand) (istopple lat(dample:nest); spyle s; ) )		
	Share lidst follow Flag  A fifthis is tody a finked list wouldn't you want something like thic void addiff of (+>"next_per -   5 A @eeel recommend you to read about reference parameters. What I did is basically equivalent to		ammerred Mar 22, 2009 at 0.19 Johannes Schaub - Bitb Johannes Schaub - Bitb 481k • 123 • 868 • 1188  5, 2011 at 16:56 / Bitb Aug 25, 2011 at 18:55 /
48	Here's a real-world example I am working on right now, from signal processing / control of Suppose you have some structure that represents the data you are collecting: struct Simple ( time, 1 time; ); dealer wakes; dealer wakes;	stems:	
	deable walve(; );  Now suppose that you stuff them into a vector:  stir reveter-damples samples; fall the vector		
	Now suppose that you want to calculate some function (say the mean) of one of the variab calculation into a function. The pointer-to-member makes it easy: dmbiz Nam(risti:vector-Campileo::comst_threator legin, stirrouter-campileo::comst_threator end, dmbiz Sepileor.	oles over a range of samples, an	d you want to factor this mean
	(find, mars 4); int maples 4; for(r legis) + mil; legis+) { cont samples 4 = "regis; man + n **mr; man / n * sample; military * samp		
	while man * Rear(septies.hapin(), septies.md(), Etempte::vealur2);  Note Edited 2016/08/05 for a more concise template-function approach  And, of course, you can template it to compute a mean for any forward-ferestor and any va	live type that supports addition	with itself and division by
	size_t touplate/pposes liter, 'pposess to  Securifites begin, constituted sed, 5 std::itsendor_traitsclitero::wake_type:' war) {		
	S and "I spiller 6 is, "I spiller 6 is spiller 7 is sp		
	Indirector-deplies regular (\$1.28), (\$2.8), (\$2.8)	implications. The summary is th	nat if you're calculating a
	summary statistic on a time series, or calculating an FFF etc, then you should store the value consider the performance of this code: struct tength of the series of this code: struct tength (fast x, x, y, xz); first x, x, y, xz);	es for each variable contiguous	dy in memory. Otherwise,
	<pre>stf:rowtroctamples series *; finat non * 0; int unpulse *0; for(dust it = verien.hepis(); it != serien.end(); it=&gt;) {</pre>		
	"flast many architecture, one instance of Sample will fill a cache line. So on each iteration of cache. 4 bytes from the cache line will be used and the rest thrown away, and the next itera on.  Much better to do this:	the loop, one sample will be pu ation will result in another cache	ulled from memory into the e miss, memory access and so
	struct Samples {     stirvectoreflasts w, x, y, z; };  Samples series *;  flast saw * 0;  flast says * 2;  flast says * 3;		
	float on %;  free samples %;  free(ask it a vertice, begin(); it is vertice, a.mel(); it is )  samples vertice, begin();  part for a vertice, begin();  part for vertice,	the cache (supposing suitable a	lignment), meaning you don't
	The above algorithm can be improved somewhat further through the use of SIMD instructs better if the values are all contiguous in memory and you can use a single instruction to lo YMAN - design your data structures to suit your algorithm.  Stare Edit Follow Flag	ions on eg SSE2 architectures. H ad four samples together (more edited Aug 5, 2016 at 13-4)	in later SSE versions).
	This is excellent. The about to implement something very similar, and now I don't have to figure of the This is the best arrown. The Ideals Septies of This is the best arrown. The Ideals Septies of This is called generally Acts or SCAL and about the Septies of This is called generally Acts or SCAL and about the Septies of This is called generally Acts or SCAL and about the Septies of This is called generally Acts or SCAL and about the Septies of This is called generally Acts or SCAL and SCAL a		6,007 • 1 • 34 • 57 w Stiurca Mar 25, 2013 at 2.47
42	You can later access this member, on any instance:	no y	
•	int Cartifoped + MCartispeed; Car system; Car you'car; Cartispeed + you'car; Figured; Cartispeed + you'car; Figured; Cartispeed + you'car; Cartispeed; Car		
	return 6;  Note that you do need an instance to call it on, so it does not work like a delegate.  It is used rarely, I've needed it maybe once or telce in all my years.  Normally using an interface (i.e. a pure base class in (++) is the better design choice.		
	Share Edit Follow Flag		amounted Mar 22, 2009 at 9:10 peterchen 39.7k • 19 • 101 • 181
	13. Of the exception of	ably exceeds the confines of the con and not a pointer to a specific value	nment functionality. – peterchen
27	IBM has some more documentation on how to use this. Briefly, you're using the pointer as from the class they refer to, so:    International Constitution of Exercisements   International Constitution   International Cons	an offset into the class. You can	n't use these pointers apart
0	wyer. Fighes 4 65; It seems a lifted obscure, but one possible application is if you're trying to write code for de your code needs to handle object types that it knows absolutely nothing about (for examp describite were created by a user of your library). The member pointers give you a general offliets, without having to resort to typelies void * tricks the way you might for C structs.	eserializing generic data into ma le, your code is in a library, and , semi-legible way of referring t	any different object types, and the objects into which you to the individual data member
	Share Edit Follow Flag  A Could you share a code originet example where this construct is useful? Thinks Advance hangs  2. A Fin currently dring allot of this due to dring some DCDM work and using managed resource cla	ses which involves doing a bit of wo	Athelps Athelps 1,762 = 11 • 16
21	members for internal representation to send off to core, plus templating-makes, a bot of booker pla  It makes it possible to brind member variables and functions in the uniform manner. The for would be brinding <u>settingsterritient</u> and <u>immessed</u> when using in STL algorithms and Booot stockade clists	llowing is example with your Ca	
9	recision (district studies) and the studies of special control of studies of special control of studies of special control of s		
	void drive() {     std:round <= Torising at " <= upwed <= " bajh" <= utd::mmdl; }; int types(); left male() {     suing memograce std;     suing memograce boots::lambda; }		
	Histogra 2; Lynch (acc (201)); Lynch (back(car(20)); Lynch (back(car(20))); Lynch (back(car(20))); Lynch (back(car(20))); Lynch (back(car(20))); Lynch (back(car(20))); Togething care		
	// Binding a value to a number variable. // Binding as value to a number variable. // Binding and variable variable. // Binding variabl		
	Preturn & Stare Edit Follow Flag	edinel Mar 22, 2009 at 13:08	ancovered Mar 22, 2009 at 13:02 Alax B 75k +40 +196 +275
11	You can use an array of pointer to (homogeneous) member data to enable a dual, named- stackular consistent stackular consistent consistent consistent consistent consistent consistent consistent consistent consistent con	member (i.e. x.data) and array-s	ubscript (i.e. x[idx]) interface.
	<pre>flast y: flast x; flast in</pre>		
	<pre>let min() {</pre>		
	v(1) = 1.8f;  asser(c, x = 1.8f); asser(c, y = 2.8f); asser(c, x = 3.8f); return 0; }		
	Share Edit Follow Flag  A The more often seen this implemented using an annoymous union including an array field 4(2) of  The work of the root-contiguous fields — Designs Retrieves Apr 21, 2015 at 428	edited Mar 23, 2009 at 17:33 noe that avoids an indirection, but cl-	answered Mar 23, 2009 at 424  Functastic  606 = 3 = 12  ever nonetheless, and potentially
_	Am Opposytellations but using a usean to type-gun in that fashion is not allowed by the standar greatment of the conference of the 7, 2014 or 1.  That's a next example but operated; can be rewritten without pointer-to-component. [East: 16] pointer-to-component seems to serve no purpose except deflacation. —100, 3 May 21, 2010 at 1.  One way Vive used it is if I have two implementations of how to do comething in a class an	omponent[] = { &x, &y, &z }; ret	turn *component[idx]; Le, the
2	continually go though an # statement is.  class Algoriths (		
	// No.off of (using a) class of (using a) type of thing		
	):  Obviously this is only practically useful if you feel the code is being hammered enough that of some intensive algorithm somewhere. I still think it's more degant than the if statement my opinion.  Share list Follow Flag.	t the if statement is slowing thin even in situations where it has edied Mar 23, 2000 at 1840	no practical use but that's just
	separated and are ensured to be tested independently. – shydha Apr 10, 2019 at 1331	AlgorithmA and AlgorithmS in su	
2 0	Pointer to classes are not may pointer, a class is a logical construct and has no physical or annebro of a class it pairs on offers into an object of the member's class where the nems static members are not associated with any object so a pointer to a member CANNGT point following:  Lists = (  public to a class = (  pub	ber can be found; This gives an	important conclusion: Since
	int graval( { cminr wit; } int g.wl(cm 1) (rminr wit; ) }; };  int g.wl(cm 1) (rminr wit; ) };  int (cur' data) * &irrwl int (cur' fara) * &irrwl		
	<pre>mail(), mb(); cost cost."ets; cost cost."ets; cost cost."ets; cost cost."ets; cost cost."ets; cost cost."ets; cost cost."ets);</pre>		
	return 6;  Source: The Complete Reference C++ - Herbert Schildt 4th Edition  Stare Edit Follow Flag	edited Apr 10, 2019 at 15:11 Shycha 412 94 9 13	annovered Jun 27, 2018 at 18.05
1	with pointer to member, we can write generic code like this terpulsars proposes 1, typenese to sectors along! T \$11.79_mms_member; };		
0	Astronact beta(		
	alphacies, beta a(Beta:rfm); b.(e,s_see_seeher) = 4; return 6; } Share Edit Follow Flag		answered 3ul 22, 2021 at 10:25
1	Hove the ** and it operators:		Spyros Tsimboulis
•	( int # (0); int pr (ML1); int try ( value x ; int *Major() ( value x pt; ) }; int main(value)  int main(value)		
	X x y Leg 4 MCxxy // pointer-to-endor "lest Elle", Type of p1 * "lest Ell" x x y x x x y x y x y x y x x y x x y x x y x		
	int (Little)() * $E(R_1^2)$ / painter-to-mediar-function "Little", from of p3 * "Lot & (Little)() * $E(R_1^2)$ (or $P_2^2$ )() * $P_2^2$		
	) Indeed all is true as long as the members are public, or static Share Edit Follow Flag		answered Nov 1, 2021 at 14:38 mada 562 = 9
0	Pointer to members are C++1 type safe equivalent for Cs inframe(), which is defined in located within a littus or seven. While afficiently may be used with cartain simple encouraged with virtual base classes. So pointer to members were added to the standard the strang C ( set set, set by 3 cs; set cs; stanger = 60.00; set cs; set cs; stanger = 60.00; set cs; stanger =	gh classes also in C++, it fails m	niserably for the general case,
0	c-faight == 1;  is much easier than:  struct C ( lot x; lot b; ) c;  lot but first = effect(struct C, s);  (cm) 1((cm) - (lotd ) but) = lottified) == 1;  (fact) 1((cm) - (lotd ) but) = lottified) == 1;		
	* (set *) (clear *) (outs *) (a) - steeffeet) = 1;  As to why one wants to use "effected()" (or pointer to members), there are good answers of the Cofficient macro work?  Share East Rollow Riag	isewhere on stackoverflow. One	example is here: <u>How does</u> answered feb 20, 2021 at 15:45  **EXT Petitive 1,427 + 15 + 24
0	Here is an example where pointer to data members could be useful:  #Eschale clostresse  #Eschale clostresse		
0	Implies opposed Container, promose 7, process Badders, proposed Container, produce 2, process Badders, proposed Container, produce 2, process Container, conest 16 L Banders prof ( for (const typeoma Container: volum, typeoma 2, containers) { for (const typeoma Container: volum, typeoma 2, for fortion x; } return typeoma Container: volum, typeo(); }  **Theory Typeoma Container: volum, typeo(); }		
	struct Object {     int ID, value;     int ID, value;     Object (lot 1, int v, const std::stringk n) : ID(1), value(v), name(v) () };  Section (lot 1, int v, const std::stringk n) : ID(1), value(v), name(v) () \$\left( \lambda \la		
	See Object_al, 'me j, see Object_al, 'me j;  in sate[ {     cont dept < servingle-showler (depts, 12, Elljectroslaw);     stirrant or object - servingle-showler (depts, 12, Elljectroslaw); }  Stars (Eft Folios Fing		answered Nov 18, 2015 at 18-48  postclokeys 4,719 - 10 + 10 - 20
0	A realworld example of a pointer-to-member could be a more namew aliasing constructor testing for regioners. To testing the regioners to testing the regioners to testing the regioners to the region of the region	for std:shared_ptr:	pristokleys -4,719 +3 +16 +30
•	What that constructor would be good for assume you have a struct foo:  struct foo {     include:		
	int tool; first fail; ); If you have given a shared get to a foo, you could then retrieve shared, get's to its members and fail, shared a setting shared fail, shared fail, shared a setting shared fail, shared a setting shared as setting shared a setting shared as setting share	s ival or fival using that construc	tor:
	ands Issa, James 4 sets intend of receptor (my lawes, literature);  This would be useful if want to pass the pointer foo, phared-visal to some function which e <u>https://mn.ppreference.com/ws/pplmemony/phared.gtm/phared.gtm</u> State Edit Follow Flag	edited Sep 20, 2000 at 17:09	answered Sep 20, 2020 at 15:56  B 156 + 2 + 4
	The but justs load shared in salt shared principes (the shared, bline shared load); four the salt shared pointers to member 5x the saltest base OP oil plane, that he would have the salt shared by the sal		
0 0	struct fine ( settingstrang as stdingstrang by );  Clay, now let's say you have a bunch of firms in a container:	Marie	
	// key; some sort of once, value; a fins instance statisseportisativity, two centalizer; Clay, now suppose you load the data from separate sources, but the data is presented in 1 You could do something like this:	the same fashion (eg. you need	the same parsing method).
	void resolutionalization (definitions & impal, with impositioning, from & container, with interpolar functionings) ( with interpolar functionings) ( // male interpolar functioning) ( // male interpolar functioning) // male interpolar functioning) // male interpolar functioning // male interpolar function //		
	// retrieve nome and value   limit to lamin to while   // data value into correct storage, whichever one is correct   containe [name]. *storage or while		
	sationsporture transcription from resultancy ( static reporturalization, team from; static from a "(super a"); static from a "(super a"); static from a ("(super a")); static from a ("(super a")); static from a ("(super a")); static from a ("super a"); static from a ("super a"); static from a (super a super a		
	At this point, calling resembles(j) will return a container with a unison of "input a" and "in to be both. Share (dif Follow Flag	put-b", all keys will be present, a	and foos with have either a or answered Apr 12, 2016 at 15:08 instanglet 4,002 • 1 • 24 • 52
-1 -0	Not to add some use cases for @anon's & @Oktalist's answer, here's a great reading mate member-data.  https://www.dos.usedelsib.eshi/-schmidt-85655strefts.od/  Date: Edit Folios Flag	aniford May 12 2020 at 2015	function and pointer-to-
40 _	Dave Edit Follow Flag  - No Edit had been deted. That's why fink only presents are not expected here. At least cummarize if	Kuba hasn't forgotten Monica 92.4k •13 +137 •288	Dragonly 35 • 7
	I think you'd only want to do this if the member data was pretty large (e.g., an object of an which only works on references to objects of that class. You don't want to copy the member of the class of	utner pretty hefty class), and yo er object, so this lets you pass it	su have some external routine around.  annuared Mar 22, 2009 at 10-47  Andrew Jaffe 25.46. 46 = 47 = 58