CS555: Agile Methods for Software Development
Homework 09

Feature Driven Development (FDD) prescribes several different roles for different members of the development team. For example, the Chief Programmers play a different role and perform different tasks than the other programmers on the team. This contrasts with most other agile methods that treat all members of the team as (mostly) equals.

(1) Describe each of the six different roles mentioned by FDD.
- **a. What skills and/or knowledge is needed to fulfill the role? Justify your answer by referring to the tasks and responsibilities they have.**
- **b. How much software development experience is needed?**

The six roles mentioned by FDD are -

1. Project Manager
2. Chief Architect
3. Development Manager
4. Chief Programmer
5. Class owners
6. Domain Experts

1. Project Manager

He is the administrative head of the team. He mainly looks after the reporting, resources, space and the budget allocation. He collects the reports from his subordinate members and collaborate all the reports and present them to his clients and other staff.

Project manager has responsibility to get necessary budget and then distribute it accordingly throughout the project. Project manager generally is responsible for hiring the staff required for the project. He should be aware of the requirement of the project hence can hire the staff accordingly. Apart from these tasks, project manager organizes space and equipment.

Project Manager should have previous experience in the project management while the basic technical idea of the project so that he can hire the people accordingly. Project manager should be able to manage the finances, human resources and documents. He should have excellent communication skills as he would be representing and communicating with clients and people in the upper hierarchy of the company.

2. Chief Architect

He is the person who is in charge of the system. He needs to have knowledge of modeling and designing. He organizes the workshops which is attended by the stakeholders and other members who all discuss about the model and design of the system.

He or she should be able to approach the problems differently to get the most efficient and effective results. One should be having excellent Technical knowledge. Apart from that Chief Architect should be having knowledge of system modeling. He should be able to provide necessary technical infrastructure to facilitate the development of the product. For such tasks, chief architect should have had the years of experience as system designer. One should have excellent technical and modeling knowledge in order to fulfill the tasks of this role.

3. Development Manager

Development manager is the team manager for the development team. Chief programmers report directly to him. He is responsible to oversee the day-to-day work of development team. He makes sure that the development process is going at a pace which is required to deliver the product in time. Dev Manager oversees resolving the conflicts between chief programmers as well as conflict of resources. Development Manager is responsible for solving any technical queries raised by the chief programmers. Such tasks require multiple years of experience in development as well as in depth knowledge of technologies being used in the product development. Development Manager should be able to understand the project very well and should be able to solve the problem precisely.

4. Chief Programmers

He is the programmer who leads the team in designing the features. He is the team lead, provides guidance to the team members in implementing different features of the project and provides necessary resources.

They have experience as a developer for a few years hence have participated in entire SDLC a few times on different projects hence having the knowledge and experience of the issues which may arise during development. They participate during the designing and requirement analysis phases as they will be overseeing these tasks at a lower level. Chief Programmers should have experience as a developer for quite a few years so that they can guide the developers about the issues which might arise and help them resolve them when necessary. They should be able to identify important requirements since they participate in requirement analysis phase. They should also have a brief knowledge of designing the system.

5. **Class Owners**
   Class owners are the members of teams which implement various features. They can be experienced or entry level developers who work under the guidance of the chief programmer to deliver the features they are assigned. It is their responsibility to perform designing, coding, testing and documenting the features for the developing system. These tasks require them to have in depth knowledge of the project as well as technologies they will be working with. They should be aware of various documentation and testing techniques.

6. **Domain Experts**
   Domain Experts are considered as the voice of customers. They represent the users who will be using the system. Developers are dependent on them for delivering the correct working system. Their input is critical in the project hence they should have excellent communication skills. Their participation is vital to success of the product as they represent the end users. They are the ones who understands the functionality of the system the most. It is necessary for domain experts to know the product being developed well.

(2) Describe the advantages and disadvantages of segregating the software developer population by the roles in FDD.

Advantages:

- High quality code is generated due to the role of a guide who helps developers to generate code with greater quality.
- Software developer has a predefined role so that the tasks to be performed for the developers are clear and completed on time.
- The person to be contacted can be find easily.
- Developers get to focus on their development work as they don't have to focus on other duties they are not assigned.
- Every developer is responsible for his own work and it is easy to find the person when the error is generated.

Disadvantages:

- If there is absence of anyone for a particular role, the progress might be affected.
- Less people to work on the feature development.
- Dependencies increases as roles are pre-defined for every individual.