7.2.1

1. Title of the Practice: Creating an IP landscape for the technical stakeholders to converge to techno-legal professionals

2. Objectives of IPR cell

The goal of the IPR cell is creation and development of Intellectual Property at the Institute

- To create awareness about the rules and regulations of the IPR procedure amongst the students and faculty.
- To conduct workshops, seminars and training courses on IPR.
- To promote better understanding of IPR and to identify more IPs
- To encourage and provide direction to students and faculties for filing IPR applications.

3. Need Addressed and the Context

SAKEC has MOUs with many national and international organizations that facilitate research projects. Intellectual properties are generated in the institution through many ways, such as research projects where students provide many innovative solutions to real-world problems and contribute to societal benefit. IPs are also generated through internship and final year projects. IP plays an important role in providing a competitive edge to any institution. The institute IPR and Research Cell is established to bridge between academic activities and ever-dynamic requirements of the institute and industry. SAKEC IPR Cell is committed to encourage, protect, manage institutions IPs such as Patent, Copyright, Trademark etc. IPR Cell arranges various activities like awareness workshops, Seminars and Case Studies. The college also offers an institutional level course on IPR which was opted by 87 in 2019-20 and currently has 67 students. Faculty and students of SAKEC are actively participating in the IPR filing process.

4. The Practice

The IPR cell was established in July 2019 and has made consistent progress. The members for IPR Cell are appointed for an academic year by the head of institution. The same is conveyed to the members through the copy of office order. The office order is displayed on notice board for dissemination to faculty and students. The IPRC In-charge, after discussion with the members, assigns one or more role/s to individual members. The cell coordinator and cell members have incorporated innovative methods to make it active and visible. As members of IPRC will mentor for IP related tasks, the number of staff and students in committee may vary as per overall requirement for the academic year.

The responsibilities include

1. Organize activities aligning to the objectives of SAKEC-IPRC
2. Publicize the activity through various modes such as banners, posters, social media and face-to-face communication
3. Facilitate the registration process of the participants
4. Provide all the technical support before and during the conduction of the activity
5. Document the details of activity
6. Collect and analyse the feedback
7. Take necessary actions on feedback

a) Seminar on Intellectual Property Rights Awareness:

The first step was to create awareness among students and staff members about IPR to take measures for protecting their ideas, scholarly publications, databases, computer programs, etc. Hence, IPR cell conducted a number of seminars for Disseminating scope of IPR cell, creating Awareness and motivating stakeholders.

b) Copyright and Patent Filing procedure

After awareness, the second step is to understand the actual procedure of filing copyright and patent. The IPR Cell conducts a hands-on Session on Copyright and Patent Filing for faculty members and Students. Attendees created accounts on copyright.gov.in & started filing applications for copyrights.

c) Mentoring Session for Respective Departments and Individuals

After filing IP, the applicants may need assistance in further communication with the IP India office. This communication includes replying to discrepancies or replying to examination reports. SAKEC IPRC mentors individual cases through oral or/and written communication. IPR Cell does hand holding till the entire process is complete.

f) Offering IPR & Patenting as elective course SAKEC IPRC took the initiative to motivate the students of final year to opt for IPR & Patenting as institute level elective course. In the Revised Syllabus of Mumbai University our college was one among the two colleges who opted for this course. As the curriculum was widely scattered in a number of books, teachers had to make a lot of efforts to collect and compile quality resources.

5. Evidence of Success:

The organized events helped the Faculty and Students to file Patent and Copyrights and Publish books on IPR.

- There has been a sizable increase in the number of Copyrights and Patent Filing since the establishment of IPR Cell.
- The faculty and students have inculcated the habit of Copyrighting their paper and Research works.
- The Seminars and Workshop session has resulted in an increase in the number of Copyrights and Patent filed by both Faculties and Students. 40 copyright applications have been filed till now. 30 copyrights are already registered. 2 patents are filed.
- The institute had hosted a Faculty Orientation program for the Institute elective subject-IPR and Patenting for semester VIII prescribed by University of Mumbai where many faculties from different colleges have attended the session.
- Many students from different streams of engineering in the institute are opting for the IPR as an Institute level elective course.
- A book on IPR entitled "Intellectual Property Rights" authored by inter department faculty Ms. Dhanasheree Toradmalle and Ms. Asha Durafe.
- Our faculty members are invited for delivering talks and awareness sessions at reputed organisations.

6. Problems Encountered and Resources Required

To train technical staff and students with legal aspects towards intellectual property to add a techno-legal aspect to their personality was a challenging task. As every individual IP is unique and has different requirements with varied backgrounds, it is challenging for IPRC members to understand each and then guide.

Entire process from seeking the permission from college, to requesting NoC from institution and maintaining records for applied IPs is a challenging task.

7.2.2

1. **Title of the Practice:** Mentoring students for Hackathon competitions

2. Objective of the Practice:

The process of mentoring students for competitions such as Hackathon meets the following objectives

- To motivate students to participate in such competitions in order to leverage its benefits
- To inculcate team building and leadership skills among the students
- To make students understand and apply systemic approach to problem solving
- To imbibe the culture of product innovation to solve some of pressing problems in our society
- To harness creativity and expertise of students, academicians and visionaries

3. The Context

Hackathon is a nationwide initiative to provide students a platform to solve some of the challenging problems we face in our daily lives, and thus inculcate a culture of product innovation and a mind-set of problem solving. It facilitates students to meet and collaborate with others in their field of expertise. It challenges the participants to exhibit their ability to innovate and create compelling, real-world solutions. Due to the learning-by-doing approach employed at hackathons, students learn new skills and attain new knowledge within a short span of six months and can be hugely rewarding. Hackathaon promotes healthy competition and imbibes a sense of achievement among the participants.

SAKEC promotes and motivates students to participate in various hackathons. It does effective hand holding for the entire process of learning. All the functional and non-functional requirements of hardware and software editions are fulfilled by the institution to bring a positive and proactive approach among students.

4. The Practice

Apart From the mandatory spokesperson from directive of Smart India Hackathon (SIH), SAKEC has a full-fledged committee exclusively formed for Hackathon. The committee is responsible for smooth functioning of activities such as publicity, registration, documentation, arranging expert lectures, coordination between students and institute for all other requirements. Following are the sequence of activities performed during the entire process-

1. **Take registrations from interested students**:
   Pre-registration forms are circulated among all the students through the college website.
2. **Group Formation**:
   Students form a group of six students involving at least one female candidate (recommended). At the same time, they are made to select a few problem statements of their interest.
3. **Mentor selection by students**:
   As per the domain of problem statements and the expertise of faculty members, the group approach and decide the mentors on mutual consent.
4. **Problem statement finalization:**
   A rigorous discussion and evaluation of the feasibility of all the selected problem statements are done and finalized. If required, all problem statements can be discarded and a new one can be selected.
5. **Solution proposal**
   A prototype model of the proposed solution is built under the guidance of a mentor as per the requirements given by SIH.
6. **Evaluation and review solution proposal**
   The proposed solution is reviewed by a panel of experts consisting of internal and external members. In order to standardize the process of review, a well-defined rubric is designed by the internal members based on the on field experience of the internal SIH committee and mentors. As per the suggestions given by panel members, the solution is revised and improved.
7. **Final submission of solution proposal**
   Documentation teams along with the department coordinators prepare the consent letter of the institute which is needed while uploading the final revised proposal. Students upload the final proposal in the SIH portal which is validated by the spokesperson of the institute.
8. **Acceptance/confirmation of participation from students**
   The SIH declares the shortlisted proposals on the SIH website. Group Leader get the intimation of acceptance which needs to be acknowledged as a confirmation of participation in the Grand Finale.
9. **Preparation of grand finale**
   Following activities are done as part preparation-

- Session by industry experts that help the group to bring novelty and completeness in the proposed solution.
- Mentors and students partially implement the solution to the final selected problem considering the different factors such as innovation, uniqueness, sustainability, timeliness and social impact. Solution is finalized after number of revisions.
- In parallel, departmental coordinators complete all the functional and non-functional requirements such as stationary, hardware, banners, etc.
- Spokesperson and respective group leader coordinate with host institute to look into accommodation and travel arrangements

10. **Grand finale:**
    Mentor(s) accompany their respective groups to the grand finale. They guide and motivate the group to perform to their potential.
11. **Felicitation of participants and winners**
    After successful completion of grand finale, institute felicitates presenting and winning teams which motivate the next batch of students to participate in hackathon
12. **Further implementation request by concerned ministry**
    In some cases, either the concerned ministry or private industry may approach students to further develop their prototype model to full fledged solution. In such situations, the mentors continue to handhold the group throughout the complete process.

5. Evidence of Success:
The rigorous process of mentoring has resulted in the following outcome

Academic Year	No of solutions submitted	No of teams selected	Number of Teams won	Winning Team	Name of the Mentor
2019-20	40	04	02	SIX_FOLD (First prize -INR 1,00,000)	Ms. Dhanashree T and Mr. Chetan Mahajan
				code4c@use (Second prize - INR 75,000)	Ms. Jalpa Mehta Ms. Kranti Ghag
2018-19	36	02	01	PHOENIXFORCE (First prize -INR 50,000)	Mr. Atul kachare Mr. Tejas Hirave
2017-18	31	08	02	Dignitas (Second Runner Up Prize- INR 50,000)	Mr. Atul kachare Mr. Tejas Hirave

				Techgeeks18 (Special 2nd Runner Up Prize by Ministry of Sikkim)	Ms. Jalpa Mehta and Ms. Kranti Ghag
2016-17	11	05	01	IGNITE (Best Innovation Award prize-INR 10,000)	Ms. Vaishli Hirlekar

6. Problems Encountered and Resources Required (150 words)

- Mentors need to be updated with the latest trends in technology.
- Keeping the students morale and enthusiasm till the end of arduous continuous 36 hours coding during the grand finale.
- Mentors have to take out a significant amount of time from their busy schedule of other academic activities.