**Time Tracking Software**

|  |  |
| --- | --- |
| **Student Name** | **Student ID** |
| Chitrang Pandit | 6554032 |
| Chilat Shah | 6780024 |
| Sahil Chaudhary | 6619630 |
| Akash Kanaujia | 6560180 |
| Gautam Sidharath verma | 6610900 |

**Patch set description**

**Change 0/2: Refactor class Admin.cs into two classes [dbFunctions.cs]**

Here in this patch we have done “Extract class” refactoring. Here class “Admin.cs” is acting as a controller but it violates the controller GRASP principle as it also contains the business logic such as connecting with database, Selecting SQL command etc. These tasks are the responsibilities of model layer in MVC architecture. Thus we extracted this business logic and created a new class “dbFunction.cs” in model layer.

Although, Admin.cs has all the information necessary to perform the responsibility to assigned to it hence current design is a good candidate for “Information Expert” GRASP principle but It has high coupling and low cohesion. hence we extract the it to the new class name “dbFunction.cs” . moreover Refactored “admin.cs” class is a good example of “Indirection” GRASP principle.

**Change 1/2: Extract method in dbFunction.cs class.**

Here in dbFunction.cs class each method is creating an object of database class. And based on this db object it is retrieving the object of dbCommand class. Here each method has the same code, so It is a duplicate code.

We extracted this duplicate code and put in a method name “getDBCommand”. Now each method in class “dbFunctions.cs will call the method getDBCommand and gets a object of “database.cs” class and “dbcommand.cs” class.

**Change 2/2: rename method in “database.cs” class**

In class “database.cs” has method name “**ExecuteDataSet**” in Model layer is same as “**ExecuteDataSet”** of data library of dot net. Thus it is a confusing name from “TimetrackingSoftware” project’s perspective.

To make this method more specific and related to the domain we change the method name from “ExecuteDataSet” to “TimeSheetExecuteDataSet” which is more readable for code compression.