The second video of chapter 11 is about passing a structure to a function. It shows the two ways to pass a structure to a function: by value and by reference. The first way the function receives the value of the structure and it is received in a structure variable declared inside the function. The value handled is not by the variable exists only inside the function. The difference with the passing the structure by reference is that the function will receive a reference to the memory address where that structure is, therefore all the operations on that structure in the function will directly affect the value of the structure referenced. In the function declaration that receives the argument by value, the parameter will be a structure variable of the type previously declared. On the other hand a function that receives a structure by reference will need the structure type first and a structure variable, preceded by an “&” sign. Here is an example of this concept:

struct Student

{

int studentID;

char lastName[20];

char firstName[20];

char classID[10];

};

void changeStudentLastName(Student &);

void changeStudentFirstName(Student &);

void changeStudentClassID(Student &);

void displayStudent(Student &);

void changeStudentLastName(Student &stdt)

{

cout << “Current student last name : “ << stdt.lastName << “\n”;

cout << “Type the new last name : “;

cin >> stdt.lastName;

}

void changeStudentFirstName(Student &stdt)

{

cout << “Current student first name : “ << stdt.firstName << “\n”;

cout << “Type the new first name : “;

cin >> stdt.firstName;

}

void changeStudentClassID(Student &stdt)

{

cout << “Current student class ID : “ << stdt.classID << “\n”;

cout << “Type the new class ID : “;

cin >> stdt.classID;

}

void displayStudent(Student &stdt)

{

cout << “Student ID : “ << stdt.studentID;

cout << “Last name : “ << stdt.lastName;

cout << “First name : “ << stdt.firstName;

cout << “Class name : “ << stdt.classID << “\n”

}

int \_tmain(int argc, \_TCHAR\* char argv[])

{

Student phoenix;

phoenix = { 1024, “Wick”, “John”, “PRG410” };

displayStudent(phoenix);

changeStudentLastName(phoenix);

changeStudentFirstName(phoenix);

changeStudentClassID(phoenix);

displayStudent(phoenix);

return 0;

}