

EVOLVING WITH LOW CODE AUTOMATION

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ABSTRACT

Developing software for the betterment of society plays very important role but having best technologies to develop software is something one wants. Low code automation is in demand and may become more famous and adaptable in coming years. In this work we analyze the benefits of software development using low code automation and to study the future scope of it. To study how low code is changing the time used to develop a software. To analyze what is better, low code automation or building software from scratch. This paper describes the use of Appian Business Process Management tool available for low code automation.

Keywords: Low Code Automation, BPM, Appian, Software Application.

I. INTRODUCTION

Low code automation is the ability to build the software applications using minimum efforts and less line of codes. Low code development enables rapid building of software with low programming knowledge. Non-programmers can also build application with low code automation. Low code automation provides framework to easily manage the business process management. Low code automation can help one build variety type of software as per the client requirements. With a rapidly growing IT firms all over the world, the use of low code automation may be adapted by them to attract customers by developing software at good speed.

Low-Code Development Platform(LCDP) is a developing platform used to develop a software by using graphical interfaces. It is considered fourth generation programming language. Appian is one of the leading BPM Tool. It easily creates engaging user experiences across web and mobile.

An application can be developed multiple times faster using Appian. It is only possible because of low code approach of Appian. The developers can easily build and deploy the application between different environments. Features like integrating different object or web api is all possible in this platform.

Research firm Forrester estimated in 2016 the low code platform will capture \$15.5 billion of market in upcoming future. The attribute which will grow the market for low code platform is the ease of use and time required to develop a software for any business processes. Low code platforms not only provide built in component but also have customization feature for general purpose applications which can be used to make it a unique application.

II. METHODOLOGY

This paper compares the two approaches which is traditional way of software development and low code development. The paper also depicts the growth of low code platforms since last few years. Appian has grabbed developer's attention because of easier user interface design and maintaining a library of reusable business things. Appian is growing each year with thousands of its customer. In upcoming year as people understands the importance of rapid development, they will prefer switching to this low code platform.

2.1 Requirements of Business User

The priorities of business giants are changing with evolving of technology all over world. Before the business just had small markets to deal with as there was no connectivity between customers and the suppliers. Competition is also increasing in the market which had led a change of business strategy. Business users requires following application features now:

- **Rapid Development:** With the increasing competition in the market, all business giants would prefer to launch their product in the market faster and be the first one to bring the new feature.
- **Data:** Data plays a vital role for the business. Nowadays terabytes of data are generated every hour. All data generated needs to be preserved and explored by analyst every day.
- **Cost-Effective:** When a company invest in any technology they will want the end product to be effective in terms of it easy usage and with appropriate functionalities. It should also give added benefits to Business where their profits should be increased.

- **Security:** Data should have high security and should be protected from unwanted use and also have authorization control. All data are not meant for everyone so it should be restricted.

2.2 Traditional way of development

Developers using traditional approach for developing software applications starts from scratch. It requires thorough knowledge of programming languages. There are various frameworks available for them to start their development which provides various packages and integrations which can be used to develop a business application. Developing even a small application for business can take up to several months. In this approach nothing is automated. Developers has to take care of designing user interface to establishing connectivity to database and writing various web services from base. It requires thorough knowledge of programming languages.

2.3 Advantages of BPM:

- **Developers and Client satisfaction:** BPM focuses on both client and developer's growth. Client can receive better support, IT support and their preferences for services they want. Their needs are taken care. Developers or the professional who are into BPM are able to build a challenging career with better performance. Even moderate coder can build their career in it.
- **Easy problem solving:** One of the advantage of BPM is the agility because organizations are able to pinpoint the problems which is handled by developers who can come up with quick solution or fixes.
- **Measurability:** Visibility is one of the BPM's main goal. It is able to show tangible and measurable results early in the process. Appian tool can help employees to monitor the workflow. Analytics can help business user to laid-out and interpreted to help organizations determine what is working and what is not.

2.4 Features of Appian

The other biggest advantage of Appian can be seen that it requires one-time effort to build multi-device software. The accessibility of same applications can be done in laptop, mobile and tablets. The Business user who will be investing into their development of software can take the benefit of this feature.

- **Astonishing User Interface:** User interface is very adaptive and pleasing to eyes for business process management requirements. Appian uses SAIL for designing interface. User Interface can be designed in various ways that is by using drag and drop feature or by coding. It also provides some templates which is ready to use with individual's data change.
- **Data Connectivity:** Databases can be easily connected with appian applications. There are different sources to connect with data. Application can connect to salesforce or any web services. Huge amount of data can be managed from Appian applications.
- **Records and Reports:** With the increasing data each day, the business giants want to extract important information from it. It can be easily done in Appian. Reports can be made using different line charts, bar charts or pie diagrams. Graphical representation of data is very easy to understand and get some meaningful information from it.
- **Security:** The data can be protected that are confidential. There may be few data which should only be accessed by specific authorities. This is possible to maintain in Appian. There is visibility concept where one can show data to specific user and restrict for other users.
- **Integrations:** Different objects can be integrated to the application. Google maps, pdf convertor or any other plugins can be integrated in Appian applications.
- **Deployment:** The real time development requires different environments for designing applications. Development is done in lower environment, Quality assurance is done in other environment and User Acceptance Testing can be done in some other environment and then we move the application to production. The deployment environment may differ from organization to organization. So the deployment of application from one environment to other is a just a button clicks away. This reduces so many efforts of developers.

III. IMPLEMENTATION OF LOW-CODE IN APPIAN

In figure (i), I have demonstrated how small piece of code has created pie chart this is what we call it as low code. Developers have two option in Appian that is either they can directly drag and drop the pie chart or they can write this small piece of code.

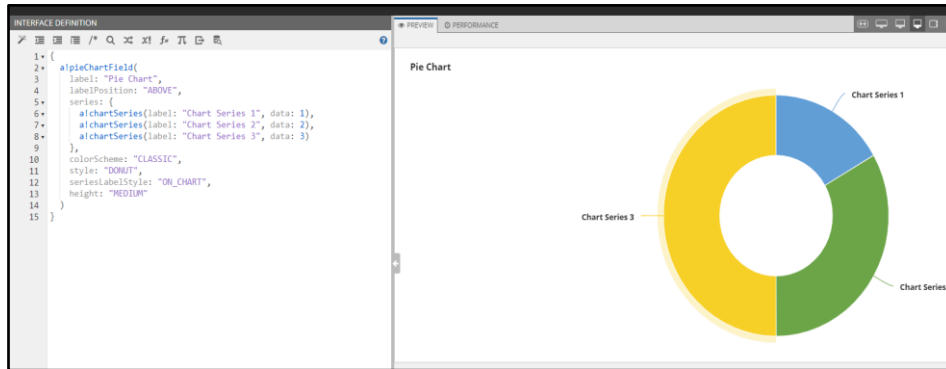


Fig (i)

Progress Bar can be created through below code in Appian:

```
load(
local!completedTasks: 100,
local!totalTasks: 150,
local!evals: {
{name: "David Rogers", completedEvals: 4, totalEvals: 10},
{name: "Marigold Brown", completedEvals: 2, totalEvals: 15}
},
{
a!sectionLayout(
contents:
a!progressBarField(
label: "Tasks Completed",
instructions: local!completedTasks & " of " & local!totalTasks & " done",
percentage: (local!completedTasks / local!totalTasks) * 100,
style: "THICK"
)
}
)
```

IV. CONCLUSION

We have seen the overall benefits of using low code automation. Low code platforms can create a BPM application at rapid speed with good efficiency. There are few drawbacks also for low-code automation as of now. We do not have any low code automation platforms where we can fulfil requirements of every user. Creation of Enterprise content Management(ECM), Business Process Management(BPM) and case management applications can be delivered. The point to be remembered is that though we have low code automation for easy and fast development of business application but BPM tools are itself made from different languages especially java. So low code automation can never replace high coding required in other languages. Plugins in Appian is built using java. Low code platforms have the potential to boost the business value of programmers and non-programmers both at the same time.

V. REFERENCES

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