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| **Ex09-01.cpp:** *Content, Address, Pointer and Synonym* |
| **Line#** | **Code** |
| 12345678910111213141516 | #include <iostream>using namespace std;int main() { int n = 100; int\* p = &n; cout << "n is " << n << endl; \*p = 999; cout << "n is " << n << endl; int& m = n; //Synonym cout << "&n:" << &n << endl; cout << "&m:" << &m << endl; m = 888; cout << "n is " << n << endl; return 0;} |

The Following is **Anonymous Function** version:

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| Ex09-09b.cpp |
| Line# | Code |
| **1****2****3****4****5****6****7****8****9****10****11****12****13****14****15****16****17****18****19****20****21****22****23****24****25****26****27****28****29****30****31****32****33****34****35****36****37****38****39****40****41****42****43****44****45****46****47****48****49****50****51****52****53****54****55****56****57****58****59****60****61****62****63****64****65****66****67****68****69****70****71****72****73** | #include <iostream>#include <string.h>**using namespace** std;#define NOI(\_arr) (sizeof(\_arr)/sizeof(\_arr[0]))#define showStudentRecords(\_students) \_showStudentRecords(\_students,NOI(\_students))#define sortStudents(\_students,\_criteria) \_sortStudents(\_students,NOI(\_students),\_criteria)**struct** STUDENT { **const char**\* name; **unsigned char** age; **float** cgpa;};**typedef** **bool** (\*COMPARER)(STUDENT lhs, STUDENT rhs);**void** \_showStudentRecords(STUDENT\* ps, **unsigned** n) { **while** (n--) { cout << "Age:" << (**int**)ps->age << '\t' << "CGPA:" << ps->cgpa << '\t' << "Name:" << ps->name << endl; ps++; } cout << endl;}**static void** \_sortStudents(STUDENT\* ps, **int** noi, COMPARER cmp) { **for** (**int** x = 0; x < (noi - 1); x++) { **for** (**int** y = 0; y < (noi - x - 1); y++) { **if** (cmp(ps[y], ps[y + 1])) { STUDENT s = ps[y]; ps[y] = ps[y + 1]; ps[y + 1] = s; } } }}/\*static bool ByCGPA(STUDENT lhs, STUDENT rhs) { return lhs.cgpa > rhs.cgpa;}static bool ByAgeDesc(STUDENT lhs, STUDENT rhs) { return lhs.age < rhs.age;}static bool ByName(STUDENT lhs, STUDENT rhs) { return strcmp(lhs.name, rhs.name) > 0;}\*/**int** main() { STUDENT class2020[] = { {"Fatimah", 19, 3.45F}, {"Zahran", 18, 3.25F}, {"Abu", 20, 3.65F}, {"Zawawi", 20, 3.75F}, {"Nizam", 19, 3.85F}, }; showStudentRecords(class2020); sortStudents(class2020, [](STUDENT lhs, STUDENT rhs) { **return** lhs.cgpa > rhs.cgpa; }); showStudentRecords(class2020); sortStudents(class2020, [](STUDENT lhs, STUDENT rhs) {**return** lhs.age < rhs.age;}); showStudentRecords(class2020); sortStudents(class2020, [](STUDENT lhs, STUDENT rhs) { **return** strcmp(lhs.name, rhs.name) > 0;}); showStudentRecords(class2020); **return** 0;} |