**Implementation Plan *(6.1)***

The overall process of implementation is divided into multiple stages and it will be done component by component.

While deciding the implementation order, we have examined several properties of the components like; their criticality, their size, the number of integrations that they will likely to have and etc. Then, based on these examinations we have given a number to each component indicating its priority on the implementation sequence. Then, from this ordering, we have identified some of the components which can be implemented at the same time and grouped them as one stage of the implementation phase. Finally after following all these steps we have ended up with the final version of our implementation plan.

The sequence that will be followed during the implementation plan will be like;

1. Model
2. DataService and DataAcquisitionService
3. RequestService and ResponseService
4. SOSService
5. RunService
6. LoginService and AccountService
7. Router

A brief reasoning for this type of ordering can be given as;

Model

“Model” can be referred as the center of the application. It is likely that every other component in the system will somehow connect or interact with model. For this reason, we have preferred to implement the model as a first step. We thought that having an accurate model before implementing and integrating the other components will be better for the overall correctness and the wellness of the system.

DataService and DataAcquisitionService

Since “data” forms a base for the main functionality of the system, it will be true to say that data is one of the most important thing in our application. So, the way data is collected, stored, transferred or in a more abstract manner, the operations that will deal with the data itself and the services that provide these operations are also very crucial. Also, most of the components in the application are in a direct interaction with these two components. As a consequence of this, we thought that it will be better to implement these two components at the early stages of the implementation.

RequestService and ResponseService

Similar to the services that are planned to be implemented before this stage, these two services also form a skeleton for the other components of the application and play a critical role over them. That’s why it will be better to implement these components as early as possible. Also, implementing these components earlier will be helpful for us in order to decide the performance of the system in terms of the request-response relation between the client and server. Because, if we encounter with decrease in the overall efficiency of the system, we will likely to have some time to find a way to make it better.

SOSService

This component is responsible from an important service called as AutomatedSOS which is offered by TrackMe. When its scope is thought, AutomatedSOS is a crucial service which is least tolerable for mistake. Because, it is in charge of providing an immediate help to the individuals in an emergency situation and in case of a mistake, the results that we will encounter might be more than we can imagine. That’s why, after implementing all the previously mentioned “skeleton services”, we have decided to start the implementation of SOSService. Because in that case we will have chance to devote more time on the implementation and possible improvement of this component.

RunService

This component is responsible from the Track4Run service. Since the job of this component is not as critical as the job of the SOSService, we thought it will be appropriate to implement it right after the implementation of SOSService. The important thing that we need to consider in this stage is to check the accurate connection between this component and the external map service which we have previously called as MapExService.

LoginService and AccountService

Compared with the other components of the application, these two components are among those components which have less priority within the implementation sequence. These two components are simpler to implement and unlike the services which are mentioned above, they do not require too much integration with other components. So, the implementation of these components can be done after finishing the implementation of other components.

Router

Router is the least critical component within the system. The only responsibility of this component is to identify the request that is coming from the client and forward it to the correct component that is in charge of this operation. So, its implementation can be shifted to the last position at the implementation plan.