Chemistry

**Software Quality Assurance**

**SQA Requirements Checklist**

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| **Revision Number** | **Revision Date** | **Author** | **Summary of Changes** |
| 1 | 3-13-2013 | John Gibbons | Initial creation of document and first draft. |
| 2 | 3-14-2013 | John Gibbons | Second draft and added new items. |
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Requirements Checklist

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| **No.** |  | **Y, N, NA** | **Comments** |
|  | Documentation Standards |  |  |
| 1 | Were the documents prepared in accordance with Object Oriented Design principles? | Y |  |
| 2 | Is there a cover sheet and table of contents? | Y |  |
| 3 | Is there revision control? | Y |  |
|  | Feasibility | **Y, N, NA** | **Comments** |
| 1 | Has the client been met with and proper contact information exchanged? | Y | Roland, team leader, has been maintaining constant contact with the client. |
| 2 | Has a domain analysis been done? | Y |  |
| 3 | Has features from similar software been identified? | Y | However, none including animations of the naming procedure. |
| 4 | Has an appropriate development cycle been decided upon? | Y |  |
| 5 | Are proposed milestones realistic? | Y |  |
| 6 | Has a list of deliverables been made? | Y |  |
| 7 | Has the customer signed off on the list of deliverables and is satisfied with them? | Y |  |
| 8 | Is the list of deliverables reasonable for the time constraints? | Y |  |
|  | SRS | **Y, N, NA** | **Comments** |
| 1 | Has all requirements in the SRS requirements document been fully documented? | Y | Upgraded from decane (10 strand longest chain) to pentadecane (15 strand longest chain) |
| 2 | Has the customer signed off on all requirements in the SRS document? | Y |  |
| 3 | Are all requirements properly incorporated into the program design? | Y |  |
| 4 | Were there any models submitted with the requirements from the customer? | Y |  |
| 5 | Were those models complete and relatable? | Y | These models are the basis for the design and flow of the animations. |
| 6 | Do all requirements function according to the customers' models? | Y |  |
| 7 | Does the domain analysis show other programs with these requirements? | N |  |
| 8 | Is the work breakdown structure and timeline reasonable? | Y |  |
| 9 | Are there any risks with the requirements being changed? | Y | A few changes were made. However, they were changes that could be implemented within the given timeframe. |
| 10 | Are there any risks with the deliverables being changed? | Y |  |
| 11 | Was research done into the machines this program would run on? | Y |  |
| 12 | Was research done on the operating systems this program will run on? | Y | Windows 7, Mac OS and Linux. |
| 13 | Was research done on the minimum requirements needed to run this program? | Y | Listed in the requirements documents. |
| 14 | Was research done on I/O devices needed for this program to function properly with? | Y | Standard mouse, keyboard and monitor. |
| 15 | Was research done on what is needed to upgrade the software/hardware on the machines if they were unsatisfactory? | Y |  |
| 16 | Does the program run properly on systems containing the minimum set requirements? | Y |  |
| 17 | Was storing results of the program addressed? | Y | No information generated by the program is stored. |
| 18 | Was security of the data generated by the program addressed? | Y | No security is needed for this program as per current requirements. |
|  | Management | **Y, N, NA** | **Comments** |
| 1 | Is there a plan in place to ensure requirements are developed to the customers' requirements? | Y |  |
| 2 | Is there a plan in place to handle changes in requirements/deliverables during the project? | Y |  |
| 3 | Can the development team change requirements or deliverables without consulting the client? | N | All changes have to be pre-approved by the client before implemented. |
|  | Support Material | **Y, N, NA** | **Comments** |
| 1 | Are all use cases accounted for and adequately represent the requirements? | Y |  |
| 2 | Does each use case have at least one use case scenario? | Y |  |
| 3 | Does the code in Python 3 generate the animation as intended? | Y |  |
| 4 | Does the UML clearly show the relationships between each class? | Y |  |
| 5 | Has the general user population been determined? | Y | Organic Chemistry professors and students. |
| 6 | Has the design of the GUI and features taken this into account? | Y | GUI is simplistic and in context is in laymen terms. |
| 7 | Has any and all text seen by the user been written in terms the user will easily understand? | Y |  |
| 8 | Do external interfaces function as intended? | NA | No external interfaces. |
| 9 | Is the system reliable? | Y |  |
| 10 | Does the program meet the requirements set by the client? | Y |  |