**Design Thinking**

Design Thinking is a human-centered approach to innovation and problem-solving that emphasizes empathy, creativity, and collaboration. It's a methodology that designers use to brainstorm and solve complex problems related to designing. It is also beneficial for the designers to find innovative, desirable and never thought before solution for customers and clients. It is a blend of logic, powerful imagination, systematic reasoning and intuition to bring to the table the ideas that promise to solve the problems of the clients with desirable outcomes.

Design thinking is a five-step process, where each step focuses on a specific goal. Each of the steps is independent of the next step but is borne out of the previous step. Design thinkers are expected not to think of the following steps when working on one step.

The process starts with empathizing with the problem of the customer or the end-user. The process then moves to ideate on solutions using divergent thinking. The prototype is developed after convergent thinking and then the design thinkers’ resort to testing the prototype.

Empathize

Ideate

Define

Prototype

Test

1. **Empathize:** This step involves putting oneself into the shoes of the customer or the end-user of our solution. We need to understand the problems faced by the customer and we, as design thinkers, need to empathize with the customer. This step is carried out in the form of requirement gathering, which involves interviews and sometimes, even field visits. This step involves the process of analysis, the one which we discussed in the previous sections. There are a few points to be considered while interviewing the customer.

* The interviewer must brainstorm for the questions beforehand and must be fully prepared for the interview.
* The questions being asked must be open questions. No such question should be asked for which the interviewee can answer only in Yes or No. Such binary questions must be avoided.
* The interviewer must have plenty of ‘why’ questions. Here, the ‘five whys’ method can help.
* The themes of the questions must not be intermingled. The themes must be arranged properly and questions about a particular theme must be asked together.
* The questions must be refined thoroughly so that no trace of ambiguity is left in them.

Once these questions have been answered, we can proceed to the further steps with more clarity. This way, a design thinker will be able to cover all the necessary details related to the problem, gather all the requirements and think of the solutions with an exhaustive set of facts and information in hand. This will help in converging at a solution that takes into consideration the answers of all the questions.

1. **Define:** Now, we have learnt the problems of our customers and the context as well. It is time to define our problem and arrive at a problem statement. This statement will give us the necessary direction to proceed towards the issue faced by the customer. As a design thinker, we need to cover all the points and the answers that we got in the ‘empathize’ phase. This is where the process of synthesis comes into the picture. We have to club all the answers together and convert them into a single statement. This involves framing the problem in a human-centered way, focusing on the needs and aspirations of the users.
2. **Ideate:** The third component of the design thinking process is the most interesting and perhaps, the most rigorous as well. In this section, called Ideate, a design thinker is supposed to bring to the table as many ideas as possible. It encourages brainstorming, thinking outside the box, and exploring various possibilities without judgment. While brainstorming for ideas, it is not checked whether the idea is possible, feasible, and viable or not. The only task of thinkers is to think of as many ideas as possible for them. Because this stage is all about generating creative solutions to the defined problem. The goal is to generate a diverse set of ideas that can later be evaluated and refined.
3. **Prototype:** This step deals with building the ideas and checking for their feasibility to arrive at the final solution. The step of prototyping is the one in which the end user comes into the picture. The end user is actively involved in this component of design thinking. All the feedback is taken from the customer, and based on the criticisms, suggestions, and appreciations received, the design thinkers create a better solution after iterating the process of design thinking’s first three steps, viz. Empathize, Define, and Ideate. Prototyping requires thinkers to create tangible products, which can be small-scale models of the exact solution.

**Primary guidelines for Prototyping**

* Don’t waste too much of time on building a single prototype.
* The prototypes must be built with the end user in mind.
* The prototype must not be a mere piece of trash; it must create an experience for the user.
* Think of open questions that the user can shoot towards you when he experiences the prototype. The prototype is meant solely for the end user. There is no value in the prototype in case the user does not feel comfortable and satisfied with it. **Once the prototype has been developed, the next steps are as follows.**
* Take the end user through the prototype and let him/her experience it completely.
* Throughout the experience, make the user speak about his moment-by-moment experience. This will help you, as a design thinker, to capture the minute details of the experience.
* Try to actively observe and enthusiastically engage with the user during the experience.
* Once the experience is over, follow up with the user who had the experience with a set of questions. It will be better if the set of questions is not impromptu and is prepared beforehand.

1. **Test:** This phase is also called as 'Execute’. This is the phase where the final solution is tested on a full-scale basis. The idea that seems the best according to the feedback of the customers and end users in the prototype phase will be executed. In this step, the design thinkers are supposed to be collaborative and agile. Testing will help to understand what actually works and what does not. This step can be the most rewarding, if the prototypes succeed to give positive results, or can be the most annoying, if the prototype fails. After testing, the entire process of design thinking may have to be repeated. If the end user approves the solution, then the process of design thinking stops here.

Design Thinking is not a linear process; it's iterative and flexible, with designers often revisiting previous stages as they gain new insights and refine their understanding of the problem. It emphasizes collaboration and interdisciplinary teamwork, bringing together individuals with diverse backgrounds and expertise to tackle complex challenges. Overall, Design Thinking fosters a creative and user-centered approach to problem-solving, leading to innovative solutions that meet the needs of the people they're designed for.

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