

CSE4708: Software Project Management

Unit I : Introduction to Software Project Management (SPM)

Topic : Definition of a Software Project (SP)

Name: Manka Sharma

Week - 1

What is Software Project Management?

Software Project

- A Software Project is the complete procedure of software development from requirement gathering to testing and maintenance.
- It is carried out according to the execution methodologies, in a specified period of time to achieve intended software product.

Need of Software Project Management

- An intangible product.
- Tailor made to fit client's requirements.
- Underlying technology changes and advances frequently and rapidly
- Experience of one product may not be applied to the other one.
- Risk in software development
- Essential to manage software projects efficiently.

Software Project Vs. Software Product



Product
VS
Project

Fig 1: Product Vs Project

Source: Tutorialspoint

Software Project Vs. Software Product

Product :

- Product is like 'ready to use solution' which is built by the company and sold to different customers / setup as free source.
- If customer requires any changes like color, title, appearance changes and some extra functionality to be added, then customization's are done to the product.
- **General e.g.:** Purchasing a flat after construction is completed – In this case You can only do minor changes like paints and interiors.

Software Project Vs. Software Product

Product :

Examples: Google products like Gmail, Google Drive



Fig 2: Product Examples
Source: Tutorialspoint

Software Project Vs. Software Product

Project :

- Project is 'taking requirements from customer to build a solution'.
- The requirements are gathered from a particular client.
- **General e.g.:** Purchasing a flat before construction. You can construct it as per your guidelines and requirement.
- **Examples:** Banking projects like ICICI, HDFC and e-commerce projects like flipkart.com and bigbasket.com. These are specific to clients.

Software Project Vs. Software Product

PRODUCTS

- Requirements gathered from market survey.
- End users are more than one.
- Develop the application for Global clients.

PROJECTS

- Requirements gathered from particular client.
- End user is one.
- Develop the application for particular client.

Triple Constraints to Software Products



Fig 3: Triple Constraints
Source: Tutorialspoint

Software Project

- The job pattern of an IT company engaged in software development can be seen split in two parts:
 - Software Creation
 - Software Project Management
- A project is well-defined task, which is a collection of several operations done in order to achieve a goal.

Software Project

- A Project can be characterized as:
 - Every project may has a unique and distinct goal.
 - Project is not routine activity or day-to-day operations.
 - Project comes with a start time and end time.
 - Project ends when its goal is achieved hence it is a temporary phase in the lifetime of an organization.
 - Project needs adequate resources in terms of time, manpower, finance, material and knowledge-bank.

Project Management

- The methods and regulation used to define goals, plan and monitor tasks and resources, identify and resolve issues, and control costs and budgets for a specific project is known as project management.

Software Project Management

- Software project management includes the tools, techniques, and knowledge essential to deal with the growth of software products.
- In Software Project Management, the end users and developers require to know the cost of the project, duration and length.
- It is a process of managing, allocating and timing resources to develop computer software that meets necessities.

Software Project Management

- It consists of eight tasks:
 - Problem Identification
 - Problem Definition
 - Project Planning
 - Project Organization
 - Resource Allocation
 - Project Scheduling
 - Tracking, Reporting and Controlling
 - Project Termination

Software Project Management

- In problem identification and definition, the conclusions are made as approving, declining or prioritizing projects. In problem identification, project is recognized, defined and justified.
- In problem definition, the use of the project is clarified. The main product is project proposal.
- In project planning, it explains a series of actions or steps that are needed to for the growth of work product.
- In project organization, the functions of the personnel are incorporated. It is done in corresponding with project planning.

Software Project Management

- In resource allocation, the resources are allocated to a project in order that the goals and objectives are attained. In project scheduling, resources are allocated so that project objectives are attained within a sensible time span.
- In tracking, reporting and controlling, the process engage whether the project results are in accordance with project plans and performance specification. In controlling, suitable action is taken to correct improper deviations.
- In project termination, the concluding report is submitted or a release order is signed.

References

- Bob Hughes and Mike Cotterell, “Software Project Management”, Tata McGraw Hill, 4th edition, 2006 .
- Software Project Management, Tutorialspoint.
https://www.tutorialspoint.com/software_engineering/software_project_management.htm (accessed on 18th July 2020).