



NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College, Permanently Affiliated to Visvesvaraya Technological University, Belagavi
Approved by AICTE & UGC, Accredited by NAAC with 'A' Grade, Accredited by NBA



A Report

Ideation Workshop Program for School Students

A three days – Ideation Workshop Program was successfully organized at New Horizon College of Engineering under the initiative of the AICTE IDEA LAB and the Department of Research and Development.

Chief Mentor	: Dr. Manjunatha, Principal
Faculty Coordinator	: Dr. Revathi V, Dean R&D
Faculty Co Coordinator	: Dr. A. Sujin Jose, Associate Professor- R&D/Mech
Tech Gurus	: Mr. Amrit Das, Mr. Thanuj Kumar
Date	: 28 th April 2026 to 30 th April 2026
Participants	: Students of New Horizon Gurkul and New Horizon Public School
Total No of Participants	: 12 students
Trainers	: Mr. Rakesh C

Objectives

- To introduce the fundamental concepts and principles of Design Thinking.
- To develop creative and critical thinking skills among participants.
- To enhance problem-solving abilities through innovative and user-centric approaches.
- To encourage the application of Design Thinking in developing practical and impactful solutions.

Overview

The session began with a detailed introduction to design Thinking. The Trainer elaborated on the five stages of design thinking—**Empathize, Define, Ideate, Prototype, and Test**. The participants were introduced to the concept of empathy as the starting point for innovation, emphasizing the need to understand user needs and challenges before developing solutions. Participants actively engaged in a series of interactive activities that guided them through all the stages of the Design Thinking process. Beginning with the Empathize stage, they worked in groups to understand user needs and challenges through discussions and brainstorming exercises. Empathy mapping is one of the foundational tools in the Design Thinking process, primarily used during the Empathize and Define stages. It helps designers, innovators, and researchers understand the user's needs, feelings, motivations, and challenges. By visually representing what users say, think, do, and feel, empathy maps enable teams to develop human-centered solutions that address real problems effectively.

Day 1 (28 April 2026) : Design Thinking

Venue : IDEA Lab

Trainer : : Mr. Rakesh C

The bootcamp was initiated with an introductory session during which the coordinators welcomed everyone and highlighted the importance of the bootcamp. This session began with an introduction to Design Thinking through which the participants were introduced to the five major stages associated with Design Thinking, including Empathy, Define, Ideate, Prototype, and Test. This introduction provided the participants with an insight into how innovative and creative perspectives could be used to solve real-world problems. This helped the participants understand the stages of the Design Thinking process and how they can implement them successfully.

This session was further divided into two parts in which the focus was on the initial two steps of the Design Thinking process, i.e., Empathy and Define. In this process, the participants gained knowledge about the significance of analyzing users and understanding their needs in order to find a solution that could meet their expectations. This session provided insights into how the collected data could be analyzed and what problem could be identified from these insights. Moreover, they were taught to formulate problem statements using the “How Might We” framework.



Day 2 (29th April 2026) : Design Thinking

Venue : IDEA Lab

Trainer : : Mr. Rakesh C

In this session, the Define stage was briefly covered by educating the participants on articulating problem statements based on insights about the user that they had gained during the Empathize stage. During this activity, the students were taught how to define problems from the perspective of users' needs, challenges, and pain points. Understanding this would allow them to appreciate the significance of having an adequately defined problem statement, which would lay the groundwork for developing a useful solution.

After the Define stage, the focus shifted to the Ideation stage of the Design Thinking process, which involved a lot of brainstorming sessions. Here, the participants learned the value of engaging in free-thinking without any boundaries or constraints and how to do so through different ideation techniques such as brainstorming, mind mapping, and brainwriting. Furthermore, they also learned to visualize and communicate their thoughts through drawing sketches and storyboards, as well as

performing some role-playing activities. Moreover, the participants were also educated on some methods for evaluating the generated ideas and selecting the most feasible and impactful ones. These include dot voting and feasibility analysis.



Day 3 (30th April) : Learning about 3d Printing & Introduction to Python
Venue : IDEA Lab

After engaging in the Design Thinking activity, the learners were exposed to the basics of 3D Printing and Python Programming. In the case of 3D Printing, the participants learned about the concept and significance of additive manufacturing technology, the application areas and use of this technology, and how the actual physical modeling is done from digital designs through 3D printing. This includes an insight into various forms of 3D printers, material requirements for printing, and the relevance of 3D printing in developing prototypes and products. Participants also got an idea about how the innovative solutions and concepts thought of in the Design Thinking process could actually become prototypes via 3D printing technology.

Furthermore, the participants were taught the basic concepts of Python Programming. This included learning about the concept of variables, data types, operators, conditions, loops, and logic in Python. Through practical examples and demonstrations, the participants were made familiar with Python as a powerful tool to solve problems and develop applications.



Outcomes

- The students had an excellent grasp of the Design Thinking process and its steps.
- They became better creative thinkers because of the program's activities.
- The participants improved their problem-solving skills through identifying the needs of the users and creating innovative solutions.
- The students learned how to generate, analyze, and develop solutions to problems.
- Teamwork was promoted through the program.

Conclusion

In summary, the bootcamp gave the students an opportunity to learn through an innovative approach combining creativity, problem solving, and technology. By going through the various stages of the Design Thinking process, they were able to develop the capacity to understand user needs, formulate appropriate problem statements, come up with new ideas, and deliver practical solutions to challenges. The exercises and presentations helped improve their creativity, collaboration, communication, and analytical skills. Moreover, by being introduced to 3D Printing and Python Programming, the students learned how to link innovative ideas with modern technologies and their application. This gave them exposure to technologies such as prototyping, as well as programming fundamentals. As a whole, the course was successful in motivating and helping the learners develop a creative and solutions-focused mentality.