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Application of Multi-agent system in College Searching for Fresher's Recruitment System

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Abstract: ***The proficiency of Multi Agent imposes us to use its features to design an approach towards constructing a system for Recruitment of Fresher. Using any single agent we cannot perform complex activities of candidates requirement so we use distributed problem solving approach and utilize it with multi-agent to perform each step towards building FRS.***

Here we assist our system to get input request by company for the recruitment of candidates then our system provides a list of eligible candidates for the recruitment process of company on the basis of pre-conditions and parameters given by the company. We also use some cognitive parameters (like) which make our agents proactive in selection of zone then state and then colleges.

Keywords: Agent Architecture, MAO, MAS, MAOS Parameters.

1. Introduction

In artificial intelligence exploration, agent-based methods technology has been addressed as a new model for conceptualizing, planning, and applying software systems. Agents are refined computer programs that act independently on behalf of their operators, across open and circulated environments, to solve a increasing number of multifaceted problems. (MAS) several In the historical few years, Multi Agent Systems (MAS) have developed, combining research from the ground of Distributed Artificial Intelligence (DAI) with a new methodology to software engineering .

2. MAS Based Exemplary For FRS

We propose a model which uses a region selector agent (RSA) which collects the input request from the company which contains pre conditions, preferences and various other parameters that eligible candidate should satisfy. RSA verifies and validates the input request. Than on the basis of given parameters RSA selects an appropriate and specific region for the recruitment process. Now RSA co-ordinates with state selector agent (SSA) which on the basis of parameters of company's request selects which state is suitable for the recruitment process. Now we use various cognitive parameters which make our agent proactive to provide more suitable information to company. These cognitive parameters include the CMM rating of the company, distance of college from the company's workplace and various other parameters including literacy rate of the state etc. The RSA selects a state where the recruitment process can take place and co-ordinates with Organization Selector Agent (OSA) which on the basis of some cognitive parameter college reputation selects the institute in that state this parameter. percentage in the college, previous placement ratio, average backlog per student, state ranking of college, level of aggradations of college, faculty grading etc. After OSA selects an institute it co-ordinates with Training and Employment Agent (TEA) of that college. This TEA selects students on the basis of branch, percentage, backlog criteria of the input request of company and generates a list of eligible students and will be providing a specific information to company. These cognitive parameters include the CMM rating of the company, distance of college from the company's workplace and various other parameters including literacy rate of the state etc. The RSA selects a state where the recruitment process can take place and co-ordinates with Organization Selector Agent (OSA) which on the basis of some cognitive parameter college reputation selects the institute in that state this parameter.

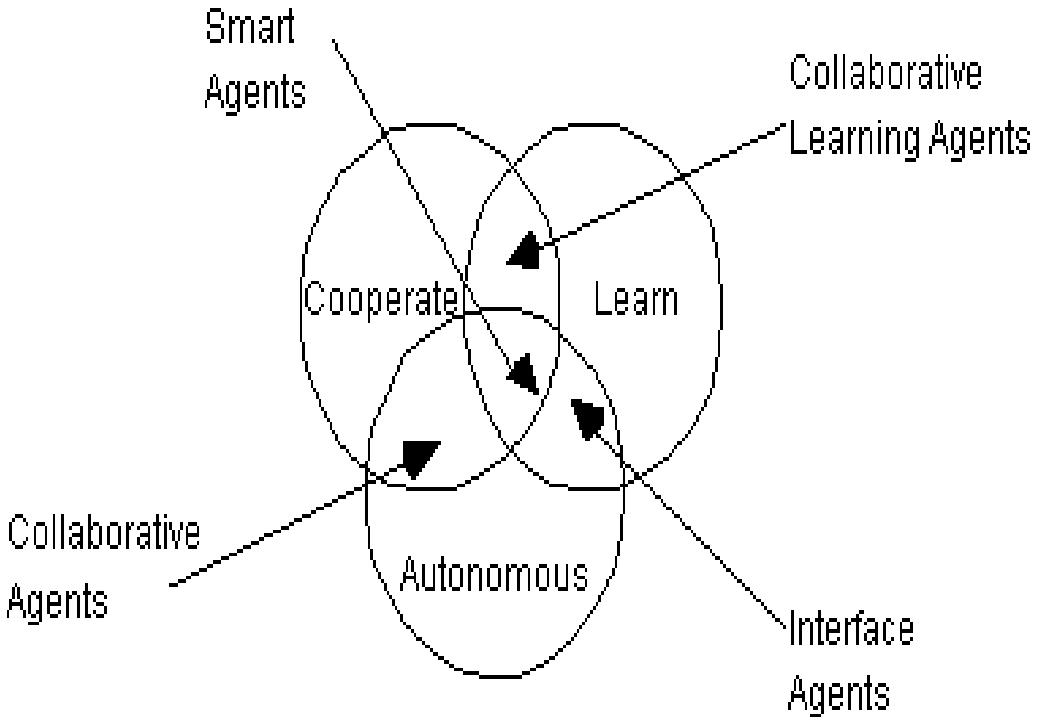

Figure 1: A Simple agent block diagram.

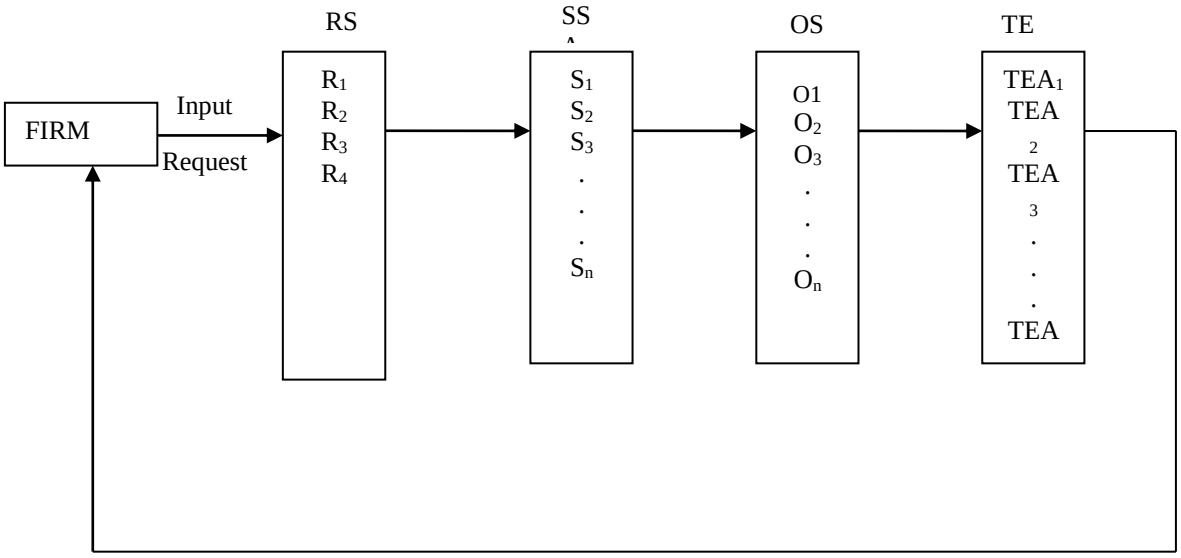

Figure 2: Agent Request/Response diagram

2.1 Present System

Every time when a corporation has to conduct its placement drive it has assured requirement in arena of interest but the only thing identified is a criteria of percentage and backlogs, this gives only qualified candidates list provided by the college placement officer. This comprises a list of unsuitable candidates that though are eligible allowing to criteria but are not appropriate to work in the corporation.

2.2 Working of the System:

Various software agents co-operating work together and sharing information among. themselves will create the system. A proper organization of agents and the method of collaboration with which the information will be delivered on, will be essential for this. Every agent has to perform a specific task. Hence, two types of responsibilities are given to agents:-

1. Execute their precise task.
2. Share the Info with other agents.

3. Functionality of Agent

3.1 Employment agent:

Receive request of staffing from organization and collects the data from college and offers that facts as per schema to Organization agent.

3.2 Organization agent

Organization agent primarily contributes in progressing of gen to placement agent then in addition to it as per data given by Placement Agent arranges the data in the suitable format.

3.3 State Agent

State agent creates two accountabilities firstly; it forwards the Company's standards to Institute Agents and have combined information by different Institute Agents. Second task is to analyse the ranking of institute and forward this ranking to Area Agent.

3.4 Region Agent

Obtains request of enrolment from Company and forwards this application to State Agent for additional processing.

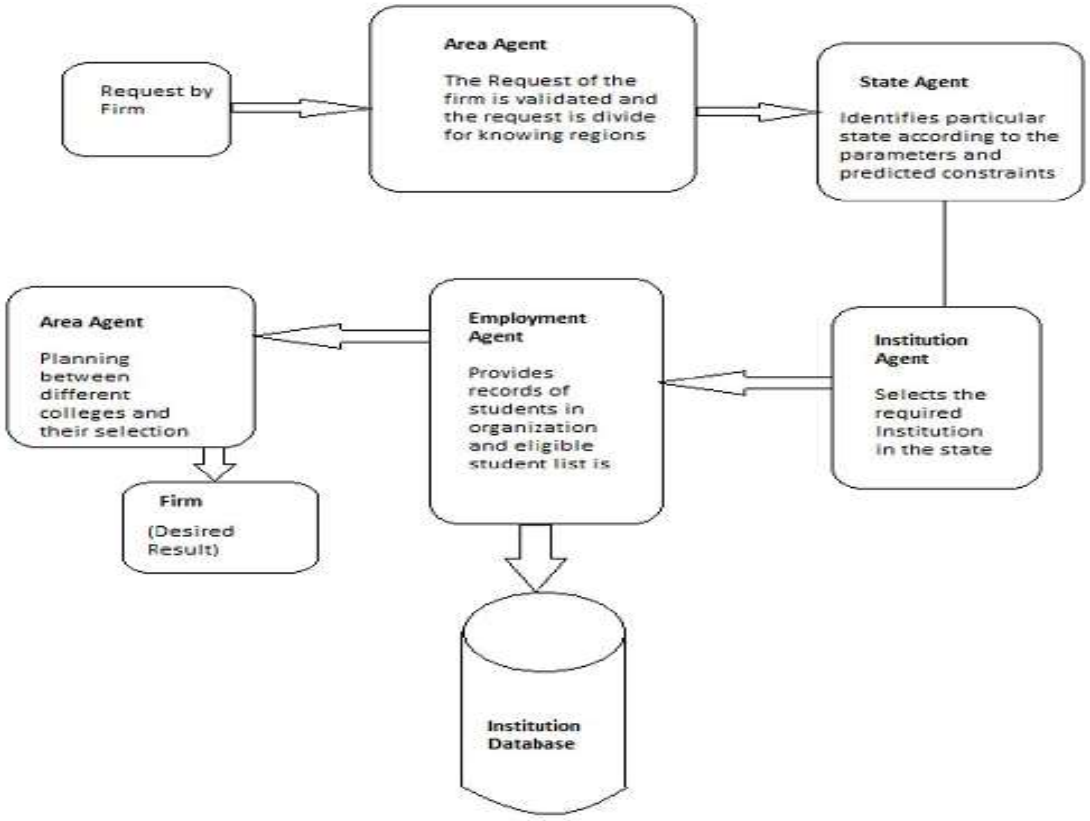

Figure 3: Agent Interaction Diagram

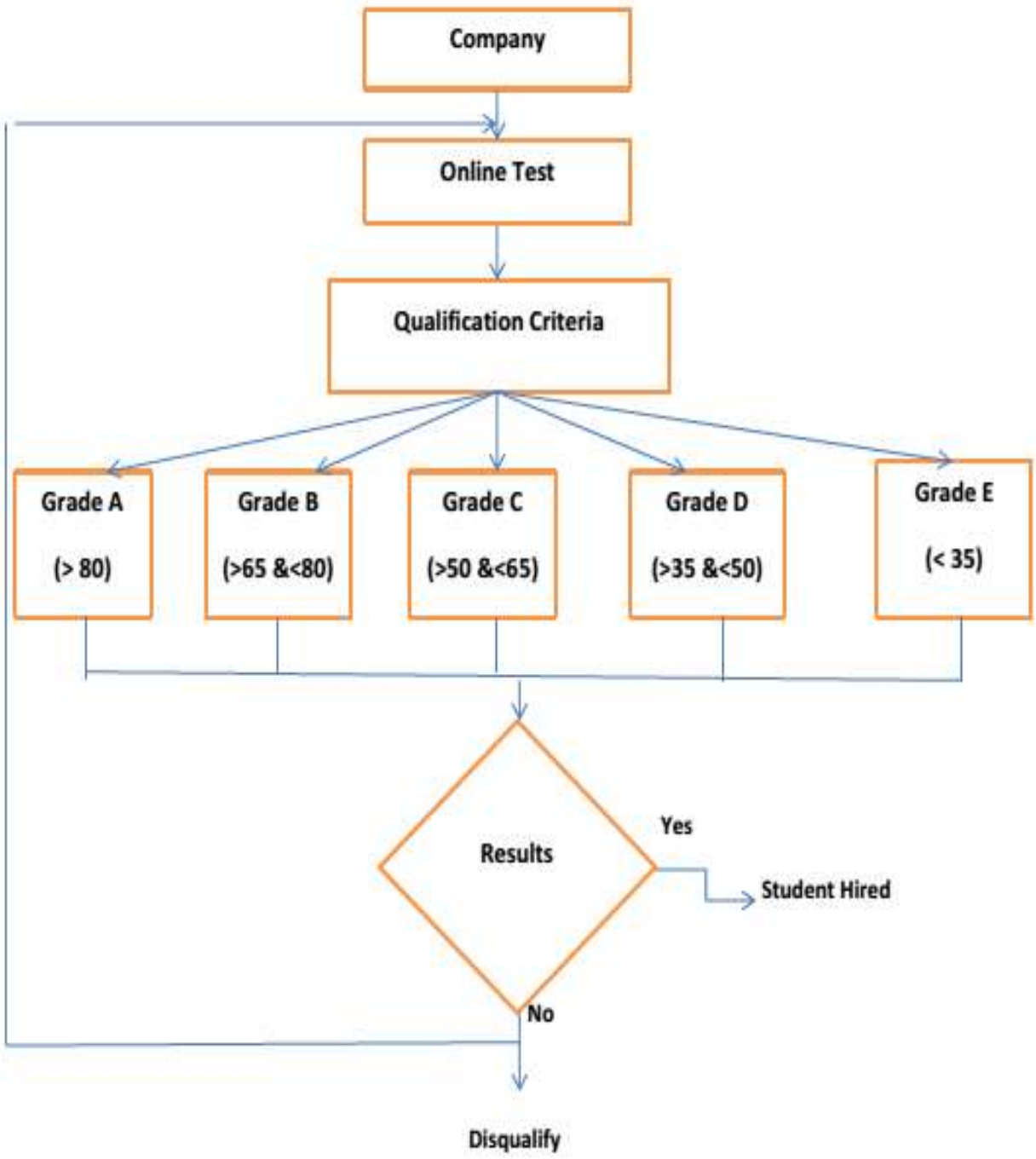

Figure 4: Grading Architecture for Freshers Recruitment System

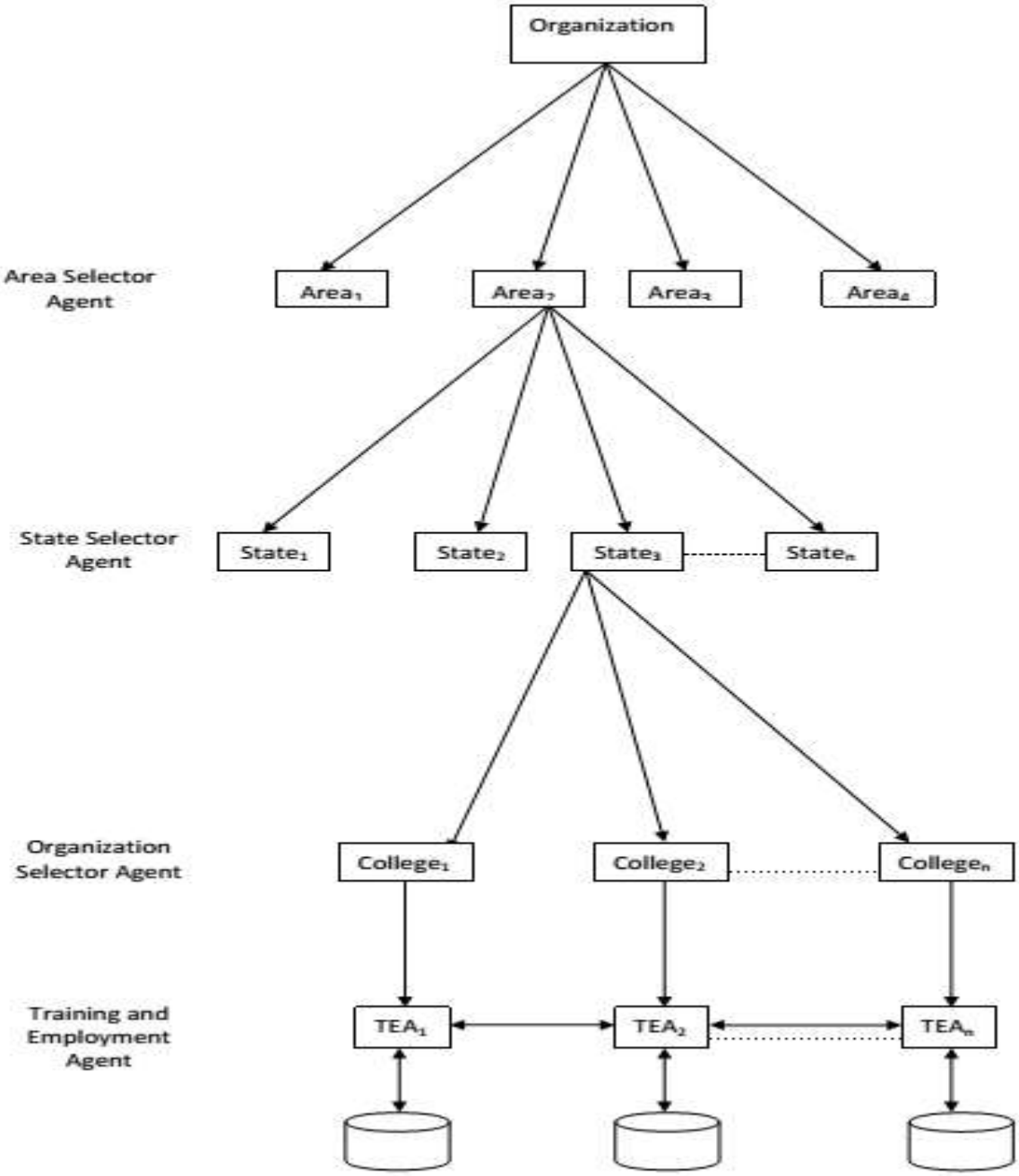

Figure 5: Working of Agents

4. Conclusion

Lastly, one and only conclusion comes from this research paper that the fresher's who will be completing their graduation might be able to gets hired or recruited for the placement or company and this criteria will not only be beneficial to the college but also to the companies who advertises on various naukri portals. We have taken help from various research papers by studying them and then this paper have been prepared. For this we have provide various references.

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