SOFTWARE ENGINEERING II : MGMT, MAIN AND QA
PROF. GIRIDHAR AMARAVADI
TA : ROSENKRANTZ TODD

ASSIGNMENT II

THE RISE OF NO/LOW CODE SOFTWARE DEVELOPMENT – NO EXPERIENCE NEEDED?

ARTICLE CITATION

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ABOUT TOPIC

A No/Low code software development is a visual development interface that helps in developing web and mobile applications via components, pre-developed logical modules, drag and drops elements, etc. besides complete coding.

SALIENT POINTS

The concept of No/Low code is currently a hot topic in businesses. So this was clearly stated in the paper with a help of tools and technology used. Real time examples, implementations, various tools, methodologies were mentioned in the paper on how it would better than traditional coding. Followed by the rise of a startup Unqork that made use of this technology was stated and also gave a description about a tool called Medrix which helps in building applications with few lines of code. And how Artificial Intelligence technology is making a mark in the market.

TOPIC SUMMARY

The author started off this by stating a real-time implementation where a COVID-19 Engagement Portal was designed by New York city officials which had the information of individuals with COVID-19 and also the ones who were in contact with them. And this setup was made just by "NOT WRITING THE CODE!". Later this was mimicked for Washington DC's coronavirus hub by Unqork, Inc., (NY startup) using one of the above methods drag-and-drop methodology which helped in delivering food for residents who tested positive for COVID-in New York. So the author referenced an article, [1] in which Unqork's importance was emphasized where it tracked COVID-19 impacts, medical supplies donations, infant care, etc.

Now just like this even huge product-based companies like Alibaba, Microsoft, Oracle, Salesforce their No/Low code software development platforms. So as per [4], Gartner announced Salesforce as the leader of Low code Application Platforms (LCAP), and by 2024 LCAP will be used for more than 65% of application development in the companies. This is because of the project backlog pressure in IT departments where they're looking to improve agility, solve complex issues user experience.

Followed by an example platform was illustrated based on drag-and-drop in the article as on Fig.1

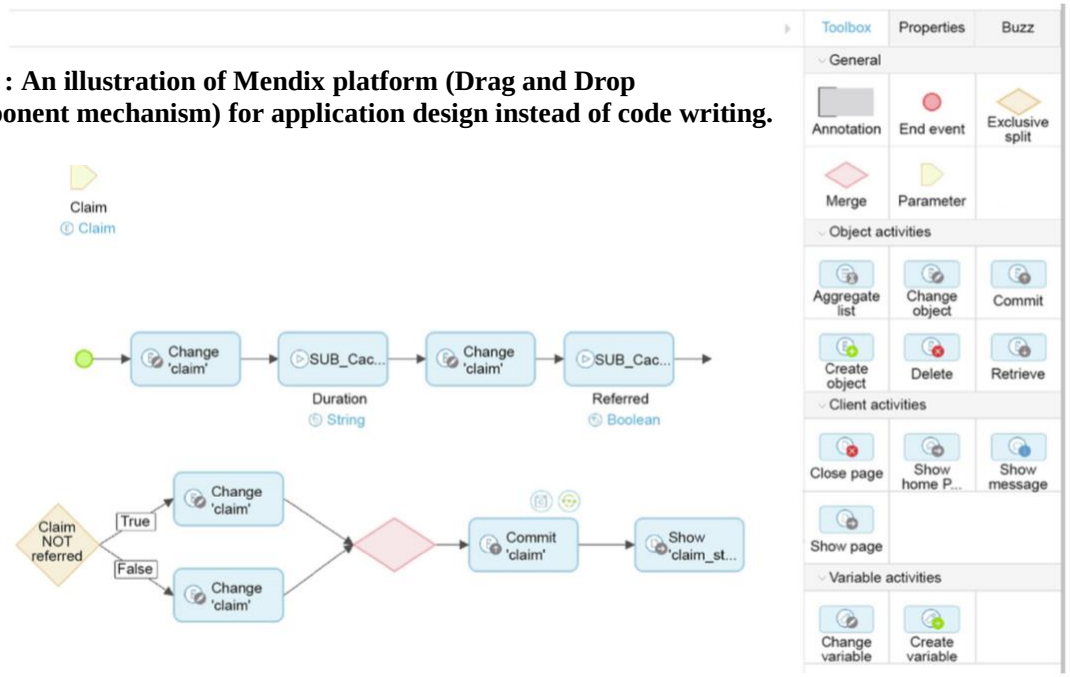

Fig 1 : An illustration of Mendix platform (Drag and Drop component mechanism) for application design instead of code writing.

"Mendix"**,** A drag and drop interface in which users need not code but can design their applications by using this tool in which by using Machine Learning it tries to map the working patterns in old data based on which it will provide the recommendations for users as they continue the application development. So in the official website, [5], Mendix can be used in creating business applications 10 times faster with close collaboration with IT use. It is the first AI-assisted development platform, this helps in 3 ways – Firstly, it reduces the cost of additional training resources in which new developers can learn from the AI-assisted suggestions in building apps. Secondly, the tool enhances developer productivity and capacity, and then with auto feedback during the development time, cost and non-functional defects will be prevented even before they happen. The company stated that much more enhancements are yet to be announced and currently working latest versions.

The use of Artificial Intelligence was explained in such a way that besides the traditional application creation in drag-and-drop platforms that use pre-defined components, AI-induced platforms would suggest the user in a better way. As the system would understand the user's example (expected input and output) and task process it will produce the code accordingly.

Now apart from drag-and-drop, coding tools like IntelliJ IDEA uses Machine Learning, and TabNine uses Deep Learning that will be able to understand the way of user's coding according to which suggestions will be given by the tool (Autocomplete). And also Microsoft's Excel's Flash fill helps in filtering the data search. Now Mendix's use is completely different from IntelliJ IDEA and TabNine where the former one is a tool for no/less coding and the latter will reduce the time to code where the author emphasized how Machine Learning is coming to the rescue for enhanced coding.

CHALLENGES AND ROOM FOR IMPROVEMENT

It's really not easy to produce output by a machine that thinks like a human because of course, the computations will vary so the process is going on to at least increase the preciseness. So various kinds of research, improvements are being done on improving the prediction, recommendations as the code are written. And another problem is that, in future if any new

changes or commits will be introduced then it would be a hassle for the current tools to meet or satisfy the new requirements because variations may occur during the runtime which isn't a good sign. Due to which there can also be a privacy issue during online application development in which if the developer doesn't have any proper coding knowledge there would arise a problem in debugging.

UNADDRESSED ISSUES

The author could have mentioned or commented about the Comparison of complex data and small data with No/Low code. Readers would've got a broader picture of which data the technology works best. This followed by, more real-time examples of low/no-code tools for web, mobile development, and the current market could've been mentioned because of which one can actually understand how the tools are performing in that specific field.

CONCLUSION

And overall, a transition is being made from traditional coding to no/low code technology to create applications, programs that would reduce the demand to hire high-end developers and concentrate more on technology. But then due to this technology people will not be replaced. Much more in-depth knowledge and background work has to be done in order to implement this technology in a wide manner to overcome cost and complexity barriers.

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