I.1. Project Definition

B2B Matchmaking System

In the today world, applications on our smart phones, smart watches, tablets, and laptops are going to be an inseparable part of our life. Specially by spreading the internet throughout the world (e.g., appearing 5G networks, or the satellite internet, and or free WiFi spots) and having smart devices with powerful processors and large memories, people can access to data almost everywhere, do any processes on their mobiles and so on.

Therefore, the methods and tools that help us to deal with daily basis problems are changing rapidly, and governments and societies are going to be more and more electronical. This means we need more application to manage our works remotely or have more useful and versatile pocket devices (i.e. smart phones).

Although, the need for new applications on our computing devices (i.e., from a small smart watch till a powerful professional laptop) are increasing constantly, however, the number of IT companies which provide services for application development requests are not increased with a same pace or distributed even in all parts of the world. Therefore, it is needed to have some kind of matchmaking systems to connect **clients** to **providers** in this little global communication village.

Our **B2B Matchmaking System** is a bridge between **clients** and **providers**. **Providers** are those IT companies that can consult and develop different variety of software systems, and **clients** are any type of customers that can order and pay for a development process. Our system tries to list best matches for our clients based on their interesting keywords.

This problem, is the main motivation beyond our project which we aim to build a system to respond this need by using an agent-based methodology.

Our project includes three main steps. Each Step will be delivered as a separate assignment:

1. **Step 1**: Project definition and High-level analysis
2. **Step 2**: Data interaction modeling and low-level design
3. **Step 3**: Implementation using JADE framework

For implementation we selected Java language, thus, we are going to use the JADE framework. Regarding the methodology we are going to use GAIA methodology for analysis and design our agent-based system.

We chose the GAIA methodology since it can be used with a variety of multi-agent systems and is broad in nature. It deals with both the macro-level (societal) and the micro-level (agent) aspects of systems.

GAIA is interested in how a community of agents works together to accomplish system-level objectives. What must be done by each individual agent in order to do this is another area of concern.