**Service based company:**

* Here customer will give the requirement, a person from the company called as BA (Business Analyst) will perform the requirement collection from the customer
* Company will develop the software and test the software and gives the software to respective customer who has given the requirement
* Here the software company don’t have any rights to keep source code with them and the software company don’t have any right to sell the same software to different customer.
* The company will get the projects from the customers.

**Product based company:**

* Initially the customer will not be present . A person called as PA (Product analyst) will perform market research and gather the requirement.
* Here the company will develop the software and test the software and sell the software to multiple customers. Later the customer while using the software if they want any changes, then they will give requirement to the company, then the company will develop the changes and test the changes gives the software to the customer by charging some amount .
* The company will have all the rights to keep source code with them .
* The company will develop the product based on the client requirement.

**Key Process Areas(KPA):**

* Each of the KPA defines the basic requirements that should be met by a software process in order to satisfy the KPA achieve that level of maturity.
* Conceptually, key process area form the basis for management control of the software project and establish a context in which technical methods are applied , work products like models, documents, data, reports, etc. are produced milestones are established, quality is ensured and change is properly managed.

**Primary Process:**

Once the client or users asked to develop some project they will be giving the details in that they will mention what are the requirements for them ?

The process of starting the execution is nothing but the primary process.

**Conceptualization and Initiation:**

Once we get the project definition then we have to think how we can do this project and what are the application requirements for the project

Once we have decided that these are the software requirements we are going to use By using these concepts how best we can design our application and give to the client.

**Requirement Gathering:**

It is nothing but collecting the requirement from the customer, we call it as Customer requirement specification(CRS).

**Functional Specification:**

It is the detailed document which explains how each and every features or functionality should works.

**Use case modelling:**

It is a graphical notation to communicate more clearly than natural languages and codes.

Represents an action that accomplishes some sort of task within the system.

**Development and Implementation:**

* **Analysis:** This is the stage where the company will undergo several considerations in order to develop the software which the customer has given the requirements, so the company will cross check whether we have sufficient resources or not?, whether we have sufficient lab setups or not?, and they will also cross check if we invest on this project do we get the profits, and they will decide which good model to follow to develop the software.
* **Design:** Once after the analysis stage is completed hen the company will go for design phase , it is done by the Architectures wherein they will look into the requirements and start designing the software generally the software will have 2 types of designs

1. High level design(HLD)
2. Low level design(LLD)

* **Coding:** Once after the design phase is completed the company will go for coding wherein the developers will look into both requirements and design and start developing the software by writing the code.
* **Testing:** After completing coding the developers will give the software to the test engineers, the test engineers will take up the software and start testing the functionality of the software by execution the test cases.

**Deployment and operation:** Once after the software is tested then it will be deployed into the production server which is present in the customer place, wherein a person from the company will move to the customer place and setup the environment and deploy the software into production server so that the customer can use the software and run their business.

**Maintenance:** Once the software installation is completed and customer while using the software if they find any defect or problem in this case they will communicate to the company ,

in software company they will freely service or they will give free support for fixing the defect for some time period based on the agreement between the company and the customer. This agreement period is called as maintenance period