

## 45 - The Arrow Operator in C++

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```
632
633 class Entity45
634 {
635     public:
636         int x;
637     public:
638         void Print() const {std::cout << "Hello!" << std::endl;}
639 };
640
641 class Scoedtr45
642 {
643     private:
644         Entity45* m_Obj;
645     public:
646         Scoedtr45(Entity45* entity) : m_Obj(entity)
647         {
648
649         }
650
651         // automated the deletion of that pointer object with this wrapper?
652         ~Scoedtr45()
653         {
654             delete m_Obj;
655         }
656
657         Entity45* operator->()
658         {
659             return m_Obj;
660         }
661 };
662
663 struct Vector45
664 {
665     float x, y, z;
666 };
667
668
669 int main()
670 {
671
672     std::cout << "" << std::endl;
673
674     // Getting the offset of that x
675     // // used when serializing data
676     // int offsetx = (int)&((Vector45*)nullptr)->x;
677     // int offsety = (int)&((Vector45*)nullptr)->y;
678     // int offsetz = (int)&((Vector45*)nullptr)->z;
679
680     // std::cout << offsetx << std::endl;
681     // std::cout << offsety << std::endl;
682     // std::cout << offsetz << std::endl;
683
684     Entity45 e45;
685     e45.Print(); // Works fine
686
687     // But if it was a pointer
688     Entity45* e45_2 = &e45;
689     // e45.Print(); // Can't use the point, we need to derreference that pointer
690     Entity45& entity45 = *e45_2;
691     entity45.Print(); // works fine after the derreference
692     // But we could also do is:
693     (*e45_2).Print(); // Direclty derreference it, it's ok and works fine but looks ugly
694     e45_2->Print(); // This do the same thing, derreferencing the pointer and calling the function ( shortcut instead of manually derraferencing it)
695
696     // We have a class that will delete the obkect when it goes out of scope
697     Scoedtr45 se45 = new Entity45();
698     se45->Print(); // Error, in this case we need to implement the arrow overload ->
699
700
701
702     std::cout << "" << std::endl;
703 }
```