EUROPEAN UNIVERSITY OF LEFKE
Faculty of Engineering
Department of Computer Engineering

COMP218
OBJECT-ORIENTED PROGRAMMING

LAB WORK NO. 6

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Task-1: Both computer and software engineering programs blend the broad engineering discipline courses with the computer science specific courses. Hence, it is a good idea to represent the "course" as an object before attempting to write a program to help students register. The programmer can think of the abstraction of a course object as the representation of title, code and credit values only.
Write a class declaration for the course object that includes a constructor, a set and a get member function for each data member, and a member function that returns the course information upon request. For instance, for this course it should prepare a string like "COMP218 - Object-Oriented Programming".

a) Use C++-strings for the representation of string of characters.

main.cpp

```
#include <iostream>
#include <string>
#include "course.h"

using namespace std;


void menu(){
  cout<<"1: Set Course"<<endl;
  cout<<"2: Retrieve Course Details"<<endl;
  cout<<"3: End Program"<<endl;

}

int main() {
  Course crs;
  string title,crsCode;
  int option,crdtHrs;
  menu();

 while(1){
    cout<<endl<<"[Choose any option from the MENU]"<<endl;
    cin>>option;
    switch(option){
      case 1:
        cin.ignore();
        cout<<"Enter Course info...."<<endl;
        cout<<"Name of the Course: ";
        getline(cin,title);
        cout<<"Course Code: ";
```

```
        getline(cin,crsCode);
        cout<<"Credit hours: ";
        cin>>crdtHrs;
        crs.setCourseInfo(crdtHrs, crsCode, title);
        break;
      case 2:
        crs.displayCourse();
        break;
      case 3:
        cout<<"Program Terminated"<<endl;
        return 0;
        break;
      default:
        cout<<"Option not available.. Please choose from the options
above.."<<endl;
        break;
    }
 }
  return 0;
}
```

course.cpp

```
#include <iostream>
#include <string>
#include "course.h"

using namespace std;

    //Constructor
    Course::Course(){
      creditHours = 0;
    }
    //Destructor
    Course::~Course(){};
    //Set Function
    void Course::setCourseInfo(int creditH,string courseC,string courseT){
      creditHours = creditH;
      courseCode = courseC;
      courseTitle = courseT;
    }
    //Get Function
    void Course::displayCourse(){
      cout<<courseCode<<"-"<<courseTitle<<endl;
    }
```

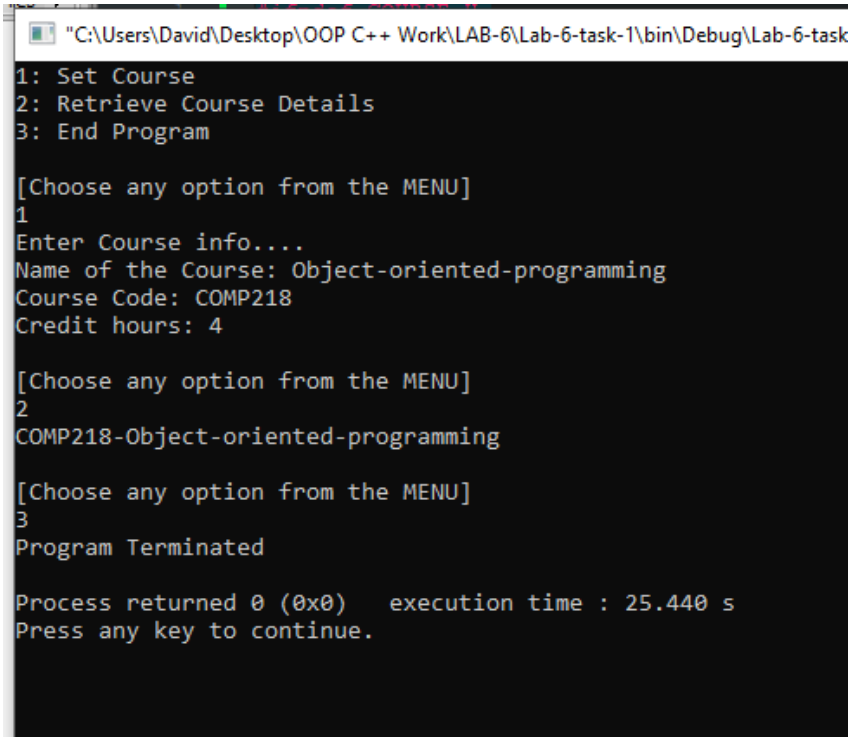
course.h

```
#ifndef COURSE_H
#define COURSE_H


using namespace std;

class Course{
  private:
    int creditHours;
    string courseTitle,courseCode;
  public:
    //Constructor
    Course();
    //Destructor
    ~Course();
    //Setter Function
    void setCourseInfo(int,string,string);
    //Getter Function
    void displayCourse();
};


#endif // COURSE_H
```



b) Use C-strings for the representation of string of characters.

main.cpp

```
#include <iostream>
#include <stdio.h>
#include <string.h>
#include "course.h"

using namespace std;


void menu(){
  cout<<"1: Set Course"<<endl;
  cout<<"2: Retrieve Course Details"<<endl;
  cout<<"3: End Program"<<endl;

}

int main() {
  Course crs;
  char title[30],crsCode[10];
  int option,crdtHrs;
  menu();

 while(1){
    cout<<endl<<"[Choose any option from the MENU]"<<endl;
    cin>>option;
    switch(option){
      case 1:
        cin.ignore();
        cout<<"Enter Course info...."<<endl;
        //Using c string function "gets" to get input from the user
        cout<<"Name of the Course: ";
        gets(title);
        cout<<"Course Code: ";
        gets(crsCode);
        cout<<"Credit hours: ";
        cin>>crdtHrs;
        crs.setCourseInfo(crdtHrs, crsCode, title);
        break;
```

```
      case 2:
        crs.displayCourse();
        break;
      case 3:
        cout<<"Program Terminated"<<endl;
        return 0;
        break;
      default:
        cout<<"Option not available.. Please choose from the options
above.."<<endl;
        break;
    }
 }
  return 0;
}
```

course.cpp

```
#include <iostream>
#include <stdio.h>>
#include <string>
#include "course.h"

using namespace std;

    //Constructor
    Course::Course(){
      creditHours = 0;
    }
    //Destructor
    Course::~Course(){};
    //Set Function
    void Course::setCourseInfo(int creditH,string courseC,string courseT){
      creditHours = creditH;
      courseCode = courseC;
      courseTitle = courseT;
    }
    //Get Function
    void Course::displayCourse(){
      cout<<courseCode<<"-"<<courseTitle<<endl;
    }
```

course.h

```cpp
#ifndef COURSE_H
#define COURSE_H


using namespace std;

class Course{
  private:
    int creditHours;
    string courseTitle,courseCode;
  public:
    //Constructor
    Course();
    //Destructor
    ~Course();
    //Setter Function
    void setCourseInfo(int,string,string);
    //Getter Function
    void displayCourse();
};

#endif // COURSE_H
```