

Reconfigurable Software to Mitigate the Errors and Attacks using Agents

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Abstract:- Modern software system are unique, complex and extensive in nature and it has many execution time variations and also fallout the system properties like execution and availability, these systems are very difficult to handle, so to overcome this we use reconfigurable systems these system are the one whose configurations can be changed even after system is constructed and they are not affected by the external changes made. Self adaptive systems must be capable of modifying itself as per the situations and if any changes are made in the system the subsystem configurations are also changed. Reconfigurable system envelop the gap between software and hardware to attain higher functionality we use software agents which work together to achieve some goals, agents are the one which act has humans and corrects the errors by itself without human support.

Keywords: - Reconfigurable Software, Agents, Self Adaptive System

I. INTRODUCTION

In this paper we use agents which remove the errors from the system, when the errors occur in the system and correct it automatically by itself. Agents can take their own decisions and act accordingly they have potential to learn on their own they can also talk with other agents from one system to another system to run a system in hassle free environment we use software agents. In this paper we have built an application where web sockets acts as an agent. In this era it is very difficult for the humans to correct all the errors present in the system hence on behalf of humans the intelligent agents does the work so that the burden is reduced. In the recent past years the use of agents as been increased in many manufacturing systems. There are many types of agents some agents are pre programmed and work according to users wish, some agents just work like humans they have proficiency to break down the functionalities into sub functionality and work autonomously, and the agents have potential to move in a charismatic environment. The systems must work efficiently to meet the user requirements and also work altogether to gain the impression of the customers, hence agent based software's were implemented these software works intelligently in order to make efficient use of the system. The multi agent based software's used to govern the distributed systems and control the production.

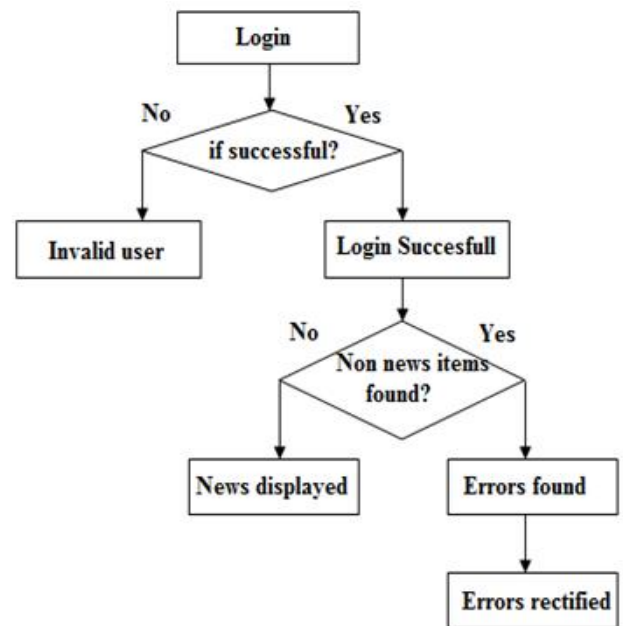


Fig 1:- Flowchart

II. EXISTING SYSTEM

In the existing system the fractals are considered as agents which work to attain the changes made in the system automatically the fractals were used in the fractal manufacturing system, this is intelligent manufacturing system. Whenever the errors occur or the system configurations are changed the fractals which act as agent mitigate the errors in the systems and reconfigure the system to work properly.

III. PROPOSED SYSTEM

In this project we have built a news application in which all the news from the world can be fetched and all the news is updated per minute and it is stored in the database and the news is displayed, while the news is being displayed on the web page if any non news contents are interrupted in between the original news the web sockets which acts as agents configure the system errors automatically. Since the web sockets perform two ways communication it is easy to send and receive the request very easily. These remove the erroneous content from the news automatically that is by deleting the non news items from the database this action is performed by agents in the background without the knowledge of the user the agents do not affect the user interaction with the web application.

IV. ARCHITECTURE

Architectural diagram epitomize the defined approach which consist of hardware and software connections and it represents the connection of the system. It represents the sequence in which the system works. The following architecture depicts the news application structure.

News channel server: The servers are used to process the demands of the customer and deliver the request of the client via network. When we send the request to the server for accessing the news from a particular news channel it processes the request and sends back the response if the request is processed as a result the news is displayed to the client. Servers help the user to access the information from various sites.

Flash server: Flash server is used to store the data for a tedious duration here the data once stored is not deleted we can access the data even after years and months. This kind of server uses the flash storage to store all the data .This is convolute storage it does not need power supply to cache the data, it is very easy to use. Here all the news which is displayed will be stored in the flash memory and it can be accessed whenever the client needs. The data can be accessed very quickly it can be accessed 200 times faster than the actual data.

Agent: The software agents works individually without any help and performs the corrections on its own the news will be displayed on the web page from the requested news channel if any non news items are found the web sockets which acts as agents automatically removes the unrelated news from the database.

News client: The news is displayed to the users when the request is processed by the servers and the response is sent back.

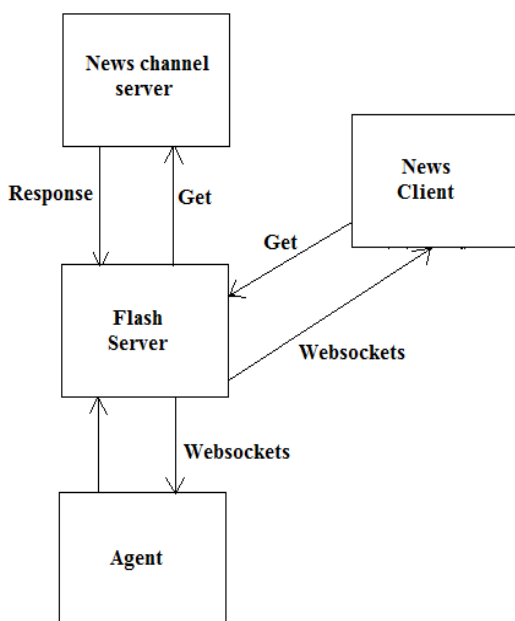


Fig 2:- Architecture

V. RESULTS

The following snapshots depicts the output of the news application

- Login form is used to check that the login credentials are authorized or not if the entered email and password is correct it will take you to news application, if the email and password is wrong it will show invalid details.

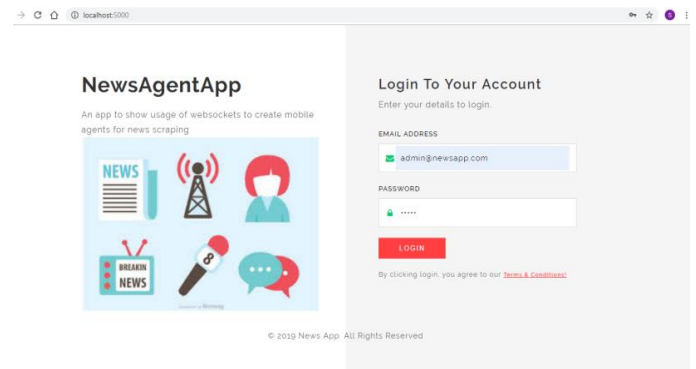


Fig 3

- Once we login to the application it will be connected to the database so that the news will be loaded and it will start storing in the database.

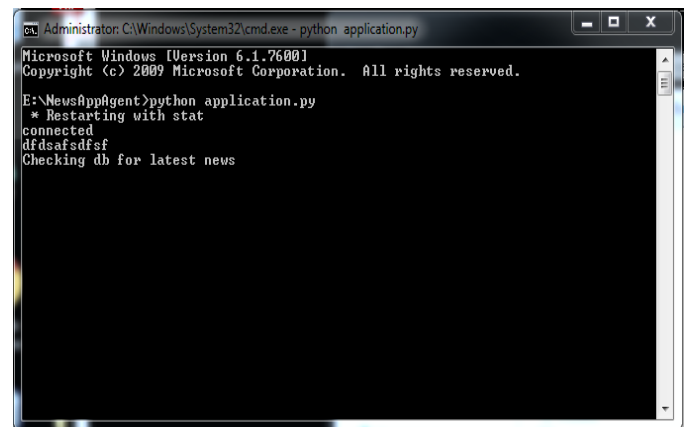


Fig 4

- The news will be displayed on the web pages when the news is loaded.



Fig 5

- When the non news items are interrupted in between the news the message is popped up saying non news items found.

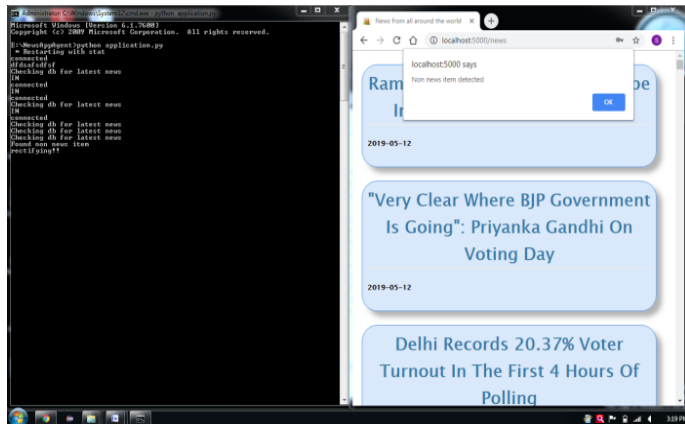


Fig 6

- The non news items are resolved by the agents and the errors are removed it shows the message errors are rectified.

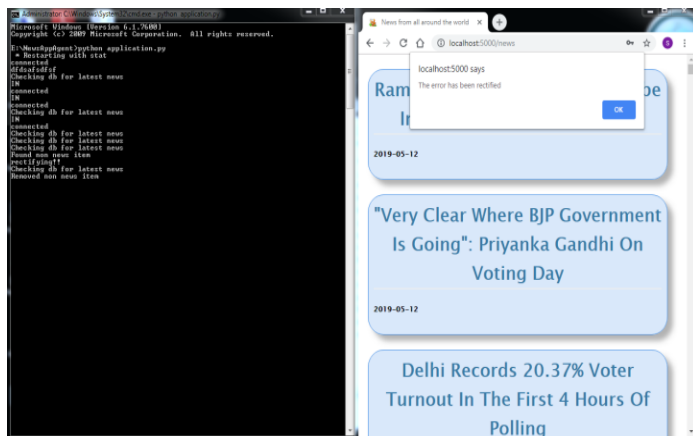


Fig 7

VI. CONCLUSION

Reconfigurable systems have been used to reduce the burden of users and agents do the work instead of humans so that to achieve high productivity in the software and it is important to decide properly that which kind of agents we should use in the system. In this paper agents remove the unrelated content from the news and increase the feasibility of the application. By implementing the proposed system we will be able to apply it for content categorization of web applications. All the information is updated per minute we can access information from all the fields.

FUTURE ENHANCEMENT

In this project I have used agents to remove the errors from the news application in future we can use the same for web filtering. For example we have politics related events it must display only politics related information it should not display the unrelated information.

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