

CECS 475 Final Exam Take-Home Problem
Fall 2019

10 points

Name: _____

____ /10 points

Due date: December 14, 2019 before midnight

Submit this document with your answers to the Dropbox called “Final Take-home problem”.

Object dependency means one object needs another object to execute properly, in multitier application (Presentation Tier, Business Logic Tier and Service Tier), the very common scenario is; Presentation Tier dependent on Business Logic and Business Logic requires different services on the basis of end user selection.

For instance for university domain, different services could be like **RegistrationService**, **GradingService**, and **ParkingService**. If we need some properties of Registration service then the Client calls Business object and Business logic requires an object of Service objects so that Business object is dependent on Service object.

Business object is coupled with Service object.

```
Class BusinessLogicImplementation
{
    RegistrationService register=new RegistrationService();

    GradingService grading=new GradingService ();
}
```

In the above example class **BusinessLogicImplementation** dependent (coupled) on different service objects. **The tightly coupled objects all most impossible to reuse and implement unit test because of the dependencies.**

The following example shows the code implementation of constructor Injection for the above example.

//Service interface

```
public interface IService
{
    string ServiceMethod();
}
```

//Registration Service

```
public class RegistrationService : IService
```

```
{
    public string ServiceMethod()
    {
        return "Registration service is running";
    }
}
```

//Grading Service

```
public class GradingService : IService
{
    public string ServiceMethod()
    {
        return "Grading service is running";
    }
}
```

Implement the Constructor Injection for all services by filling in blanks.

For a blank that it should be a C# statement, you need to fill it in with one statement only.

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```
public class BusinessLogicImplementation
{
    _____

    public BusinessLogicImplementation (_____)
    {
        _____
    }
    //Function to display the service
    public void display( )
    {//Display to the console window about what service is running
        _____
    }
}
```

Implement the client (main method) that will consume a registration service.

The main method will display a message "Registration is running"

//YOUR CODE