

A Modernization Approach to Software Engineering

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Abstract -The Technology is rapidly growing day by day. In this regard the utility of software also is rapidly increasing day by day in many forms like ROBOTICS,ARTIFICIAL INTELLIGENCE,MACHINE LEARNING etc .The tools used in this software are also increased which we call it as an automation that is going to play a key role in the software industry replacing some persons with that particular tool may result in increase of productivity of the company as well as in attaining a reliable product .This paper communicates a meaningful tool that is available at a free of cost to use for a layman to build up a software on his own .This paper entirely presents the communication between a layman and that tool its name is CONSTRUCT2D.Along with the middleware application. The central idea of the paper deals with the scenario of SOFTWARE INDUSTRY,A Start UP.

Index Terms—Construct2D, Startup, Robotics, Artificial Intelligence, Machine learning

I. INTRODUCTION

Software trends are rapidly changing day by day since from 2002.So, a person who is willing to learn or join as an employee in the Software Industry must be updated according to the recent trends and technologies thereby helps him in attaining some skill set to sustain in the job.

Now a days the key role played in the software industry is the programming. And the thing that we are going to discuss in this paper is about the automation.

Automation or automatic control, is the use of various control systems for operating equipment such as machinery, processes in factories, boilers and heat treating ovens, switching on telephone networks, steering and stabilization of ships, aircraft and other applications and vehicles with minimal or reduced human This states that a Company needs less human and more tools that generate the high productive work so that tools can do more work than humans. But in this game there is requirement of human being who knows how to use that particular tool and where to use it. The human resource plays a key role. To attain a good position in an industry human resource is more important in any manner. So this paper will be a base to develop a building model for the lay man in software industry who has fear to develop software programming and who has fear in designing a particular software and who has fear to learn or develop a program.

A program is the set of instructions given to the software and in this regard a person who is willing to develop a program must visualize and simulate the output of the program to attain the logic of the program. The

logic of the program is the key to open the door called Project. The things that are discussed until now in this paper make us to realize that a Project can be done with the help of collection of several programs. There is a great statement written in INDIAN LOGIC that is “THE KEY TO KNOWLEDGE IS THE RATIONAL QUESTIONING”

So by seeing many people who are unemployed with a lot of skill sets and creative thoughts we have started probing ourselves how do this sort of fear to write a program or to develop a program according to the minds of various people and various thoughts.

This makes us realize the fact of recent technology that is VIRTUAL REALITY. Our thinking pattern has changed in proving an unsuccessful project to be a successful project with the constant thinking efforts and with a determination of the team effort to make impossible as possible.

The INTEGRATED TECHNOLOGY of CONSTRUCT2D along with a middleware agent called TIBCO with a COMBINATION of a BACKEND DATABASE has been out. This paper presents this integrated technology. Most of the companies now a days believe in only tools but not the humans because cost of humans is very huge when compared to machines In this regard being Educationists to make a lay man realize the forthcoming technology We have taken this step to recognize the forthcoming growth of technology and this too may be upgraded with the innovations of forthcoming generations. These tools are openly available in the internet and we can obtain them at a free of cost. The motive of this paper is to realize a layman to imbibe the

technology and to elucidate its need as a symbol to forthcoming generations.

II. LITERATURE SURVEY

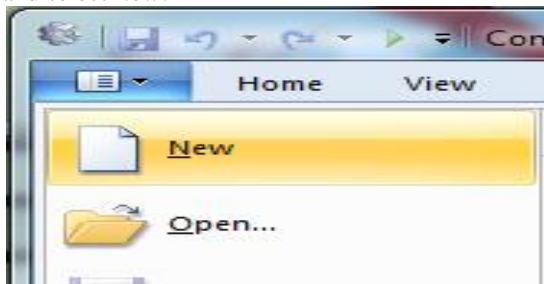
Construct2d

Construct 2 has been downloaded over 4,000,000 times to date and is actively used by tens of thousands of game developers.

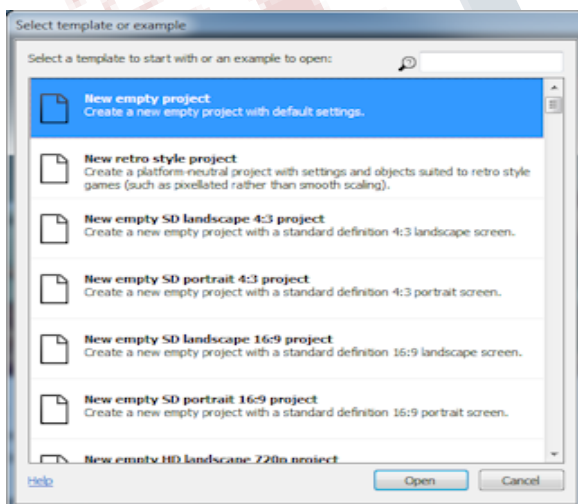
Getting started

Download construct2D Free edition from the Internet.

After the set up, launch Construct 2. Click the *File* button, and select *New*.



You will see the 'Template or Example' dialog box.



This shows a list of examples and templates that you can investigate at your leisure. For now, just click on 'Open' at the bottom of the box to create a blank, empty new project. Construct 2 will keep the entire project in a single *.capx* file for us. You should now be looking at an empty *layout* - the design view where you create and

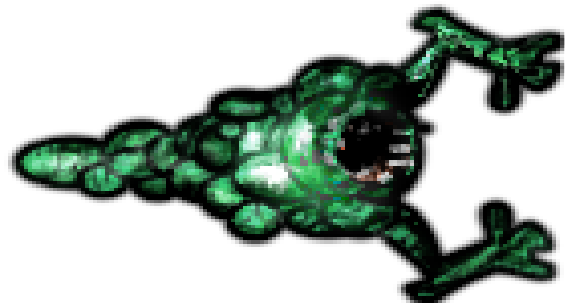
position objects. Think of a layout like a game level or menu screen. In other tools, this might have been called a *room*, *scene* or *frame*.

Inserting objects

Player:



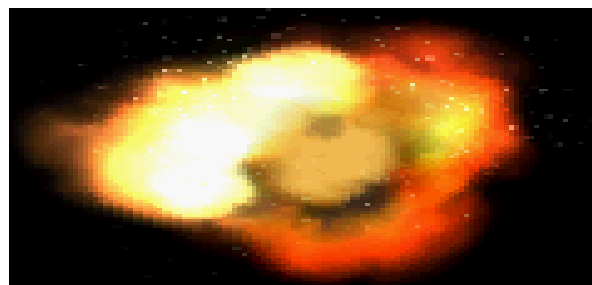
Monster:



Bullet:



and Explosion:



For each of these objects, we will be using a *sprite* object. It simply displays a texture, which you can move about, rotate and resize. Games are generally composed mostly out of sprite objects. Let's insert each of the above four objects as sprite objects.

1. **Double click** to insert a new object
2. **Double click** the 'Sprite' object.
3. When the mouse turns to a crosshair, click somewhere in the layout. The tooltip should be 'Main'. (Remember this is the active layout.)
4. The texture editor pops up. Click the open icon, and **load one of the four textures**.
5. **Close** the texture editor, saving your changes. We can now see the object in the layout!

There is an event sheet that connects every object with every layout. These events are like the events that we are discussed in JAVA. The background code for every event is automatically generated in an XML FILE. The data is to be stored on condition and the relevant data of the event.

TIBCO BW

TIBCO ActiveMatrix BusinessWorks is a scalable, extensible, and easy to use integration platform that allows us to develop integration projects. TIBCO ActiveMatrix BusinessWorks uses the TIBCO Designer graphical user interface (GUI) for defining business processes and the TIBCO ActiveMatrix BusinessWorks process engine executes the business process. TIBCO ActiveMatrix BusinessWorks also works with TIBCO Administrator, a web-based GUI for monitoring and managing run-time components.

The Challenge of Application Integration

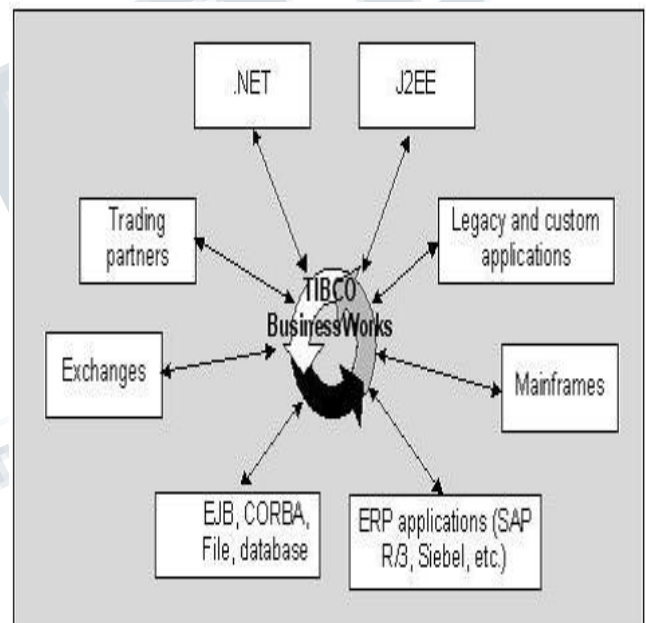
Application integration is one of the most pressing challenges of today's enterprise. An enterprise may need to integrate back-office systems with the Internet, a purchase order management system with the customer service management system, or any of the above with legacy or ERP (Enterprise Resource Planning) systems. An integration platform should allow us to design the business process, that is, the flow of data. The business process should transparently receive and send data throughout the enterprise and beyond.

Integration Benefits

The integrated enterprise works seamlessly. Different departments and groups share communications and can together respond quickly to customer needs. With less time spent on administrative and manual tasks, employees become more productive and the integrated system yields a significant return on investment.

This return increases as the company grows. The illustration below shows how TIBCO ActiveMatrix BusinessWorks connects to applications of different types, databases, trading partners and exchanges, etc.

TIBCO COMMUNICATION THROUGH ENTERPRISE



TIBCO ActiveMatrix BusinessWorks Features

1. Messaging
2. Adapters
3. Business Process Modelling
4. Schemas and Data Mapping
5. Manual Activities

To support our integration project at run-time, we need a messaging system that can reliably handle the volume of messages that will be sent and received. The system should have these characteristics

:

1. Guaranteed delivery and fault tolerance—Message delivery must be guaranteed, and the system must be fault tolerant. If a message cannot be delivered because the recipient was unavailable, the messaging system must queue that message and continue to operate. The queued message must then be redelivered as appropriate

2. Distributed architecture—A distributed, loosely coupled system is much more likely to support the fault-tolerance we require than a monolithic system that depends on one centralized server

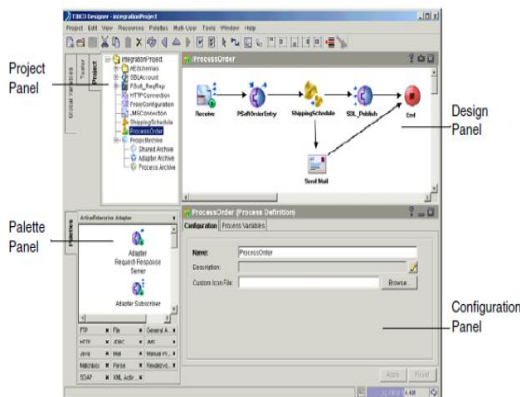
3. High throughput—High throughput without performance degradation is needed. Requirements vary throughout the day and throughout the business year, and we cannot afford performance degradation at the time when business increases.

4. Scalability—As our business grows, we want to be able to update our business integration in a simple and cohesive way. Furthermore, we want to be able to connect our integration project with other departments using a similar system. The messaging system must support this scalability.

TIBCO ActiveMatrix BusinessWorks is based on messaging standards with proven track records. Supported protocols include TIBCO Rendezvous, JMS, and HTTP.

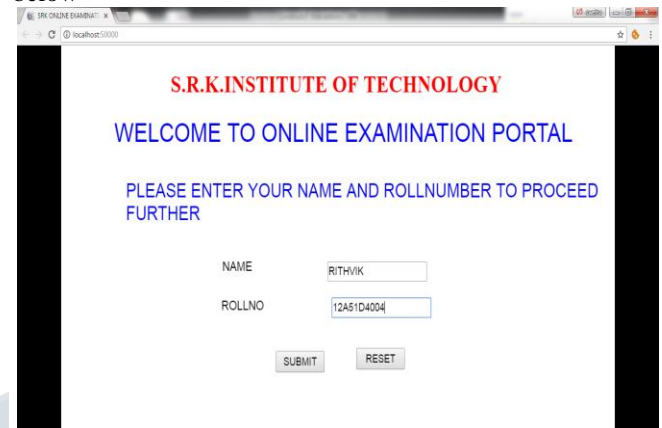
TIBCO Designer Layout Overview

The TIBCO Designer main window has three or four panels that contain the design-time components of an integration project. We can configure the TIBCO Designer GUI to either display the project and palette panels separately or together.

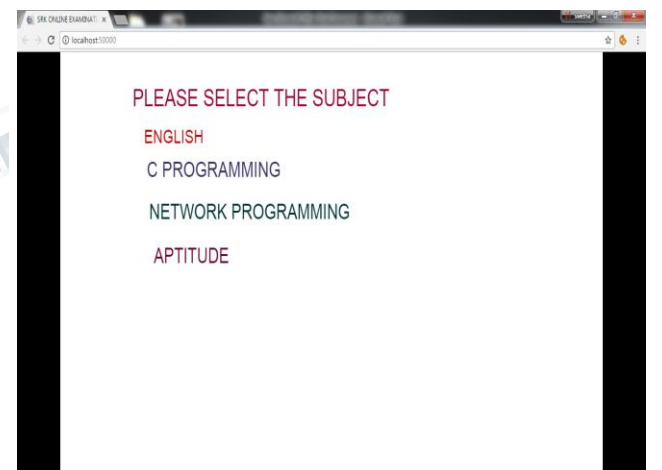


III. EXPERIMENT

To develop a technology with the integration of these tools we have developed the following portal as shown below



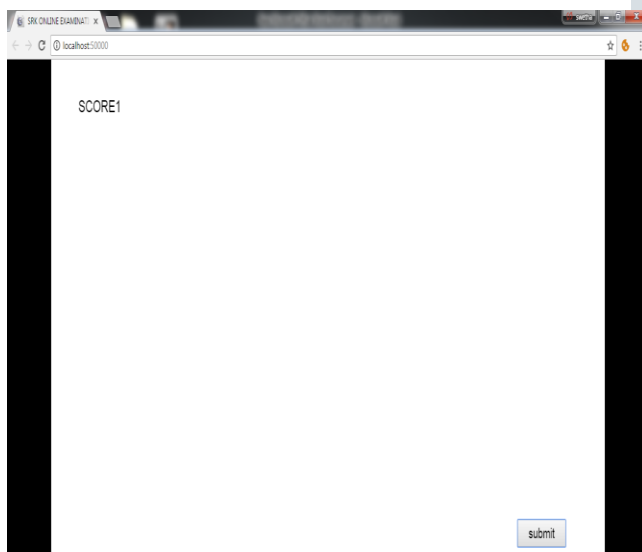
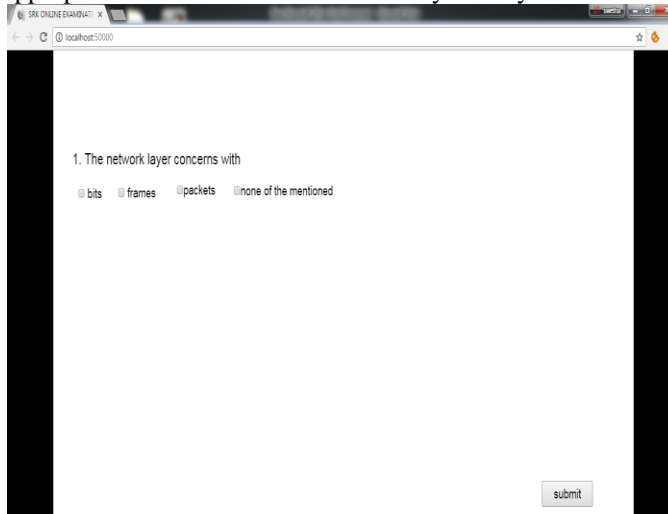
The authentication for this portal is the name and roll number should match so that it will go to the next layer and this is done as a result of events with conditions in construct2d using the forms.



The person who is going to use this portal are requested to select the particular text on clicking that particular subject it goes to that particular subject layer thereby conducting a test. This is done by using the events in construct2d. When that particular object is clicked it will go to that particular area and thereby it opens a layer

The next area specifies the test that is to be conducted on the subject chosen by the student or an

individual who is willing to write the test. The test questions must be created on our own or any questions from the INTERNET and we choose checkboxes for various options. These checkboxes when they are selected that particular marks should be given as a global variable and thereby we need to increment the global variable values for each question that is chosen. It is done in an event sheet by choosing the appropriate event with the appropriate action that is undertaken by the layout.



The final element is the score or marks secured by the participant who wrote this exam. This value must be stored subject wise in a database and this is done by taking a middleware. The middleware administrator is

responsible to collect all the score values and sent it to the database. Here the score values attained by the participants are stored in a runtime storage facility. This means we can attain the score values at runtime but not at compile time. The role of middleware is to capture the scores in an image and convert the image into a text and upload these values in the database as a textfile by using **TIBCO BW** as a middleware agent. In order to use this agent many companies may not be capable in that case we can use a **PHP ADMIN to connect** the front end with the back end. This process integrates all the technologies at one hand so that we can attain and boost up to each and every technology. The above mentioned portal is a demo portal we can build many portals and applications at a free of cost by using construct2d trial version.

III. CONCLUSION

We would like to conclude that technology enhancements and enrichments can be done through encouragement of some new innovative thoughts and ideas and we feel that we have initiated a step forward in this regard.

TIBCO BW is the growing technology now a days and game itself is an application therefore construct2d game search engine is used not only for the games but also for the innovative applications. This technology can be enriched and enhanced in future days

IV. ACKNOWLEDGEMENTS

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REFERENCES

- [1].TIBCO BW TUTORIAL-TUTORIALS PEDIA
- [2].CONSTRUCT2D TUTORIAL.