**SSW 555 Agile Methods for Software Development**

**Homework 9**

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**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 6 different roles mentioned by FDD. (Note: Don't just copy the descriptions found at Palmer's website. Express everything in your own words.) For each role describe:**

**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**

There are 6 different roles in FDD:

1. Project Manager (Administrative Lead)
   1. The project manager is administrative lead of the project. Skills he must have include reporting success of the team to the upper management, maintaining team resources (infrastructure, personnel), managing funding’s. Thus, the project manager must have administration or management experience and knowledge.
   2. This may require little software development experience. But having experience is an added bonus, as it proves useful for the project manager to manage resourcing and tasks of managing development teams.
2. Chief Architect (Responsible for overall design)
   1. The Chief architect is responsible for the overall design of the project. He is responsible for the overall integrity of the projects and ensures if all the features in the project are designed as per the requirements. Thus, this requires lot of technical knowledge and software design skills. He is the person to be contacted when there are design issues that the developers cannot figure out while moving forward to the development.
   2. The role requires a lot of technical knowledge and software development experience to take decisions aiming for optimal design and architecture of the system to be built. It might require 20-25+ years of experience.
3. Development Manager (team management)
   1. The development manager is responsible for daily communication with the developers. He is the one who looks after resolving the impediments in the way of the developers and keeping the spirit high of the development team. The development manager is responsible for resolving everyday conflicts for resources when the Chief Programmers cannot do it between themselves. Thus, this role requires a good technical knowledge and domain expertise.
   2. A good amount of software development experience is required. Probably 10-15 years.
4. Chief Programmers (leads team in designing the features)
   1. They are experienced developers and participate in high level requirements analysis and design activities of the project. They are responsible for leading a team of 3 – 8 developers for design and development of the software’s feature.  The team works collaboratively on the analysis and design for each feature. The Chief Programmer role also is also ultimately accountable to the other Chief Programmers on the project for the design and quality of the code that is delivered by their feature teams.
   2. This role also requires a software development experience of 5-7 years.
5. Class Owners (developers who implement features)
   1. Class owners are members of the development team under the guidance of the chief programmer. They handle all the design, coding, testing of the class they are assigned and are solely responsible for the ownership of their class. They are expertise of the class they write and take pride in its full ownership.
   2. This may require a software development experience of probably 3-5 years to get the expertise a certain type.
6. Domain Experts (voice of customer)
   1. They are users, clients, business people which mainly represent the customers. They use their business knowledge to explain to the developers how the tasks should perform. Based upon this knowledge the developers design the system for the users. Their clear knowledge of customer requirement is extremely crucial in delivery of the desired system.
   2. This requires very little to no software experience. It may require knowing the software engineering lifecycle and basic software development low level knowledge.

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

**Advantages:**

* Clear division of labor – Activities are clearly assigned to each role in the team and there are no conflicts between which work is supposed to be done by whom.
* Less distraction and better focus on work – Everyone is responsible for his task thus he can focus on the work he is assigned.
* Individual class ownerships - Every class owner can gain expertise in his domain and become domain knowledge expert. He is responsible for everything for that class. He takes pride in individual ownership.
* Strengths and weaknesses of every person considered.

**Disadvantages:**

* Too much segregation of work or dividing the work into roles can prove to be overhead for small projects.
* It relies greatly on good communication between all team members which may not always be guaranteed.
* Individual class ownership can be risky if the class owner leaves the team.
* Having team members dedicated to very detailed focus areas may lead to programmers working in silos. (They cannot think of the entire scope or bigger picture.)