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<p><b>Subject Name &amp; Code:</b> Software Engineering, ADUA22204</p>		
<p><b>Title of Assignment:</b> Write the Goals, Requirements (Functional, Non-functional, User Interface) of your three CPS (Customer Problem Statement)</p>		

**Aim:** Write the Goals, Requirements (Functional, Non-functional, User Interface) of your three CPS (Customer Problem Statement)

## Assignment no 2 (SE)

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Title: Identify Goals, Requirement (functional, non functional, UI) and perform Analysis of a customer Problem statement

Q1. Why there is need of requirement engineering?

Ans) Requirement engineering is the process of gathering, analyzing, and documenting the requirement for a software system.

- i) It is an essential step in software development process because it help to ensure that the final product meets stakeholder and users.
- ii) Without proper requirement engineering, there is a risk of developing a system that does not meet the needs of user or is difficult to use, maintain and evolve.
- iii) Additionally, requirement engineering provides a clear understanding of the project scope and objective, which helps to guide the design and development of system.
- iv) Moreover, requirement engineering also help to identify any potential gaps or inconsistencies in the requirement and to solve resolve them before the development process begins.
- v) In summary, requirement engineering is a critical step in software development process that helps to ensure that final product meet the need of users.

Q2. What are functional, non functional and user interface requirement

→ i) Functional requirement :-

- Functional requirement are specific features or capabilities that a software system must have in order to meet the needs of stakeholder & users.

- These requirements define what the system should do and typically include specific actions, calculation or processing that system must be able to perform.

## ii Non Functional Requirement:

- Non Functional Requirements are the characteristics or attributes of a software system that do not pertain to its specific functions, but rather how well those functions are performed.
- These requirements include things like performance, security, scalability and usability.

## iii User interface requirement:

- User Interface Requirements describe how the system should interact with user and how user should interact with system.
- These requirements include things like layout, navigation and overall design and look of UI.

- \* All these types of requirements are important in the software development process, as they help to ensure that final product meets the needs of users and is easy to use, maintain and evolve.

CP (I): Customer feels insecure in transaction through online mode to book ticket of park.

Goal: To build and deploy secure system for easy transaction.

Functional:

- 1) System must contain function of Transaction correction, adjustment and cancellation.
- 2) System must able to send OTP, notification alerting regarding money transfer has been detected

Non-Functional:

- 1) System must not disclose information of user like account number, bank detail etc.
- 2) System must be quick and responsive.
- 3) System must be secure and protected.

UI:

- 1) Interactive design.
- 2) Easy to use.
- 3) Must able to handle many people at same time.

CP (II): Student are trying to learn various course in online mode but content website is not responsive.

Goal: We will build a responsive website.

Functional:

- 1) Our website should contain latest technology and must stay updated frequently.
- 2) It should have a proper notification message which will pop up before opening any file or any course.

Non-Functional:

- 1) It should refresh continuously without disturbing user.
- 2) It must have access to the computer files and browsers so that student must able to upload their assignment.
- 3) Student must able to see updated detail easily and quickly.

UI:

- 1) Interactive design.
- 2) Easy to use.
- 3) Interactive video player must be used in video.

CP (III): Scientist is researching on topic but unable to find proper detail of concept.

Goal: Make a website and android application containing all blog and project related information.

Functional:

- 1) Our system will take input of project requirement and bases upon that will give suggestion.
- 2) Our system will also suggest the scientist that in which area he can apply their project.

Non-Functional:

- 1) System should able to handle many users at a time.
- 2) It should individually act with that user.

UI:

- 1) Easy to use.
- 2) Small size.

Conclusion:

In this way, we can categories the functional, non-functional and UI. This will help to understand the CP easily.