**Software Re-Engineering**

**Course Title: Software Re-Engineering(CS-368)**

**Section: (A)**

**Group Members Detail:**

**Muhammad Tayyab 181400029**

**Ahmad Saqi 181400055**

Refactoring In Selected IDE:

IDE: Intellij IDE

What is Refactoring?

**Refactoring** consists of improving the internal structure of an existing program's source code without creating any feature.

Refactoring in Intellij IDE:

Following are the refactoring in the Intellij:

Invoke Refactoring:

In invoke ide allows the user to select any item which is going to be refractor. User can chose symbol, editor, file or folder in the project tool. User can also press Ctrl+Alt+Shift+T to display the list of refactoring from the given list.

| **Name** | **Description** |
| --- | --- |
| Safe Delete | To ensure you do not delete a file that is referenced in source code. |
| Copy/Move | Copies/Move an element. |
| Extract Method | Help reduce code duplication. |
| Extract Constant | Declares a new constant and initializes it with a selected expression. |
| Extract Field | Declares a new field and initializes it with a selected expression |
| Extract Parameter | Adds a new parameter to a method declaration and automatically updates method calls accordingly. |
| Include Variable | Declares a new variable and initializes it with a selected expression. |
| Rename | Renames an element. |
| Inline | Inline an element. Act as the opposite of extracting. |
| Change Signature | Changes a call signature of a method. |

Preview The Refactoring:

Click on the Preview to see the preview of the refactored code. User can see changes in the find tool window.

Extract Class:

Click on the Refactor in the tool bar, which is “Extract Class”

Extract Interface:

User can also extract the interface in the similar way, click on the Refactor in the tool bar of the which is “Extract Interface”.

Rename:

User can rename the name of the variables by simply select the rename for the Refactoring the code.

Remove Duplicate:

In this Refactoring method, is to remove the line of code from the large number of codes.

Extract Method:

Sometimes at some points, we have to extract a small number lines of code, then at that point Extract Method is used. Select the Refactor from the Tool Window bar, select Refactor this, then select on the extract method, then the new method of some necessary lines of code will be extracted.