**Software Engineering Project**

**Topic :**

Object ­Oriented Design Tool

**Problem Statement :**

In Object Oriented Designing, we are focusing on designing of UML (Unified Modeling Language) diagram creator tool that aimed at providing a fast way to create UML diagrams.

It will allow us to create our ow custom UML elements.

**Software/Hardware Requirements :**

1. **Software :**

* Netbeans/Eclipse IDE
* JDK 8.0 or above
* JRE 8.0 or above
* Any text Editor
* External Libraries of Java

1. **Hardware :**

* Dual -core 64-bit processor
* 200 MB of memory
* Network Interface Card

**Software Size Estimation :**

* Estimated size of UML creator is about 4 to 5 MB.
* Size estimation may vary depending on addition/removal of some features or addition of certain advanced features.
* Estimated size may also vary if certain bugs will be fixed.

**Modules :**

1. **GUI implementation :**

In this module, we will implement outer GUI work that aimed at providing an Interface for user i.e, user friendly graphical interface.

We will be using swing and awt class of Java to implement most of GUI and for

Better interface may use JAVAX framework.

1. **Resizing/Auto Adjusting :**

This module will implement features of auto adjust of the UML diagram and UML elements in case of resizing of window pane so that diagram doesn’t change i.e, its meaning remain same if we resize our window pane.

1. **Plugin and Plugin Dependencies :**

All the plugin and plugin dependencies that are needed for our tool will be added and any additional plugin that are required in Eclipse IDE will be added

in this module.

1. **UML elements and Standalone :**

Various UML elements that are required for our UML diagram created are added in this module.

**5. Linking :**

In this module all the different above mentioned module will be linked together to get our final software .

Once various modules are linked, we will be checking working of our software and performing various type of testing before realising the software.

We will be implementing other features that will be needed as per after testing is performed.

**Testing Perform :**

* **GUI Testing :**

It aimed at testing the software GUI (Graphical User Interface) of the software meets the requirements as mentioned in the first module and detailed designed documents.

* **Performance Testing :**

It is performed to check some of the quality attributes of our software like Stability, reliability, availability.

* **Compatibility testing :**

It aimed at checking if the software can be run on different hardware, operating system, web servers, application servers, hardware peripherals, emulators, processor, different browsers and different versions of the browsers etc.

* **Functional Testing :**

**It** focuses on testing software against design document, use cases, and requirements document. Here, we don’t require internal working of our

software.

* **Beta Testing :**

It will be performed once the all of the testing is done on our software.

We will be performing it before releasing or handing over software to end users.

Once it will be completed successfully means we are ready to release our software to the end users.

**Estimated Lines of Code(LoC) :**

* Estimated LoC for our software is around 20,000 including the plugin and plugin dependencies.
* We will be using some already implemented features for our software (using jar files) and hence LoC may be reduced to around 14,000.
* Some features of our software is already implemented hence we will be directly using the source code (we will be giving the reference of it).
* We will be using Drag And Drop features of our IDE that will automatically generate code for our UI.

**Responsibilities of Team Members :**

|  |  |  |
| --- | --- | --- |
| **Name** | **Task Assigned** | **Signature** |
| Akshay Kumar Singh(20168020) | Testing |  |
| Alok Kumar(20168093) | Maintenance |  |
| Ananya Pandey (20168025) | Resource Gathering & Specification |  |
| Ankit Kumar Mishra(20168007) | Resource Analysis and Coding |  |
| Ankit Mishra(20168047) | Designing and Coding |  |

**References :**

* [www.umlet.com/](http://www.umlet.com/)
* [en.wikipedia.org/wiki/UML\_tool](https://en.wikipedia.org/wiki/UML_tool)
* <www.stackoverflow.com>
* We are referring to some of open source framework that are available online for implementing our designing of tool.
* **Similar Software available** : Dia UML creator, ArgoUML, Eclipse UML2 Tools.