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| **Key Concepts** | **Explore concepts' significance and relevance** | **Establish relevance, make sense and meaning -Find real-life contexts** | **Establish relevance, make sense and meaning -Find interdisciplinary connections** | **Engage in critical thinking** | **Technology, tools and techniques** | **Plan project management** | **Project specification and sketch** |
| It is the process of defining the components, architecture, interfaces, modules and data for a system to satisfy specified requirements.  The various kinds of designs for a system are:  **1.** Architectural design.  **2.** Logical design.  **3.** Physical design.  Alternative design methodologies include:-  **1.** Rapid application development  (RAD).  **2.** Joint application development  (JAD).  Our product is a client- server architectural design. It is based on or is network related. | According to software engineering, system designing has its own importance and value in system development process as a whole.  However, even in the smallest problems a top-level system design is critical for consistency and ease of use.  Coupling is helpful to measure the level of inter-dependability among modules and  cohesion is helpful to measure the level of intra-dependability within elements of module.  If Class components, aren’t externally consistent with other objects, the system will be brittle, and difficult to use. | -It is necessary for developers for hiding irrelevant details so that  one can focus on important things at a time.  -It is necessary as it helps in testing and debugging effectively.  -It is necessary as it tells at what level the modules interact with each other.  -It is necessary as it decides how well modules fits together.  The use of tesserac-ocr is needed for scanning image and converting it into text or different format. Hence it requires major testing and design of this is way too complex. | Related disciplines include:-  - more than one '[models](https://en.wikipedia.org/wiki/Systems_modeling)' are made by designer of what they see a product is eventually looking like, with ideas from the analysis section either used or discarded.  **–** analyzing the needs of the end users or customers.  **–** evaluates the actual functionality in relation to expected or intended functionality, including all integration aspects.  - Allows easy maintenance without affecting functionality of the software. It allows controlling complexity of design process. | It involves giving deeper thoughts into the selected methodology, having knowledge of cohesion and coupling which is functional and data in our case.  Lower coupling and higher cohesion will make a good program.  Modularization, Concurrency, software design level (Architectural, High-level and Detailed) and design verification play an important part. | Tools used for Designing Software Structure:-  **1. Star UML**– Data flow is being showed by using this tool by making sequence diagram.  **2.Argo UML–**  It is used to show hierarchy as well as to show state diagram.  **3. Decision tree-**  A way to display algorithm as flow chart and even calculating cost and other factors.  **4. Object-Oriented Design** **–** Object  Oriented Design is an approach to modular decomposition where problems and solutions can be viewed in terms of objects and operations. | We decided rather than having oral meetings we will first learn more while making actual document.    Divided project in different modules and then brainstorming is done on each part.  Immediate backlogs are none, are nothing yet, but further, SDD (Systems Design Document) has to be completed. | Meeting was done and the basic design concept was applied. |