Criterion 2 - Teaching- Learning and Evaluation

2.3 Teaching- Learning Process

Support File for Cri-2.3.1: Student-centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences

INDEX

Sr. No.	Document Name
1.	Sample of Experiential Learning (hands-on-workshop/Miniproject) of Computer Engineering
2.	Sample of Experiential Learning (hands-on-workshop/Miniproject) of Electrical Engineering
3.	Sample of Experiential Learning (hands-on-workshop/Miniproject) of Mechanical Engineering
4.	Sample of Participative Learning (Student-Presentations/Quiz/Poll/Crossword/Puzzle) of Computer Engineering
5.	Sample of Participative Learning (Student-Presentations/Quiz/Poll/Crossword/Puzzle) of Information Technology
6.	Sample of Participative Learning (Student-Presentations/Quiz/Poll/Crossword/Puzzle) of Mechanical Engineering
7.	Sample of Problem-Solving-Methodologies (Compute/Simplify/Make Model/Tabularize/Chart) of Computer Engineering.
8.	Sample of Problem-Solving-Methodologies (Compute/Simplify/Make Model/Tabularize/Chart) of Mechanical Engineering.

Sample of Experiential Learning (hands-on-workshop/Miniproject) of Computer Engineering

St. Francis Institute of Technology

Mini Project Topics

Class : **SE CMPN A** Academic: 2022-23   Sem :III and IV

Group No	Roll nos	Names	Topic Selected	Guide Alloted
A1	25	Shrutimadhuri Pal	CAMPUS SELECTION SYSTEM	Ms. Prachiti P
	24	Janvi Pakhmode		
	19	Jelestina Nadar		
	17	Raisa Furtado		
A2	32	Janet Rebello	Pet Rescue and Adoption	Ms. Prachiti P
	36	Rian Alphonso		
	38	Hajera Ali		
	39	Saumya Poojari		
A3	27	Nigel Colaço	WorkConnect	Ms. Monalisa Lopes
	31	Royce Gracias		
	37	Jason Sampy		
	43	Aakhaash Diclas		
A4	29	Devraj Madichetty	Vocabulary Improviser Website	Ms. Dakshata
	30	Jaden Prasad		
	41	A Maria Rex		
	62	Chrisban		
A5	65	Jennessa Rowena Dsouza	Academe	Ms. K. Priya
	67	Om Kamerkar		
	70	Jheel Shah		
	73	Chaklashiya Mansi Shailesh		
A6	55	Glancy Dsa	Recipe maker	Ms. K. Priya
	63	Kate Alphanso		
	66	Nehal Kadam		
	68	Chrissel Machado		
A7	54	Sahil Putran	Canteen Automation System	Ms. Annies Minnu
	56	Ricky Chetty		
	60	Smith Jiue		
	69	Shreyas Navalkhe		
A8	5	Shawn Rodrigues	Security Check-in Manager	Ms. Dakshata
	4	Valdrin Pandrick		
	13	Alister Almeida		
	20	Samuel Albert		
A9	46	Alfred Vembil	Automatic Parking Management Program	Ms. Prachiti P
	50	Shibhya Kaimal		
	3	Saileen		
	9	Yohan		
A10	51	Pranay Prakash Chavan	CAREER GUIDANCE	Ms. Prachiti P
	52	Reece Falcao		
	53	Ryan Joe		
	57	Fabian Pereira		
A11	1	Dhruv Suvarna	Website for Orphan Welfare	Ms. K. Priya
	6	Vaidehi Kale		
	7	Hansie Mendonca		
	74	Nahak Anushree Durgacharan		
A12	10	Reeve Silvera	MUCollegeEvents	Ms. Reshma
	21	Callahan Carvalho		
	22	Nadeem Mithawala		
	23	Evan Mendonsa		
A13	61	Yash Shirish Andhale	Restaurant table booking	Ms. Annies Minnu
	58	Saurish Ranjane		
	59	Warren Castelino		
	75	Makwana Vedant Jigna		
A14	14	Siddh Surani	Online Turf booking system	Ms. Dakshata
	16	Atharva Raut		
	15	Denzil Mudaliar		
	2	Sahil Rodrigues		
A15	26	Aslin Dcunha	Newsfeed Application-based Software	Ms. Annies Minnu
	28	Avron Souto		
	33	Alroy Rodrigues		
	35	Lloyd Dsouza		
A16	8	Jashan shetty	Stockomputer	Ms. Annies Minnu
	18	Bipin Kotian		
	11	Ammar Dadani		
	12	Varanasya Kudva		
A17	44	Rohan Das	Portfolio builder website	Ms. Reshma
	47	Prashant Vanjare		
	34	Aryan Puthran		
	48	Reuben D'souza		
A18	40	Smith Rojars Lopes	Tax Calculator	Ms. Dakshata
	45	Joshua Laurent Sequeira		
	42	Eva Zacharia		
	49	Jason Pereira		

A19	71	Dylan Dsilva	Sign Language Interpretation	Ms. Reshma
	72	Shashank Kamble		
	76	Harsh Kalgutkar		
	64	Glenn Dmello		

Class : **SE CMPN B** Academic: 2022-23 Sem :III and IV

Group No	Roll nos	Names	Topic 1	Guide Alloted
B1	13	Sukumar Rajesh Soni	QR code voting system	Ms. Bidisha Roy
	16	Dishant Haresh Shah		
	22	Bruno Johnson Pegado		
	18	Ankit Kanji Poriya		
B2	47	Manav Sharma	2 Factor Authentication for ATM Transactions using face detection	Ms. Nidhi Gaur
	45	Saakshi Bagal		
	42	Jesal Nanda		
	36	Carolyn Gonsalves		
B3	15	Yashyashsvi Singh	Productivity monitoring of employees in organization	Ms. Bidisha Roy
	19	Bhumika Pimple		
	48	Prachi Sharma		
	24	Patil Aniket Padmakar		
B4	46	Sania Nemade	SFIT Socials	Ms. Bidisha Roy
	50	Chinmay Shinde		
	40	Raunak Banwar		
B5	28	Glen Robert	SFIT Event Management Website	Ms. Priya K
	31	Shrajan Karkera		
	32	Soumyadeep Das		
	23	PATIL ISHWARI RANDHIR		
B6	3	Samit Fernandes	SPAM FILTER APP	Ms. Nidhi Gaur
	4	Jaden Franco		
	11	Sahil Vartak		
	20	Ralph Pereira		
B7	7	Ojas Mahaddalkar	Student Database Using Blockchain and Face Recognition	Ms. Priya K
	6	Mukesh Gupta		
	10	Prasad Pathak		
B8	30	Janhavi Manve	Ticketless Entry System to monuments/museums	Ms. Bidisha Roy
	33	Poorna Dani		
	34	Ruth D'abero		
	35	Geethu Joseph		
B9	29	Tanmay Mohod	Eduverse- Lecture Rescheduling App	Ms. Priya K
	38	Lillian Rodrigues		
	41	Yogiraj Buddhiwant		
	49	Sonal Shinde		
B10	26	Yash Parmar	Vehicle Renter	Ms. Reshma
	27	Omkar Parab		
	37	Aryan Pange		
	44	Nikson Nadar		
B11	5	Riddhi Gupta	Car pooling with security	Ms. Nidhi Gaur
	8	Gaurav Mane		
	9	Renuka Munde		
	12	Rohit Tarke		
B12	1	NashCorreia	Music production	Ms. Priya K
	14	JerioSoares		
	17	Vedant Satvi		
	21	SwenPegado		
B13	51	Mishita	Social Media Analytics	Ms. Monalisa Lopes
	55	Joel		
	62	Unnati		
	61	Myron		
B14	54	Ynez Dias	Worksaga	Ms. Monalisa Lopes
	56	Shane Coelhio		
	58	Lyris Dsilva		
	60	Dewain Diago		
B15	53	Hrishikesh Kavale	Pushup Counter using Augmented Reality	Ms. Monalisa Lopes
	57	Avanish Vartak		
	63	Deep Jain		
	52	Veon Almeida		
B16	39	Marina Mathew	Travel and Tourism website	Ms. Nidhi Gaur
	43	Gupta Saumya Satish		
	2	Dsouza Roshaun Hubert Charles		
	25	Patel Rushabh Pradeep		

TE-A Mini Project Groups and Topics Academic Year:-2022-23 Sem:-V and VI

Group Nos	Roll No	Name of the Student	Mini Project Title	Extension of the Last sem Mini Project(If yes then please mention the new features which you are going to add)	Guide Name
A1	2	Roosewelt Antony		Yes	Ms.Ankita K
	3	Aditi Bane			
	4	Anushka Bhandary			
	18	Lance Fernandes	Title - Air Pen		
A2	1	Reuel Amin			Ms.Ankita K
	9	Alarik Correa			
	12	Joston Dsouza	Title- Go Cart: A smart trolley system		
	14	Onil Dsouza		Yes	
A3	5	Aatif Bhat			Ms.Ankita K
	8	Suzanne Corda	Title-Recommender System Using Deep learning		
	15	Joshua Dsouza		Yes	
A4	6	Nikhil Bhise			Ms.Ankita K
	7	Yash Chourasia			
	10	Dhruv Desai	Title: E-commerce Website with AI Chatbot (Clothing)		
	17	Jayden Elangikal		Yes	
A5	11	Ashlyn Dsilva			Ms.Ankita K
	13	Renoy Dsouza	Title : Mushroom Identification System		
	16	Lincia Dsouza			
	19	Elvina Fernandes		Yes	
A6	20	Brendon Ferrao		Yes	Mr.Sachin More
	21	Dillon Girkar			
	24	Lisban Gonsalves			
	25	Athen Gonsalves	Brain Tumor Detection using deep learning		
A7	28	Alec Lewis		Yes	Mr.Sachin More
	30	Vendrell Mendonca			
	31	Louis Nadar	Fatigue Detection		
	38	Ashwin Pillai			
A8	22	John Andrin Gomez		Yes	Mr.Sachin More
	23	Jess Gonsalves			
	29	Simson Mastan	Fake News Detection		
A9	32	Trinity Naidu		YES	Mr.Sachin More
	34	Deepak Parihar			
	35	Lipika Parui	NSS Event Management App		
	36	Meet Patel			
A10	26	Greeshma Hedvikar		No	Mr.Sachin More
	27	Karan Kamath			
	33	Prathamesh Parab	NGO Management Website		
	37	Vedant Pednekar			
A11	43	Melvina Tulji		Yes	Ms.Snehal K
	44	Damayanti Patil			
	45	Steven Mathew	Intelligent tourist system		
	51	Roshan Nadar			
A12	39	Rhea Pinto		This project will include two modules, one will apprehend one's present	Ms.Snehal K
	46	Elbin Thomas Abraham	Emojify - Converting Text and Images to Emojis		
	50	Jayesh Kapgate			
	54	Chryselle Marina Barret			
A13	48	Celine John Philip		and other tools used in gardening, setting reminders to water plants, Reading articles about	Mr.Sachin More
	49	Yasshita Jathan	Title: Agridoc - E-commerece application with Plant disease detection		
	52	Kris Rawal			
	57	Parbat Singh Rajpurohit			

A14	40	Varad Prabhu	Crypto Messaging System	No	Ms.Varsha Nagpurkar
	47	Nathan Joseph			
	53	Carl Mascarenhas			
	56	Kevin Gomes			
A15	55	Juan Noronha	Automatic Speech Recognition for Regional Languages	No	Mr.Rupesh Mishra
	42	Zaid Shaikh			
	41	Atharva Satam			
A16	60	Parth Barai	Spam SMS filtering using ML	yes	Mr.Rupesh Mishra
	62	Mehul Bhere			
	67	Axill Dcunha			
	69	Joel Devasia			
A17	64	Lauren Colaco	OTT subscription model	No	Mr.Rupesh Mishra
	71	Jessica Gonsalves			
	72	Jason Gonsalves			
	74	Lyann Henriques			
A18	58	Daniel George	Predicting Student Performance using Regression analysis	No	Mr.Rupesh Mishra
	65	Kyle Crasto			
	75	Shruti Humbal			
A19	61	Tejas Bedre	Fake product detection using blockchain	yes	Mr.Rupesh Mishra
	66	JEFF Dbrito			
	68	Jess Lopes			
	70	Vian Dabre			
A20	63	Aditi Bhoir	VIBE-AN MUSIC PLAYER BASED ON AI POWERED VOICE ASSISTANT	No	Ms.Snehal Kulkarni
	73	Simone Gracias			
	59	Minakshi devi			

Sample of Experiential Learning (hands-on-workshop/Miniproject) of Electrical Engineering

ST. FRANCIS INSTITUTE OF TECHNOLOGY
Department of Electrical Engineering

List of Mini Project Groups for Direct Second Year Academic Year
2022-2023

Group Number	Roll No.	Name of the Students	Project TIltle(Tentative)	Guide
1	22	Kazi Tausif Ahmed Maqsood Ahm	inverter using IC555	**Omkar Pawar**
	27	Shaikh Rehan Guljar		
	30	Chourasiya Satish Kumar Prakash		
	32	Chavan Aditya Jayant		
2	29	Smith Stephen Dsouza	automatic staircase lighting	**Mohini Kher**
	28	Suraj Hiralal Chaurasiya		
	31	Akshay Bharade		
3	23	Tejas Satish Jadhav	Clap switch	**Mohini Kher**
	20	Sanika Maruti Supal		
	41	Pratik Santosh Dalvi		
	42	Shubham Gautam Munge		
4	45	VAISHYA SUNIL ANANDLAL	Digital switchboard	**Omkar Pawar**
	61	CHAILKAR MOBASSHIR MUR		
	37	**PAWASE RIYA VIJAY**		
5	55	Siddhi Dagdu Jangam	Undergroud cable fault detection	**Kalyani Soni**
	48	Darshan Vishnu Kadam		
	56	Siddhi Ratnadeep Kadam		
	57	Shrey Boghabhai Kanjaria		
6	21	OZAIR KHAN	adjustable auto on-off delay timer using IC 555	**Mohini Kher**
	24	ZAID ANSARI.		
	34	RIHAN MANIYAR		
	40	HARIS PAWASKAR		
7	43	Ashutosh Santosh Hatkar	Off-grid automatic street lighting	**Kalyani Soni**
	36	Roshan Pancham yadav		
	35	Heramba dalvi		
	38	Vishwajeet Jairaj Narayankar		
8	44	Pratik Anil Ga	IOT based fan regulator	**Mohini Kher**
	46	Hardik Ramesh Prajapati		
	59	Amir Hemant Vernekar		
	62	Rahul Kumar Ramashish Yadav		
9	25	Mitesh Mahendra vaktana	Solar battery charge controller	**Kalyani Soni**
	26	yash anil hodabe		
	39	shardul rane		
	33	Shubham Ramesh Dixit		
10	51	Nayan Wankhede	Fire alarm system	**Mohini Kher**
	63	Jason Gonsalves		
	47	Samarth Mane		
	58	Ayush Jagtap		
11	52	Om Sardesai	Home automation system	**Omkar Pawar**
	53	Sahil Mulla		
	54	Harsh Saini		
	64	Ankit Pal		
12	65	Aryan Raut	Automatic three phase change over system	**Kalyani Soni**
	50	Darshan Waghmare		
	60	Yashraj Mahimkar		
	49	Sayyed Mohsin Ali MeerAjagar A		

ST. FRANCIS INSTITUTE OF TECHNOLOGY

Department of Electrical Engineering

List of Mini Project Groups for Second Year

Academic Year 2022-2023   SEM - III

Group Number	Roll No.	Name of the Students	Project Title	GUIDE
1	13	Makarand Samant	solar power bank proximity charging	**Ms. Ekta Desai**
	18	ANIRUDDHA SUDIN YERAM		
	14	Gaurang SAWANT		
	10	DARPAN PRAJAPATI		
2	7	TUSHAR MORE	Arduino weather station	**Mr. Kannan K**
	8	RISHI NARAYANAN		
	9	JAINISH PATEL		
	16	EZAM SHAIKH		
3	6	OMKAR MORE	System to measure solar power and battery	**Ms. Shyma K.**
	19	ALBE DEVASIA ANTAPPAN		
	12	SILVAN MILTON ROSARIO		
4			smart home	**Mr. Omkar Pawar**
	5	PRACHI ANANT MANDADKAR		
	2	KARAN KUMAR SATYAM ARURI		
5	17	DEEPAK RAVINDRA YADAV	prepaid energy meter	**Mrs. Mohini Kher**
	3	HARIOM VAIDYANATH CHOUDHA		
	11	VEDANT MAHESH RAUT		
		MD SHAHNAWAZ SHAHBAUDDIN		

ST. FRANCIS INSTITUTE OF TECHNOLOGY
Department of Electrical Engineering

SE SEM IV	SE PROJECT GROUP		
Group Number	Name of the Students	Tittle of the Project	Name of Guide
1	DARPAN PRAJAPATI Makarand Samant Gaurang SAWANT	Smart home	Ms. Megha Fernandis
2	TUSHAR MORE RISHI NARAYANAN JAINISH PATEL EZAM SHAIKH	Design and Implementation of Ardino Weather Station	Mr. Omkar Pawar
3	KARAN KUMAR SATYAM ARURI ANIRUDDHA SUDIN YERAM Pravin Gaikwad	smart appliances for home	Ms. Megha Fernandis
4	PRACHI ANANT MANDADKAR OMKAR MORE SILVAN MILTON ROSARIO ALBE DEVASIA ANTAPPAN	smart inverter with constant solar monitoring system	Mr. Omkar Pawar
5	DEEPAK RAVINDRA YADAV HARIOM VAIDYANATH CHOUDHARY VEDANT MAHESH RAUT MD SHAHNAWAZ SHAHBAUDDIN ALAM	prepaid energy meter	Ms.Mohini Kher
6	Kazi Tausif Ahmed Maqsood Ahmed Shaikh Rehan Guljar Chourasiya Satish Kumar Prakash Chavan Aditya Jayant	Techometer with data recorder	Ms. Megha Fernandis
7	Tejas Satish Jadhav Sanika Maruti Supal Pratik Santosh Dalvi Shubham Gautam Munge	power generation using speed breaker	Ms.Mohini Kher
8	Siddhi Dagdu Jangam Darshan Vishnu Kadam Siddhi Ratnadeep Kadam Shrey Boghabhai Kanjaria	underground cable O.c. and S.C. fault detection	Ms. Amisha Joshi
9	OZAIR KHAN ZAID ANSARI. RIHAN MANIYAR HARIS PAWASKAR	Anti Sleep alarm circuit	Ms. Amisha Joshi
10	Ashutosh Santosh Hatkar Roshan Pancham yadav Suraj Hiralal Chaurasiya	IOT based transformer monitoring system	Ms. Amisha Joshi
11	Pratik Anil Gamare Hardik Ramesh Prajapati Amir Hemant Vernekar Rahul Kumar Ramashish Yadav	smart irrigation	Ms. Megha Fernandis
12	Mitesh Mahendra vaktana yash anil hodabe shardul rane Shubham Ramesh Dixit	Boost converter and simulation on BMS for stand alone solar PV system	Ms. Amisha Joshi
13	Jason Gonsalves Samarth Mane Ayush Jagtap Ankit pal	fire detectors	Ms. Amisha Joshi
14	Om Sardesai Sahil Mulla VAISHYA SUNIL ANANDLAL CHAILKAR MOBASSHIR MURAD ALI	solar cleaning Robot	Ms. Amisha Joshi
15	Aryan Raut Darshan Waghmare Yashraj Mahimkar Sayyed Mohsin Ali MeerAjagar Ali	Three phase change over system with wi-fi	Ms. Amisha Joshi
16	Akshay Bharade Smith Stephen Dsouza Ankit Pal	Automatic stair lighing	Ms. Amisha Joshi
17	Heramba dalvi **PAWASE RIYA VIJAY** Harsh Saini	Clap switch using 4017	Mr. Omkar Pawar

ST. FRANCIS INSTITUTE OF TECHNOLOGY

Department of Electrical Engineering

List of Mini Project Groups for Third Year (SEM V)

Academic Year 2022-2023

Sr. No.	Roll No.	Name of the Students	Project TItle(Tentative)	GUIDE
1	19	Adnan Malik	Single Phase Inverter	**Ms Ekta Desai**
	5	Prashant Angekar		
	2	Manfred Fernandes		
	9	Shubham Jadhav		
2		Irfan Sheikh	Distribution Transformer Monitoring System (IOT Based)	**Ms Ekta Desai**
		Yash Nikam		
		Krishnakant Sarang		
		Raj Mirani		
3		SUSANTH NAIR	Speed Controller For Motors	**Mr. Omkar pawar**
		VINIL GOSAVI		
		Abhishek Nannavare		
		Kaushal Nerkar		
4		Satbir Singh	SCARA (robotic arm)	**Shyma K**
		Adaísk Naií		
		Jyotiraditya Varute		
		Divya Sutar		
5	59	Motilal Suthar	Power Bank for Laptop	**Kalyani Soni**
	63	Karan Valvi		
	23	Md Sajid Khan		
	67	Vivek Yadav		
6	3	ANSARI OSAMA HILAL	Design and implementation of single phase grid connected inverter with LCL shunt filter	**Kalyani Soni**
	54	MANOJ SHARMA		
	33	ABHISHEK NAGARE		
	42	PRASAD PATIL		
7	10	Tanmay Bhavesh Gala	Street Lightning	**Shyma K**
	40	Rahul Rajendra Parkar		
	13	Aaditya Avadhut Girkar		
	49	Yugam Mitesh Shah		
8	27	Atharva Kulkarni	Sun tracking solar panel	**Shyma K**
	20	Zaheen Jethwa		
	57	Dimple Singh		
	53	Umar Shaikh		
9	19	Loukik Jathar	Design and implementation of solar supported inverter with charge controller	**Kalyani Soni**
	37	Soham Nar		
	4	Payal Bandkar		
	64	Pallavi Varak		
10	28	Ashton Lobo	Weather station interface using ESP32	**Kannan K**
	60	Avdhut Tambe		
	1	Nachiket Ambre		
	30	Abhay Maurya		
11	26	Shrijita Bangera	SURVIVELANCE ROBOT USING ESP32 CAM MODULE	**Mr. Omkar pawar**
	29	Pratik Ingole		
	31	Akshata Gawade		
	43	Prathamesh Patil		
12	24	Mohd Usaid Khan	Centralized Home security/Burglar Alarm system with GSM	**Mohini Kher**
	51	Mohammed Adnan Shaikh		
	52	Taufiq Raza Shaikh		
	56	Ansh Singh		
	22	Khan Ahtesham		
	26	Adnan khully		

13	50	zaid shaikh	Power generation using speed breakers	**Mohini Kher**
	8	Lester Dsouza		
14	45	Rutikesh Potdar	Gesture Controlled Car	**Ms Ekta Desai**
	46	Smit Redekar		
	47	Ajinkya Sangle		
15	62	Simbron Tuscano	Smart Dustbin	**Kannan K**
		Lionel Gonsalves		
		Immanuel Nadar		
		Dipesh Gawari		
16	41	ASAAD NASIR PATEL	AI SMART GLASS	**Mr. Omkar pawar**
	6	YOGESH BASUTKAR		
	66	SHRUTIKA YADAV		
	61	THORAT DARSHANA VILAS		
17	7	Sainath Beenamoni	WIRELESS CHARGER	**Ms Ekta Desai**
	17	prathamesh jadhav		
	21	Nikita		
	44	Rajiv pimple		

ST. FRANCIS INSTITUTE OF TECHNOLOGY

Department of Electrical Engineering

List of Mini Project Groups for Third Year (SEM VI)

Academic Year 2022-2023

Group No.	No.	Name of the Students	Project TIitle	GUIDE
1	19	Adnan Malik	Electric fence System	**Ms Megha Fernandes**
	5	Prashant Angekar		
	2	Manfred Fernandes		
	9	Shubham Jadhav		
2	55	Irfan Sheikh	Partial Discharge detection in overhead conductor with real time monitoring	**Ms Megha Fernandes**
	39	Yash Nikam		
	48	Krishnakant Sarang		
	31	Raj Mirani		
3	34	SUSANTH NAIR	Three phase transmissin line fault detection system	**Mr. Omkar pawar**
	15	VINIL GOSAVI		
	36	Abhishek Nannavare		
	38	Kaushal Nerkar		
4	25	Satbir Singh	Application of Lipo Battery as SCARA	**Kalyani Soni**
	34	**Adaísk Naíí**		
	65	Jyotiraditya Varute		
	58	Divya Sutar		
5	59	Motilal Suthar	Active cooling for PV panels	**Kalyani Soni**
	63	Karan Valvi		
	23	Md Sajid Khan		
	67	Vivek Yadav		
6	3	ANSARI OSAMA HILAL	Smart protection and monitoring of IM	**Kalyani Soni**
	54	MANOJ SHARMA		
	33	ABHISHEK NAGARE		
	42	PRASAD PATIL		
7	10	Tanmay Bhavesh Gala	Street Lightning	**Shyma K**
	40	Rahul Rajendra Parkar		
	13	Aaditya Avadhut Girkar		
	49	Yugam Mitesh Shah		
8	27	Atharva Kulkarni	Tesla coil	**Shyma K**
	20	Zaheen Jethwa		
	57	Dimple Singh		
	53	Umar Shaikh		
9	19	Loukik Jathar	Monitoring of inverter using ESP 32	**Kalyani Soni**
	37	Soham Nar		
	4	Payal Bandkar		
	64	Pallavi Varak		
10	28	Ashton Lobo	Weather station interface using ESP32	**Kannan K**
	60	Avdhut Tambe		
	1	Nachiket Ambre		
	30	Abhay Maurya		
11	26	Shrijita Bangera	SURVIVELANCE ROBOT USING ESP32 CAM MODULE	**Mr. Omkar pawar**
	29	Pratik Ingole		
	31	Akshata Gawade		
	43	Prathamesh Patil		
12	24	Mohd Usaid Khan	Centralized Home security/Burglar Alarm system with GSM	**Mohini Kher**
	51	Mohammed Adnan Shaikh		
	52	Taufiq Raza Shaikh		
	56	Ansh Singh		
13	22	Khan Ahtesham	Power generation using speed breakers	**Mohini Kher**
	26	Adnan khully		
	50	zaid shaikh		
	8	Lester Dsouza		

	45	Rutikesh Potdar		

	46	Smit Redekar	Boost conveter for Solar Panel	**Ms Megha Fernandes**
14	47	Ajinkya Sangle		
	62	Simbron Tuscano	Smart Dustbin	**Kannan K**
	14	Lionel Gonsalves		
	32	Immanuel Nadar		
15	12	Dipesh Gawari		
	41	ASAAD NASIR PATEL	AI SMART GLASS	**Mr. Omkar pawar**
	6	YOGESH BASUTKAR		
	66	SHRUTIKA YADAV		
16	61	THORAT DARSHANA VILAS		
	7	Sainath Beenamoni	Tachometer	**Ms Megha Fernandes**
	17	prathamesh jadhav		
	21	Nikita		
17	44	Rajiv pimple		

Sample of Experiential Learning (hands-on-workshop/Miniproject) of Mechanical Engineering

St. Francis Institute of Technology (Engineering College)

Mount Poinsur, S.V.P. Road, Borivli (West), Mumbai-400103

Department of Mechanical Engineering

Sem - III		Course- MEPBL301 Mini Project 1A			A.Y.- 2022-23
Group no.	Roll No.	PID No.	Name	Title of Major Project	Guide
1	209	214008	KADAM YASH SAGAR	Mobility Walker	Mr. Sanjay Ghaskatta
	211	214010	KANCHAN NEEL SADASHIV		
	215	214014	MODY HARSHIL PIYUSH		
	220	214019	REDDY SHIVA KANAKRAJ		
2	203	214002	CHAVAN PRANAV UNMESH	Universal Joint	
	210	214009	KALEKAR OM KAUSTUBH		
	218	214017	PATIL MIHEER CHARUDATTA		
	219	214018	RAUT MANAD KIRAN		
3	201	214026	BERNICS ANTHONY RAJ	Peanut Shelling Machine	
	205	214004	CHOUTELE MOHIT MANOJ		
	212	214011	KANDAR DEVENDRA DHONDU		
	226	214025	YADAVAR KARTHIK BALAKRISHNAN		
4	207	214005	DSOUZA RALDEN DENIS	Agricutter	
	208	214007	FERNANDES ELVIS VINCENT		
	216	214015	MULEY TIMISH RAJESH		
	217	214016	NAIR RISHAB RAMDAS		
5	214	214013	KARNAD MANAV ROHIT KARNAD	Parametric modelling of Drill Jig	
	204	214003	CHIVILKAR ATHARVA SUDHIR		
	213	214012	KARKADA MARINE MACQVIN		
	221	214020	SALDANHA SIBONY WALTER		
6	223	214022	SOGAM VINAY BHASKAR	White Board Cleaning Machine	
	206	214006	DSOUZA ADRIAN ALEXANDER		
	224	214023	TORASKAR SHIVAM VILAS		
	222	214021	SALVI ATHARVA TUSHAR		
7	227	224252	MAHESH KUMAR KESHAV GUPTA	SCOTH YOKE MECHA	Mr.Siddharth Saindane
	228	224253	SHUSHEN LAXMIKANT MOLANKAR		
	229	224254	ADITYA SUBHASH TRIVEDI		
	230	224255	JEES JOSE VETTIYATTIL		
8	231	224256	ASHLEY AMULDAS CHETTY	MINI HACKSAW POWERED BY BEAM ENGINE	
	232	224257	ZAID ABDUL KADER KAZI		
	233	224258	SURYA MANOHAR MUDALIAR		
	234	224259	ASHUTOSH THAKUR		
9	235	224260	ARYAN ABHIMANYU PAWAR	CASE STUDY OF SOLAR PANEL USING PHASE CHANGE	
	236	224261	MAYURESH RANA		
	237	224262	PARAJ SADANAND SAKHALE		
10	238	224263	DHRUV RAJIV JAIN	ELECTRICITY GENERATION USING MINIATURE STIRLING ENGINE	
	239	224264	MAAZ SARFRAZ KHAN		
	240	224265	SAHIL SANDIP NISHANKAR		
	241	224266	DIVYESH ANAND PARAB		
	242	224251	DARSHIL DHARMENDRA SONDAGAR		

	243	224267	PANKAJ GORAKH GAIKWAD	PRINTING PRESS MACHINE USING DOUBLE TOGGLE MECHANISM	
11	244	224268	AMAN ARIF SHAIKH		
12	245	224269	UDDHAV MORESHWAR CHAUDHARI	CASE STUY OF EV CELL USING PCM	
	246	224270	AMEYA JITENDRA NALAVADE		
	247	224271	SANIL SANJAY RAMBADE		

St. Francis Institute of Technology (Engineering College)

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Department of Mechanical Engineering

Sem - III		Course- MEPBL301 Mini Project 1A			A.Y.- 2022-23
Group no.	Roll No.	PID No.	Name	Title of Major Project	Guide
13	248	224272	REYON WILFRED DSOUZA	REGENERATIVE BRAKING SYSTEM	Dr.Ravindra Garmode
	249	224273	JANVI VIRSEN MANJALKAR		
	250	224274	DHRUV DEEPAK MAROLIA		
	251	224275	PRINCE MUKESH MAROLIA		
14	252	224276	SIDDHESH SHAILENDRA KANADE	MINI STAMPING MACHINE	
	253	224277	SIDDHESH ANIL PAWAR		
	254	224278	SAHIL AHMED SHAIKH		
	255	224279	SHUBHAM ASHOK SUTAR		
15	256	224280	KIRTAN HEMANT MISTRY	PUNCHING OPERATION USING CAM AND FOLLOWER	
	257	224281	KUNAL ASHOK KUMAR PRAJAPATI		
	258	224282	PRANAV SURENDRA SHELAR		
	259	224283	SAHIL DHANANJAY DADHEKAR		
16	260	224284	HARSH SUNIL YADAV	BEAM ENGINE MECHANISM	
	261	224285	ADITYA MUKUND TAMBE		
	262	224286	KARAN NITIN PARMAR		
	263	224287	FURQAN ASHFAQUE FODKAR		
17	264	224288	SAURABH SHANKAR BIRAMANE	MANUALLY OPERATED PUNCHING MACHINE	
	265	224289	RUSHABH UMESH DABHOLKAR		
	266	224290	SHUBHAM BUJHARAT GUPTA		
	267	224291	PRATIK RADHESHYAM YADAV		

Mr. Siddharth Saindane
Assistant Professor & Coordinator
Department of Mechanical Engineering

Mr. Sunil Pansare
Head of Department
Department of Mechanical Engineering

St. Francis Institute of Technology (Engineering College)

Mount Poinsur, S.V.P. Road, Borivli (West), Mumbai-400103

Department of Mechanical Engineering

Sem - IV			Course- MEPBL401 Mini Project 1B		A.Y.- 2022-23
Group no.	Roll No.	PID No.	Name	Title of Major Project	Guide
1	209	214008	KADAM YASH SAGAR	Mobility Walker	Mr. Sanjay Ghaskatta
	211	214010	KANCHAN NEEL SADASHIV		
	215	214014	MODY HARSHIL PIYUSH		
	220	214019	REDDY SHIVA KANAKRAJ		
2	203	214002	CHAVAN PRANAV UNMESH	Universal Joint	
	210	214009	KALEKAR OM KAUSTUBH		
	218	214017	PATIL MIHEER CHARUDATTA		
	219	214018	RAUT MANAD KIRAN		
3	201	214026	BERNICS ANTHONY RAJ	Peanut Shelling Machine	
	205	214004	CHOUTELE MOHIT MANOJ		
	212	214011	KANDAR DEVENDRA DHONDU		
	226	214025	YADAVAR KARTHIK BALAKRISHNAN		
4	207	214005	DSOUZA RALDEN DENIS	Agricutter	
	208	214007	FERNANDES ELVIS VINCENT		
	216	214015	MULEY TIMISH RAJESH		
	217	214016	NAIR RISHAB RAMDAS		
5	214	214013	KARNAD MANAV ROHIT KARNAD	Scissor Screw Jack	
	204	214003	CHIVILKAR ATHARVA SUDHIR		
	213	214012	KARKADA MARINE MACQVIN		
	221	214020	SALDANHA SIBONY WALTER		
6	223	214022	SOGAM VINAY BHASKAR	White Board Cleaning Machine	
	206	214006	DSOUZA ADRIAN ALEXANDER		
	224	214023	TORASKAR SHIVAM VILAS		
	222	214021	SALVI ATHARVA TUSHAR		
7	227	224252	MAHESH KUMAR KESHAV GUPTA	SCOTH YOKE MECHA	Mr.Siddharth Saindane
	228	224253	SHUSHEN LAXMIKANT MOLANKAR		
	229	224254	ADITYA SUBHASH TRIVEDI		
	230	224255	JEES JOSE VETTIYATTIL		
8	231	224256	ASHLEY AMULDAS CHETTY	MINI HACKSAW POWERED BY BEAM ENGINE	
	232	224257	ZAID ABDUL KADER KAZI		
	233	224258	SURYA MANOHAR MUDALIAR		
	234	224259	ASHUTOSH THAKUR		
9	235	224260	ARYAN ABHIMANYU PAWAR	CASE STUDY OF SOLAR PANEL USING PHASE CHANGE	
	236	224261	MAYURESH RANA		
	237	224262	PARAJ SADANAND SAKHALE		
10	238	224263	DHRUV RAJIV JAIN	ELECTRICITY GENERATION USING MINIATURE STIRLING ENGINE	
	239	224264	MAAZ SARFRAZ KHAN		
	240	224265	SAHIL SANDIP NISHANKAR		
	241	224266	DIVYESH ANAND PARAB		
11	242	224251	DARSHIL DHARMENDRA SONDAGAR	PRINTING PRESS MACHINE USING DOUBLE TOGGLE MECHANISM	
	243	224267	PANKAJ GORAKH GAIKWAD		
	244	224268	AMAN ARIF SHAIKH		

	245	224269	UDDHAV MORESHWAR CHAUDHARI		
12	246	224270	AMEYA JITENDRA NALAVADE	CASE STUY OF EV CELL USING PCM	
	247	224271	SANIL SANJAY RAMBADE		

St. Francis Institute of Technology (Engineering College)

Mount Poinsur, S.V.P. Road, Borivli (West), Mumbai-400103

Department of Mechanical Engineering

Sem - IV			Course- MEPBL401 Mini Project 1B		A.Y.- 2022-23
Group no.	Roll No.	PID No.	Name	Title of Major Project	Guide
13	248	224272	REYON WILFRED DSOUZA	REGENERATIVE BRAKING SYSTEM	Dr.Ravindra Garmode
	249	224273	JANVI VIRSEN MANJALKAR		
	250	224274	DHRUV DEEPAK MAROLIA		
	251	224275	PRINCE MUKESH MAROLIA		
14	252	224276	SIDDHESH SHAILENDRA KANADE	MINI STAMPING MACHINE	
	253	224277	SIDDHESH ANIL PAWAR		
	254	224278	SAHIL AHMED SHAIKH		
	255	224279	SHUBHAM ASHOK SUTAR		
15	256	224280	KIRTAN HEMANT MISTRY	PUNCHING OPERATION USING CAM AND FOLLOWER	
	257	224281	KUNAL ASHOK KUMAR PRAJAPATI		
	258	224282	PRANAV SURENDRA SHELAR		
	259	224283	SAHIL DHANANJAY DADHEKAR		
16	260	224284	HARSH SUNIL YADAV	BEAM ENGINE MECHANISM	
	261	224285	ADITYA MUKUND TAMBE		
	262	224286	KARAN NITIN PARMAR		
	263	224287	FURQAN ASHFAQUE FODKAR		
17	264	224288	SAURABH SHANKAR BIRAMANE	MANUALLY OPERATED PUNCHING MACHINE	
	265	224289	RUSHABH UMESH DABHOLKAR		
	266	224290	SHUBHAM BUJHARAT GUPTA		
	267	224291	PRATIK RADHESHYAM YADAV		

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Department of Mechanical Engineering

Sem - V		Course- MEPBL501 Mini Project-2A			A.Y.- 2022-23
Group no.	**Roll No.**	**PID No.**	**Name**	**Title of Major Project**	**Guide**
1	301	214257	Neil Khade	Wind Energy Powered Light Emitting Diodes (WEP-LED 2)	Mr. Sunil Pansare
	302	214260	Vaishnavi Palkar		
	303	214268	Janhavi Timkar		
	304	204017	Darren DSouza		
2	305	204002	Thorat Aryan	Whirling of shaft apparatus	Mr. Sunil Pansare
	306	204046	Sequeira Jonathan		
	307	204025	Yadav Kusal		
	308	204043	Rathod Khushi		
3	309	204006	Neel Bhalani	Portable Go-kart lift	Mr. Sunil Pansare
	310	204015	Tejas Dhingankar		
	311	204011	Bharat Choudhary		
	312	204001	Kaushal Achrekar		
4	313	204028	Sakshi Marchande	Helmet wiper	Mr. Sunil Pansare
	314	204051	Vaibhav bavkar		
	315	204038	Neel Patel		
	316	204009	Umang chapla		
5	317	204042	Ashton Quadros	Hydraulic braking system	Mr. Magesh Nadar
	318	204029	Komal Nagda		
	319	204032	Kris Noguera		
	320	204048	Ronan Tauro		
6	321	204041	Aditi Poudwal	Box Shifting Mechanism	Mr. Magesh Nadar
	322	204034	Sanskruti Panaskar		
	323	204044	Pranjal Raul		
	324	204031	Nick Lopes		
7	325	204019	Vivek Ghaskatta	Self Balancing Cube	Mr. Magesh Nadar
	326	204010	Vishal Chotaliya		
	327	204045	Siddhant Rebello		
	328	204020	Prathamesh Kadam		
8	329	214264	Pinto Darryl	Electromagnetic Braking system	Mr. Magesh Nadar
	330	214262	Pathak Satyam		
	331	214266	Sawant Harsh		
	332	214261	Panchal Aditya		
9	333	204040	Francis Pereira	Miniature Ice Plant	Mr. Yunus Dalal
	334	204039	Kunal Pathare		
	335	204007	Madhav Bhavsar		
	336	204027	Jaideep Mankar		
10	337	214254	Jeff Fargose	Mini drone	Mr. Yunus Dalal
	338	214251	Rohit Ament		
	339	214252	Ryan Colaco		
	340	204036	Pragati Pandey		
11	341	204026	Isha Lagad	Chalk recycling machine	Mr. Yunus Dalal
	342	204033	Ansell Oliveira		
	343	204035	Divyesh Panchal		
	344	204012	Chris Coelho		
12	345	204013	Om Devlekar	Beach cleaner	Mr. Yunus Dalal
	346	204022	Utkarsh kankaria		
	347	204021	Harsh kamath		
	348	204024	Chirag khedekar		
13	349	204050	Yash Thakur	Seed Sowing Machine	Ms. Neha Valse
	350	204030	Omkar Narkar		
	351	204016	Kunal Dodiya		
	352	214255	Alister Fernandes		
14	353	204004	Soniyal Bavighar	Floor cleaner	Ms. Neha Valse
	354	204008	Dolson Butti		
	355	204018	Fatima Dunga		
	356	204047	Shamil Netoghar		
15	357	214267	Krish Solanki	Vertical Conveyor	Ms. Neha Valse
	358	214269	Vignesh Arumugam		
	359	204005	Arjun Bedi		
	360	204037	Kalpesh Patel		
16	361	214256	Kalyani Joshi	Road Divider Wind Turbine	Ms. Neha Valse
	362	214253	Jeril Dsouza		
	363	214259	Leon Lopes		
	368	204003	Atul Sharma		
17	364	204049	Tejas pyarelal	Single Axis Automatic Solar Tracker	Ms. Neha Valse
	365	204023	Harshad Khan		
	366	214258	Veron Koli		
	367	214265	Adrian Rodrigues		

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St. Francis Institute of Technology (Engineering College)

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Department of Mechanical Engineering

| Sem - VI | | | Course- MEPBL601 Mini Project-2B | | A.Y.- 2022-23 |

Group no.	Roll No.	PID No.	Name	Title of Major Project	Guide
1	301	214257	Neil Khade	Wind Energy Powered Light Emitting Diodes (WEP-LED 2)	Mr. Sunil Pansare
	302	214260	Vaishnavi Palkar		
	303	214268	Janhavi Timkar		
	304	204017	Darren DSouza		
2	305	204002	Thorat Aryan	Experimental Setup to Study effect of Unbalance in Rotary Systems	Mr. Sunil Pansare
	306	204046	Sequeira Jonathan		
	307	204025	Yadav Kusal		
	308	204043	Rathod Khushi		
3	309	204006	Neel Bhalani	Portable Go-kart lift	Mr. Sunil Pansare
	310	204015	Tejas Dhingankar		
	311	204011	Bharat Choudhary		
	312	204001	Kaushal Achrekar		
4	313	204028	Sakshi Marchande	Motorized Mashing Machine	Mr. Sunil Pansare
	314	204051	Vaibhav bavkar		
	315	204038	Neel Patel		
	316	204009	Umang chapla		
5	317	204042	Ashton Quadros	Hydraulic braking system	Mr. Magesh Nadar
	318	204029	Komal Nagda		
	319	204032	Kris Noguera		
	320	204048	Ronan Tauro		
6	321	204041	Aditi Poudwal	Box Shifting Mechanism	Mr. Magesh Nadar
	322	204034	Sanskruti Panaskar		
	323	204044	Pranjal Raul		
	324	204031	Nick Lopes		
7	325	204019	Vivek Ghaskatta	SCARA Robotic Arm	Mr. Magesh Nadar
	326	204010	Vishal Chotaliya		
	327	204045	Siddhant Rebello		
	328	204020	Prathamesh Kadam		
8	329	214264	Pinto Darryl	Electromagnetic Braking system	Mr. Magesh Nadar
	330	214262	Pathak Satyam		
	331	214266	Sawant Harsh		
	332	214261	Panchal Aditya		
9	333	204040	Francis Pereira	Vapour Compression Refrigeration Cycle	Mr. Yunus Dalal
	334	204039	Kunal Pathare		
	335	204007	Madhav Bhavsar		
	336	204027	Jaideep Mankar		
10	337	214254	Jeff Fargose	Ultrasonic Security System	Mr. Yunus Dalal
	338	214251	Rohit Ament		
	339	214252	Ryan Colaco		
	340	204036	Pragati Pandey		
11	341	204026	Isha Lagad	Chalk recycling machine	Mr. Yunus Dalal
	342	204033	Ansell Oliveira		
	343	204035	Divyesh Panchal		
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	351	204016	Kunal Dodiya		
	352	214255	Alister Fernandes		
14	353	204004	Soniyal Bavighar	Floor cleaner	Ms. Neha Valse
	354	204008	Dolson Butti		
	355	204018	Fatima Dunga		
	356	204047	Shamil Netoghar		
15	357	214267	Krish Solanki	Vertical Conveyor	Ms. Neha Valse
	358	214269	Vignesh Arumugam		
	359	204005	Arjun Bedi		
	360	204037	Kalpesh Patel		
16	361	214256	Kalyani Joshi	Road Divider Wind Turbine	Ms. Neha Valse
	362	214253	Jeril Dsouza		
	363	214259	Leon Lopes		
	368	204003	Atul Sharma		
17	364	204049	Tejas pyarelal	Single Axis Automatic Solar Tracker	Ms. Neha Valse
	365	204023	Harshad Khan		
	366	214258	Veron Koli		
	367	214265	Adrian Rodrigues		

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Sample of Participative Learning (Student-Presentations/Quiz/Poll/Crossword/Puzzle) of Computer Engineering

2022 – 23 (Term – I)

2022 – 23 (Term – II)

Seminar Report on "Cyber Security Landscape and its future"

1. Date of the Seminar/Workshop:- 23/03/2023

2. Title of the Seminar/Workshop: - Cyber Security Threat Landscape and its Countermeasures

3. Name of the Speaker/Resource person with Affiliation with the institute/industry:-Mr. Sridhar Iyer, SVKM's Dwarkadas J. Sanghvi College of Engineering

4. Venue of the Seminar/Workshop: - Platform used Google Meet

5. Duration of the Seminar: - 2 hrs 30 min (11am to 1.30pm)

6. Conducted For:- Students of Third Year Computer Engineering

7. Objective of the Seminar/Workshop /Curriculum Gap identified/Other than that (Write 2-3 lines):-

The objective of the seminar was basically to ensure that the students should have a clear understanding of the recent cybersecurity landscape in the industry. The Agenda of arranging this seminar was to give the students technical/practical insight of the various cyber attacks that can be carried out and a hands on demonstration of the same.

8. Contents of the Seminar/Workshop

- Introduction to basic terms - threat, vulnerability and risk
- Motivation behind studying cybersecurity
- Vulnerability of algorithms used today to various attacks
- Case studies of some popular high-profile cyber attacks
- Demonstration of different cyber attacks
- Countermeasures

9. Description of the Entire Event

 - Overview of the session

The seminar was conducted by Mr. Sridhar Iyer, an expert in the field of cyber security. The session started at 11.30 with an introduction to the objectives and the need of cyber security (CS). The speaker, Mr. Sridhar Iyer, then proceeded to discuss the various types of cyber threats, their risks, and vulnerabilities. He motivated the audience by discussing the security of Advanced Encryption Standard (AES) and the potential attacks on it.

The session then delved into the attacks on AES, SSL/TLS, and WPA-2, highlighting the techniques used by attackers to exploit vulnerabilities. Mr. Iyer provided real-world

examples of cyber attacks, including Equifax data breach, WannaCry ransomware, Target data breach, NotPetya attack, and Solarwinds attack.

The second half of the session focused on ethical hacking and the various phases involved in it. Mr. Iyer explained the first phase, reconnaissance, and demonstrated how to use Google Dorks and Shodan to gather information about a target. He then discussed Wireshark, Kali Linux Ettercap, and Netcat, and their usage in ethical hacking.

The seminar was interactive, with the attendees encouraged to ask questions and share their experiences. Mr. Iyer patiently addressed all the queries and provided practical advice on implementing cyber security best practices.

Overall, the seminar was informative and engaging, and Mr. Iyer's expertise and experience in the field of cyber security made it a valuable learning experience for all the attendees. The session covered the latest threats and vulnerabilities, provided practical knowledge on ethical hacking, and highlighted the importance of cyber security in today's digital age.

- Technical Details

- **Cybersecurity** - The practice of defending computers, servers, mobile devices, electronic systems, networks, and data from malicious attacks.
    - Threat - Something that can damage or destroy an asset
    - Vulnerability - A weakness or gap in protection
    - Risk - Where assets, threats and vulnerabilities intersect

- **Active Attacks** -Active attacks are a type of cyber attack in which an unauthorized user attempts to alter, destroy, or disrupt the normal functioning of a computer system or network.

    Man-in-the-Middle (MITM) attack: In this type of attack, an attacker intercepts the communication between two parties and can eavesdrop, alter, or inject new messages, potentially leading to theft of sensitive data.

    Denial-of-service (DoS) attack: In a DoS attack, the attacker attempts to disrupt the normal functioning of a website or network by overwhelming it with traffic, making it unavailable to legitimate users.

    Distributed Denial-of-service (DDoS) attack: A DDoS attack is a type of DoS attack in which multiple systems are used to flood the target network or website with traffic, making it unavailable to legitimate users.

Password attacks: Password attacks aim to gain unauthorized access to a system or network by guessing or cracking passwords. Common types of password attacks include brute force attacks, dictionary attacks, and rainbow table attacks.

Injection attacks: Injection attacks target web applications and exploit vulnerabilities to inject malicious code into a database or web page, giving the attacker access to sensitive data.

Spoofing attacks: Spoofing attacks involve impersonating a legitimate entity, such as an IP address, email address, or website, to gain unauthorized access to a system or network or to trick the victim into revealing sensitive information.

Worm attacks: Worms are self-replicating programs that spread across networks and can cause significant damage to computer systems and networks by consuming system resources or exploiting vulnerabilities.

Trojan horse attacks: Trojan horses are malicious programs that masquerade as legitimate software and can allow an attacker to gain unauthorized access to a system or network.

- **Passive attacks -**Passive attacks are a type of cyber attack in which an unauthorized user attempts to gain access to confidential information or sensitive data without altering or disrupting the normal functioning of a computer system or network.

Eavesdropping: In this type of attack, an attacker intercepts the communication between two parties and listens in to the conversation, potentially leading to theft of sensitive data.

Traffic analysis: Traffic analysis involves monitoring the patterns of network traffic to gain insight into the behavior of network users, potentially revealing sensitive information.

Port scanning: Port scanning is a technique used to identify open ports on a target system or network, which can be used to launch other types of attacks.

Password attacks: Password attacks also fall under the category of passive attacks, where an attacker tries to gain access to a system or network by guessing or cracking passwords.

Social engineering: Social engineering attacks rely on human interaction to trick individuals into revealing sensitive information, such as passwords or personal information.

Passive reconnaissance: Passive reconnaissance involves gathering information about a target system or network without directly interacting with it, such as by scanning public websites, social media, or job postings.

- **Advanced Encryption Standard (AES) -** It is a symmetric block cipher chosen to protect classified information.
  - **Side Channel Attack**: works by monitoring security critical operations such as AES T-table entry.

- **Secure Sockets Layer (SSL) -** it's the standard technology for keeping an internet connection secure and safeguarding any sensitive data that is being sent between two systems
  - **SSL Stripping Attack:** user is made to believe connection is secure and data is encrypted but in reality connection is insecure and data is sent in plaintext.
  .
- **Transport Layer Security (TLS)** - is an updated, more secure, version of SSL.

- **Wi-Fi Protected Access 2 (WPA-2)** -an encrypted security protocol that protects internet traffic on wireless networks.

  - **Key Installation Attacks (KRAck):** adversary tricks a victim into reinstalling an already-in-use key.

- **Reconnaissance-** First Phase of Ethical Hacking, it involves gathering information about the target systems or organization. Tools used:

- Google Dorks

- Shodan

- Whois

- Nmap

- **Packet Sniffing-** it is a technique whereby packet data flowing across the network is detected and observed. Tools used:

  - Wireshark

- **ARP Spoofing/Poisoning-** ARP Spoofing or ARP Poisoning is a type of attack in computer networking where an attacker sends false Address Resolution Protocol (ARP) messages to a local area network (LAN) in order to associate the attacker's MAC address with the IP address of another device on the network. Tool used:

  - Ettercap

- **Maintaining Access-** Maintaining access is a technique used by attackers to remain undetected on a compromised system or network after an initial breach. Once an attacker gains access to a system, they may create backdoors, install malware or modify system configurations in order to maintain persistent access. Tools used:
  - Netcat

Opportunities in Cyber Security - Cyber security is a rapidly growing field with a high demand for skilled professionals. As technology continues to advance and more businesses and individuals move online, the need for cyber security expertise will only continue to grow. Here are some of the opportunities available in cyber security:

- **Cyber Security Analyst**

- **Cyber Security Engineer**

- **Penetration Tester**

- **Cyber Security Consultant**

- **Security Architect**

- **Cyber Security Manager**

- **Incident Responder**

- Regarding total number of participants

There were approximately 139 students and 5 faculty participants who attended the seminar.

- Overall feedback about the seminar/Workshop and about the resource person

Overall the seminar was a great success, as all the participants had shown keen interest in this seminar and were interactive during the session. The resource person delivered an excellent session giving insights on Cybersecurity Threat Landscape and its Countermeasures. The resource person had clarity of thoughts and took over the seminar very cleanly. He started the seminar with the very basics of Cybersecurity and the motivation behind using various algorithms for safety followed by a hands-on session where participants could implement what was taught. The session was very interactive as the speaker kept asking questions to the students at regular intervals.All the doubts were also cleared at regular intervals. Overall the resource person was very knowledgeable, interactive and the seminar was very beneficial for the students.

- How do the objectives of the seminar meet the requirements?

The seminar aims to provide participants with a comprehensive understanding of the current cyber security threat landscape and the countermeasures that can be taken to mitigate such threats. This meets the requirements of individuals and organizations who want to protect themselves from cyber attacks and safeguard their digital assets.Therefore, the objectives of the seminar effectively meet the requirements of individuals and organizations who want to understand the current cyber security threats.

- Photographs of the Seminar/Workshop

Ms.Varsha N. and Ankita K　　　　　　　　　　　**Dr.Kavita Sonawane**

Seminar Incharge　　　　　　　　　　　　　　　**HOD,CMPN**

Sample of Participative Learning (Student-Presentations/Quiz/Poll/Crossword/Puzzle) of Information Technology

2022-23 (Term – I)
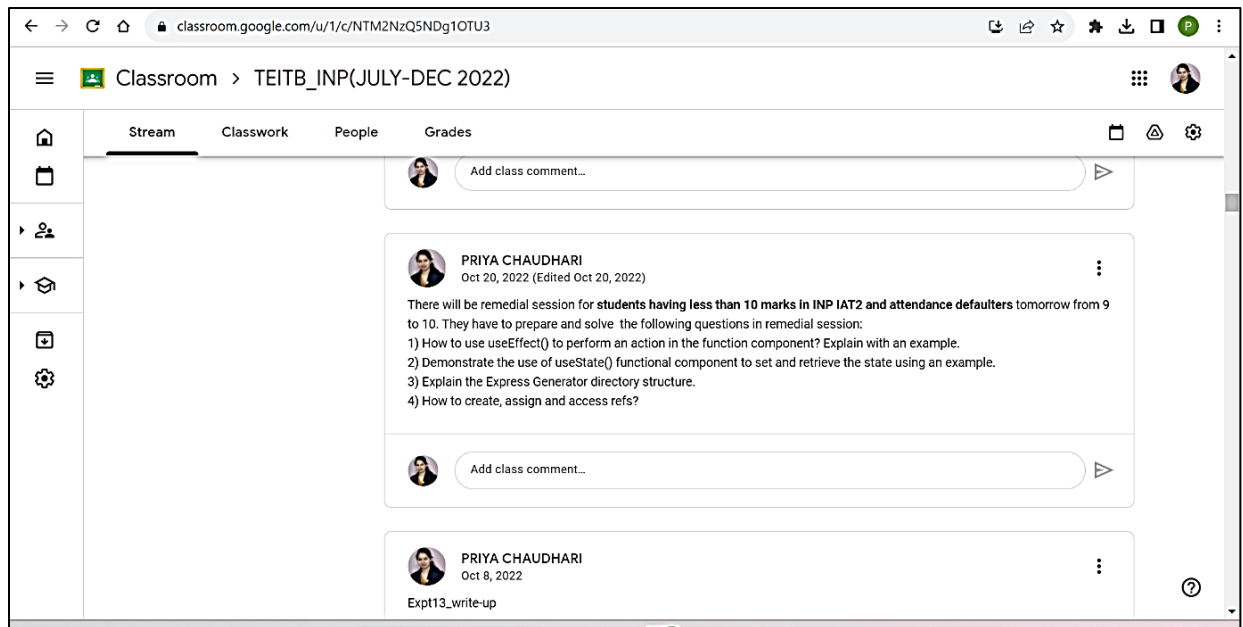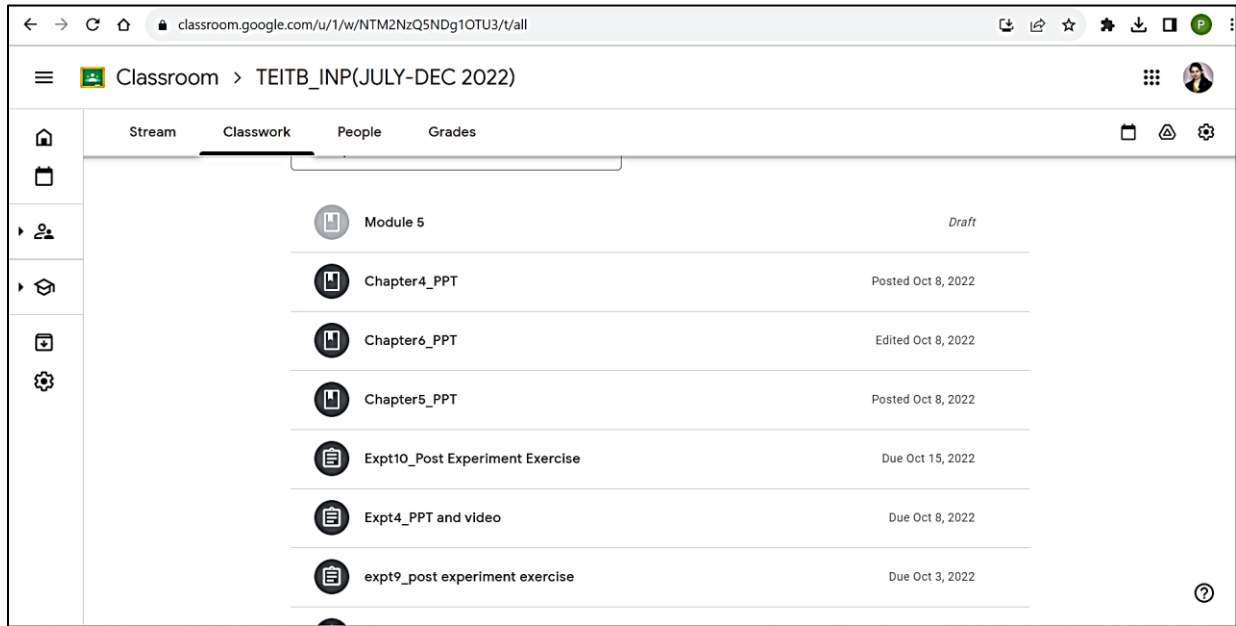
2022-23 (Term – II)
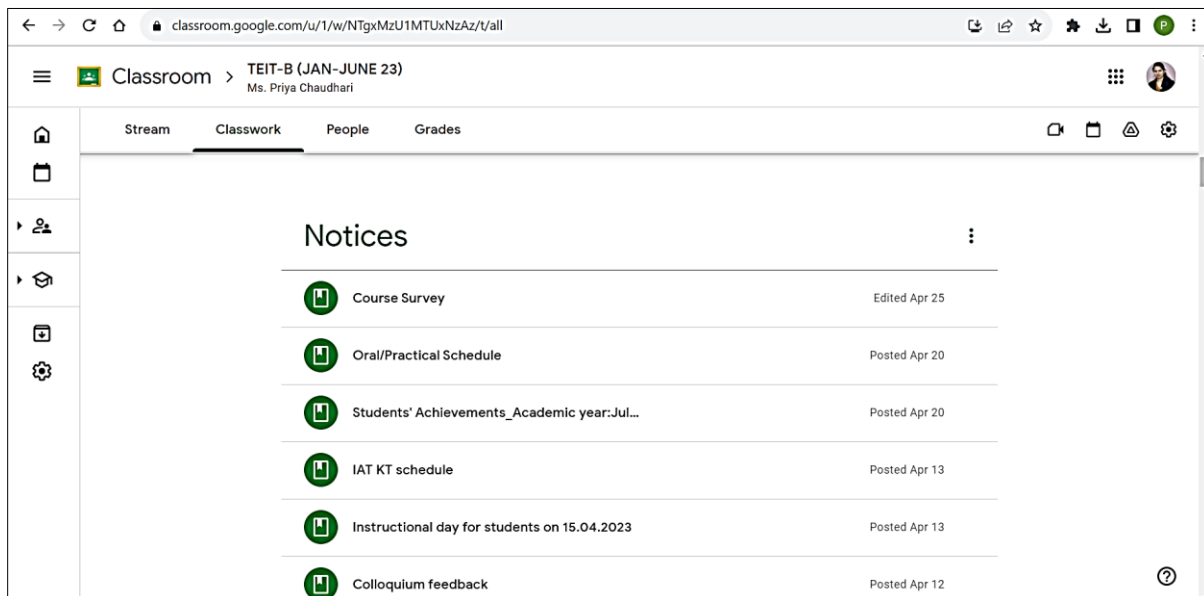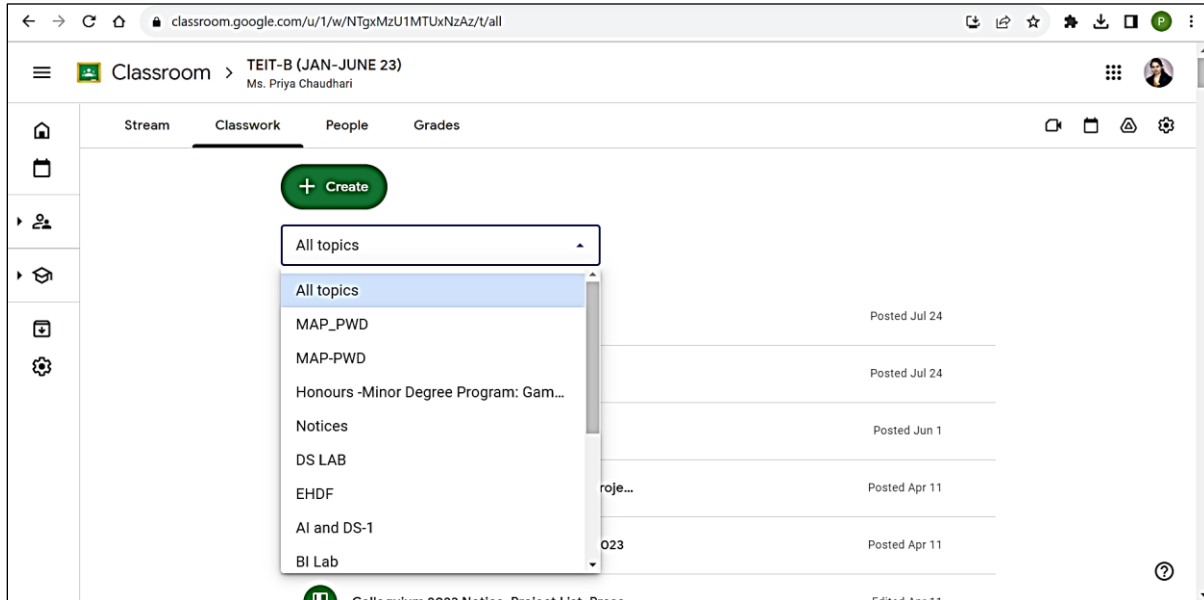
IP__Quiz on Prerequisite

Questions   Responses 132   Settings

Summary   Question   Individua

suthararvind144@student.sfit.ac.in   ▼   ‹   4   of   132   ›

10 of 10 points   🔒 *Score not released*   Relea

St. Francis Institute of Technology, Borivali(W

Department of Information Technology
Academic Year: 2022-2023
Sem: V
Class: TEITA/TEITB
Subject: InP Lab
Date: 29/7/2022

The respondent's email (suthararvind144@student.sfit.ac.in) was recorded on submission of this fo

* Indicates required question

Name *

Arvind Suthar

Add individual feedback

Sample of Participative Learning (Student-Presentations/Quiz/Poll/Crossword/Puzzle) of Mechanical Engineering

2022 – 23 (Term – I)

Google Classroom

Quiz on ERP

2022 – 23 (Term – II)

Google Classroom
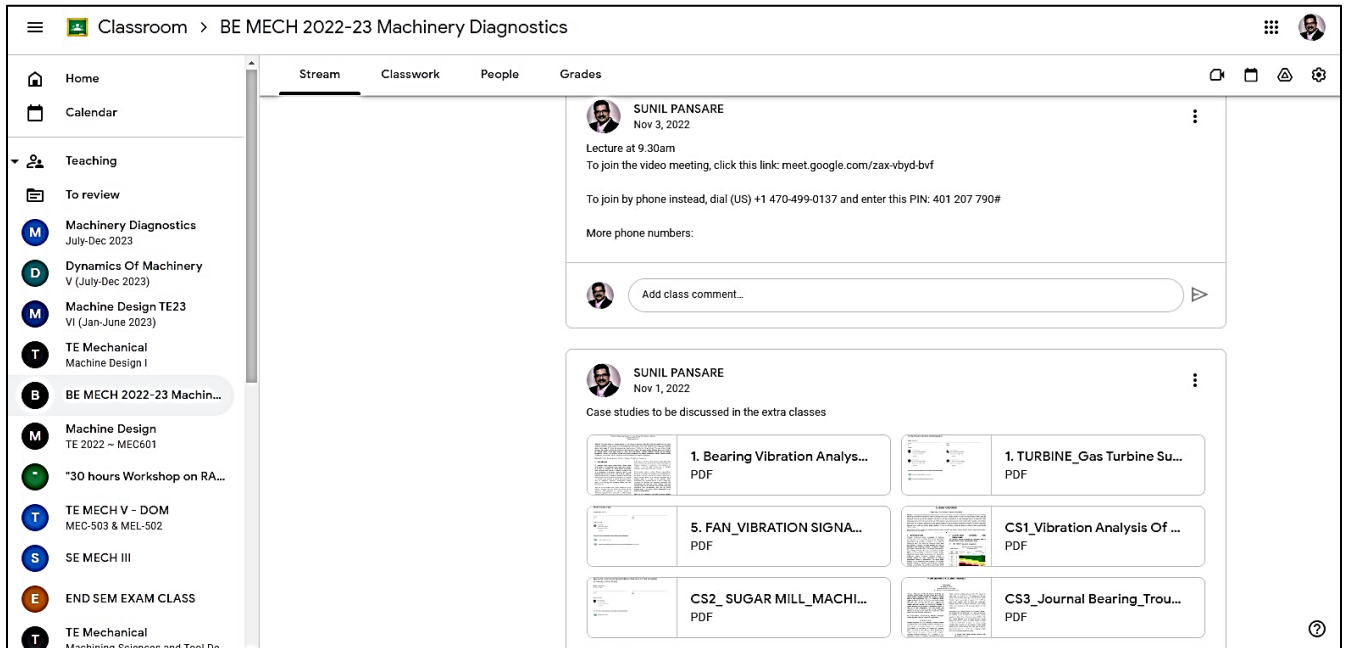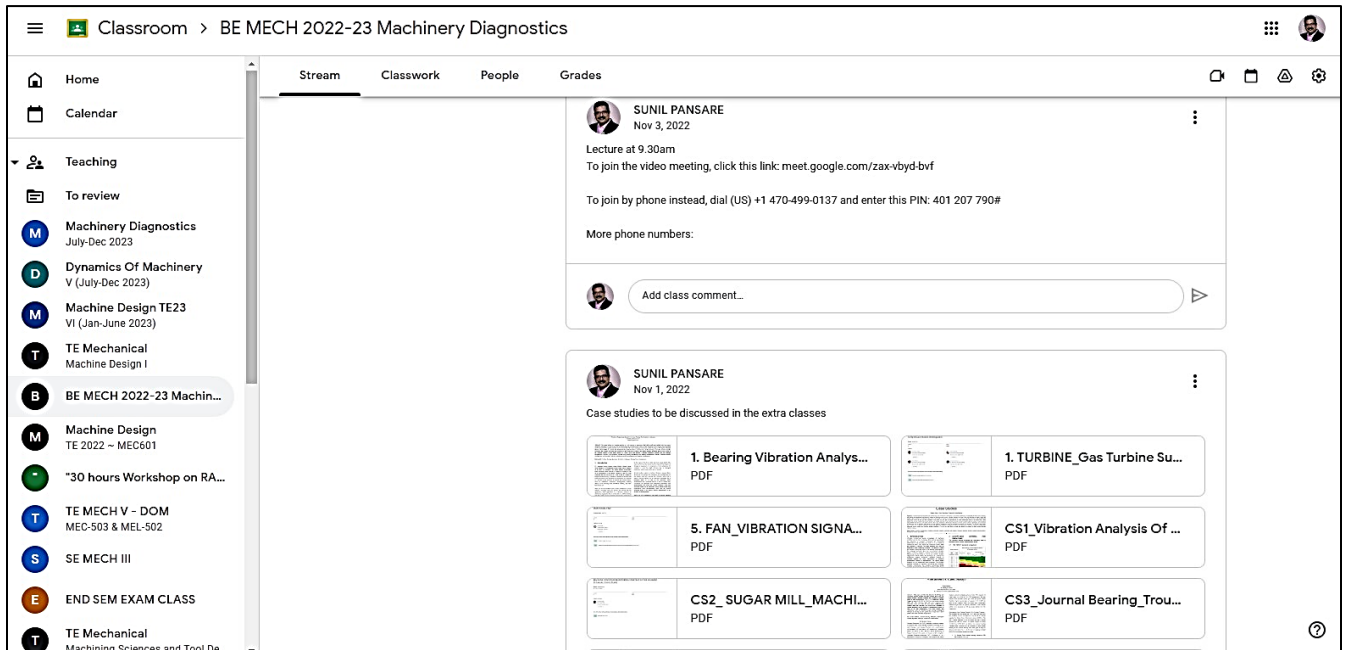
Google Meet (Machinery Diagnostics)

Google Meet (HVAC&R)

Quiz on ERP

Sr. No.	Quiz Name	Exam Type	Total Questions	Total Marks	Time Limit (mins)	Quiz Date	Quiz Start & End Time	Division	Result	Report
29	Module 5 HVAC&R Components	Assignment Test	10	10	20	01-05-2023	12:00 - 12:45	A	View Result	View Report
31	MODULE 4 DUCT DESIGN AND AIR DISTRIBUTION SYSTEM	Assignment Test	9	10	20	02-04-2023	12:00 - 12:45	A	View Result	View Report
30	MODULE 6 CONTROLS AND APPLICATIONS	Assignment Test	10	10	20	02-05-2023	12:00 - 12:45	A	View Result	View Report
2	Module 2- VCRS, VARS & Heat Pump	Assignment Test	10	10	20	05-03-2022	17:41 - 18:17	A	View Result	View Report
4	Module 3 Psychrometry, Thermal Comfort and Cooling Load Estimation	Assignment Test	8	10	20	08-04-2022	22:30 - 23:00	A	View Result	View Report
5	Module 6 Applications of HVAC&R	Assignment Test	10	10	20	09-05-2022	21:30 - 22:00	A	View Result	View Report

Sample of Problem-Solving-Methodologies (Compute/Simplify/Make Model/Tabularize/Chart) of Computer Engineering.

2022-2023

Class: BE-CMPN A/B, Semester: VII

Subject: **Big Data Lab**

Experiment : To implement a word count program using MapReduce.

1. Aim: To implement a word count program using MapReduce.

2. Objectives:

· To understand the working model of MapReduce in distributed environment

· To implement MapReduce using an example of word count.

3. Outcomes: After study of this experiment, the student will be able to · Perform different operations using MapReduce model (here specifically wordcount).

· Understand the importance of MapReduce model in Hadoop.

4. Prerequisite: Oracle VM Virtual Box, cloudera

5. Requirements: PC and Internet.

6. Pre-Experiment Exercise:

Brief Theory:

Students need to write the theory of following points.

1. What is MapReduce?

2. MapReduce Model

3. How MapReduce Works explain with example?

7. Laboratory Exercise

A. Procedure

1. Steps for implementing MapReduce Model

a. Create New project >New Package >New Class and write code in that class file (Or copy and paste the demo program)

b. Go to Build Path > Configure build path > Libraries >Add External

Jars > hadoop-core.jar & /lib/commons-cli-1.2.jar

c. Write code > Save > Export as a jar file > Set export destination

d. Create input file and make sure it is placed in HDFS.(For us, default location is /user/training/filename)

e. To execute type in terminal : hadoop jar jar-name.jar package.class input-file(s) output-directory

2. After generating the output take the snapshots of each step and arrange the ouptput with proper explaination.

Note : - Coding has to be done in java. It should include three different class (Main class, Mapper and Reducer)

B. Result/Observation/Program code

Students have to implement the command with proper syntax for the above stated sample list and attached the output as printouts for the same.

8. Post-Experiments Exercise

A. Questions:

1. Mention few benefits/advantages of MapReduce.

B. Conclusion:

1. Write what was performed in the experiment.

2. Mention few applications of what was studied.

3. Write the significance of the topic studied in the experiment.

C. References:

1. Raj Kamal, Preeti Saxena, "Big Data Analytics", Mc Graw Hill Education
2. Alex Holmes "Hadoop in Practice", Manning Press, Dreamtech Press. 3. https://www.tutorialspoint.com/mongodb/index.htm

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Sample of Problem-Solving-Methodologies (Compute/Simplify/Make Model/Tabularize/Chart) of Mechanical Engineering.

Analysis of Gear Coupling

1. Aim : Design and Static structural analysis of a gear coupling

2. Introduction :

Gear couplings, often known as gear couplings, are a form of coupling that is often used in high-torque, high-power applications. Gear couplings can normally tolerate more torque than universal joints, whereas universal joints produce less vibration. A gear coupling is made up of two hubs with external and internal teeth and a one- or two-piece sleeve.
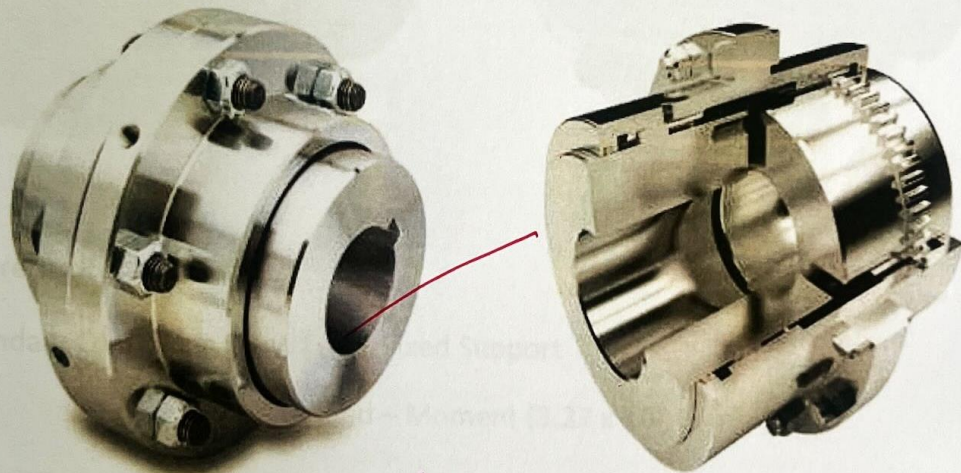
Gear couplings have a general misalignment capability of 0.01-0.02 inches in parallel and 2 degrees in angular. They are sometimes used in pairs of spacer shafts to bridge the gap between driving and driven machinery. Gear coupling Teeth are floating because teeth on outer surface of hub have spherical shape and teeth inside cover have cylindrical shape, have appropriate tangible clearance. The olive shaped tangible teeth, outer spherical gear teeth allow the teeth to float and slide about central axis within range, and this movement of teeth provides flexibility to Gear Couplings. By proper lubrication, conventional stress development is avoided.

3. Design of Gear Coupling :

It is designed with the help of assumptions taken from one reference example and the dimensions were take from the coupling size chart. The dimensions were all checked for various possible failures.
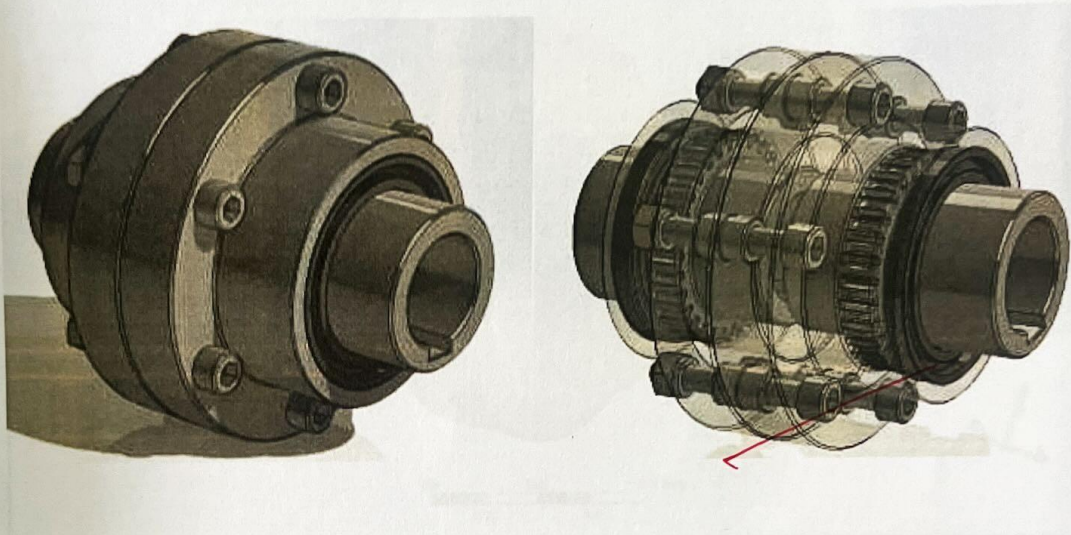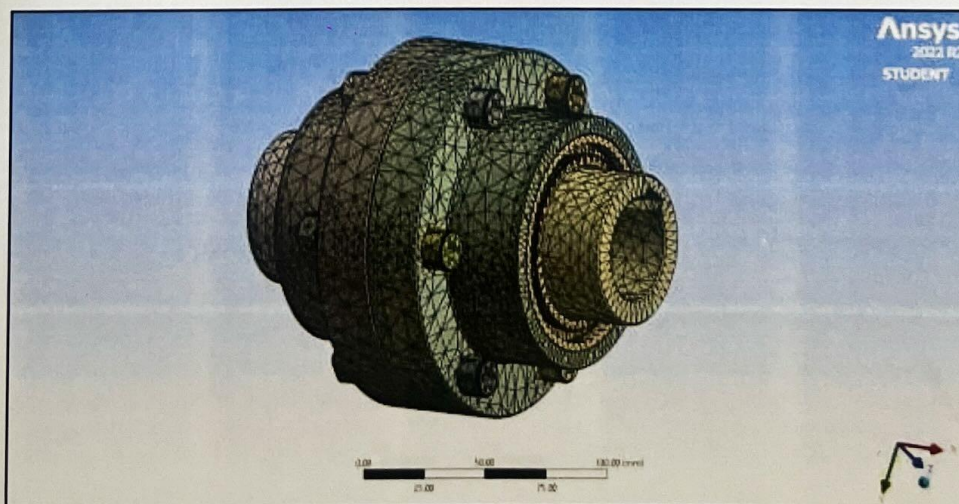

4. Pre-Processing :

Boundary Conditions : One End – Fixed Support
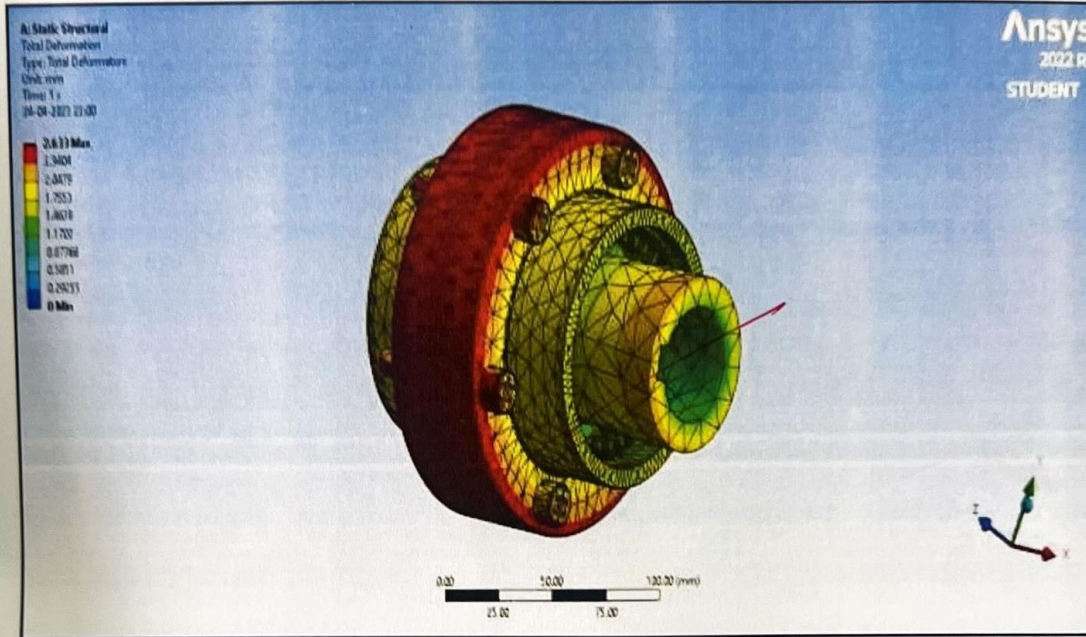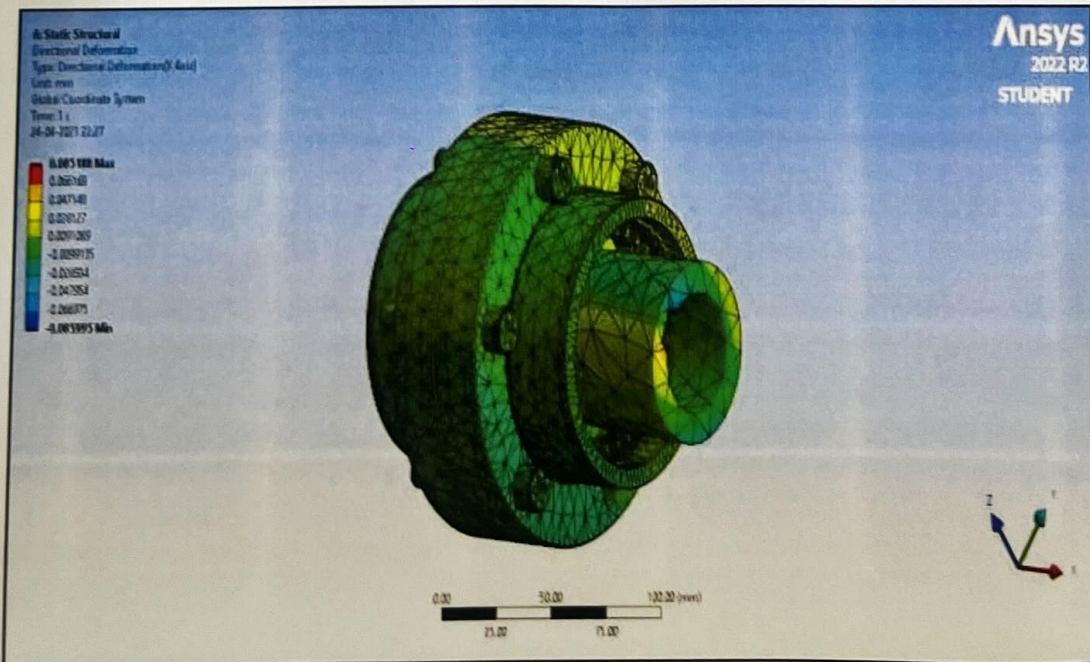
Other End – Moment (3.27 x 10^6 N-mm)

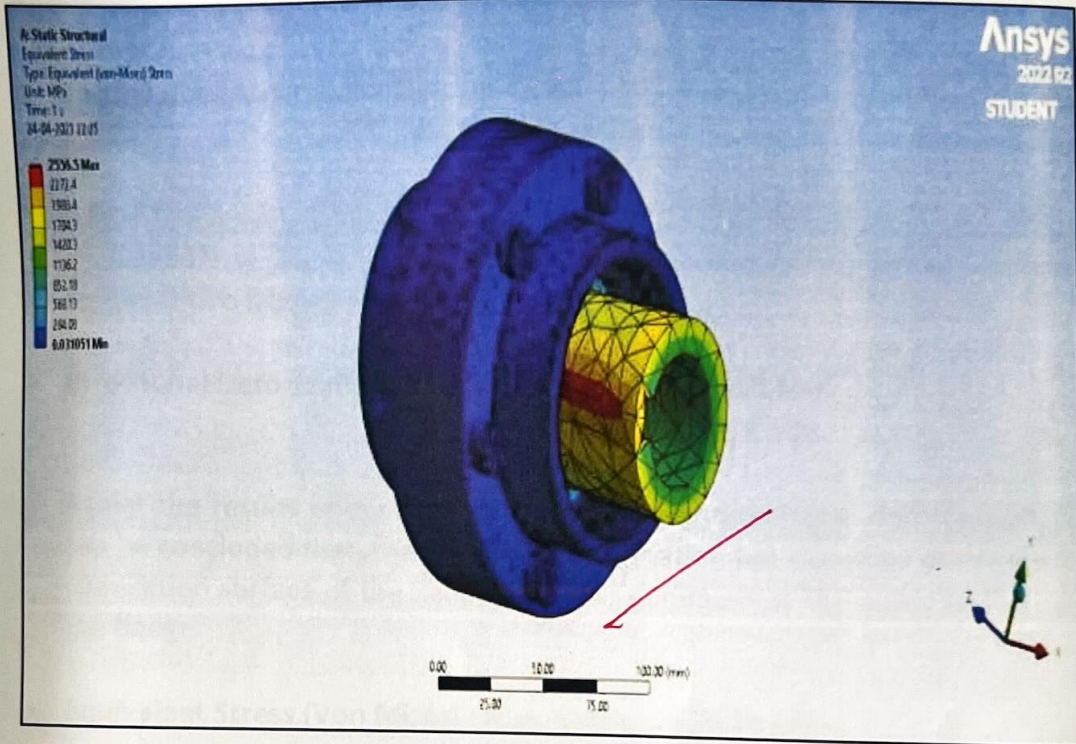**Meshing**

5. Processing :
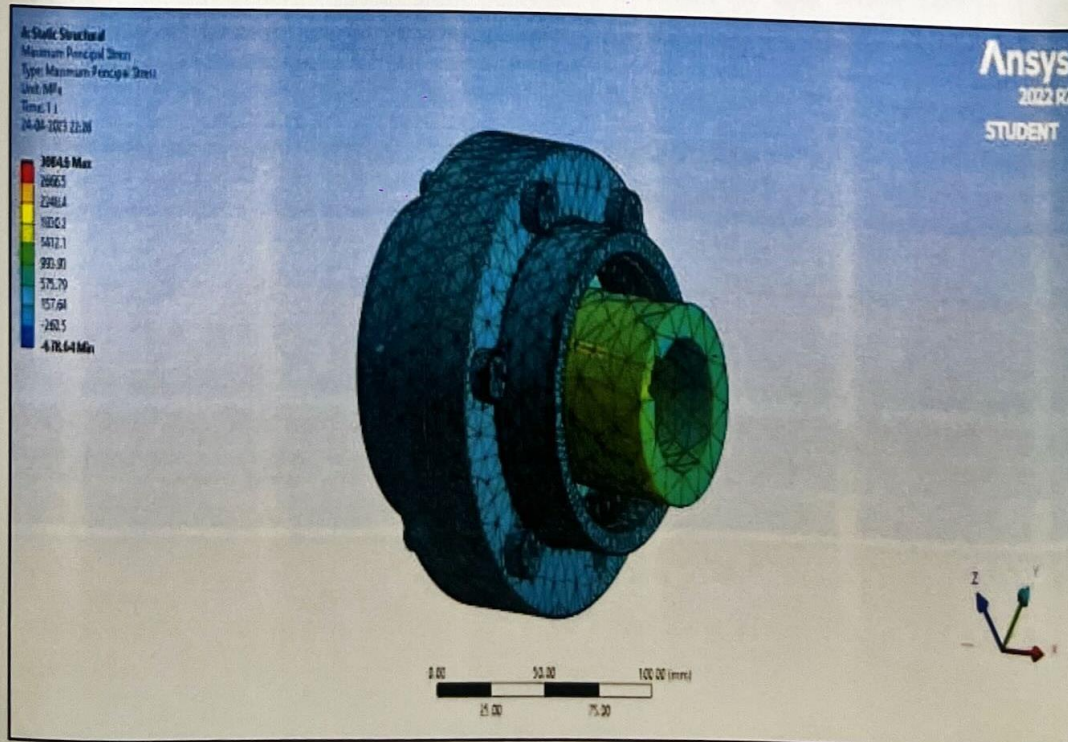
Total Deformation :

Directional Deformation :

4

Equivalent Stress (Von Mises)

Maximum Principle Stress :

6. Post Processing :

- **Total Deformation :** Max. Deformation : **2.633** mm
  Min. Deformation : **0** mm

As per the results obtained from the analysis of total deformation, it can be concluded that, the maximum deformation has occurred near the connection region of two flanges of gear coupling.

- **Directional Deformation :** Max. Deformation : **0.0851 mm**
  Min. Deformation : **-0.0859** mm

As per the results obtained from the analysis of directional deformation, it can be concluded that, the maximum deformation has occurred at the shaft connection surface of the flange bore and minimum at the outer surface of the flange.
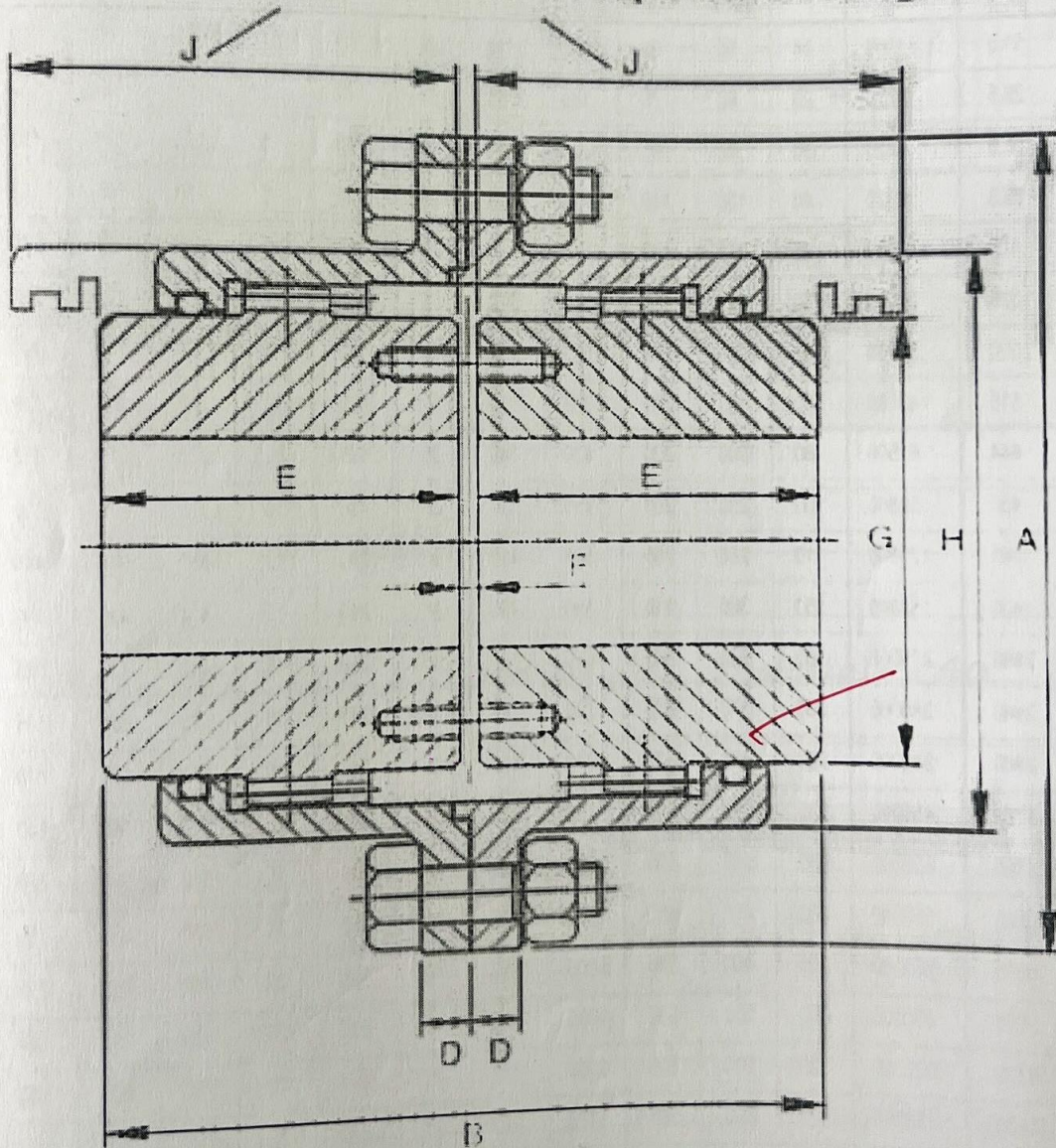
- **Equivalent Stress (Von Mises) :** Max. stress : **2556.50** MPa
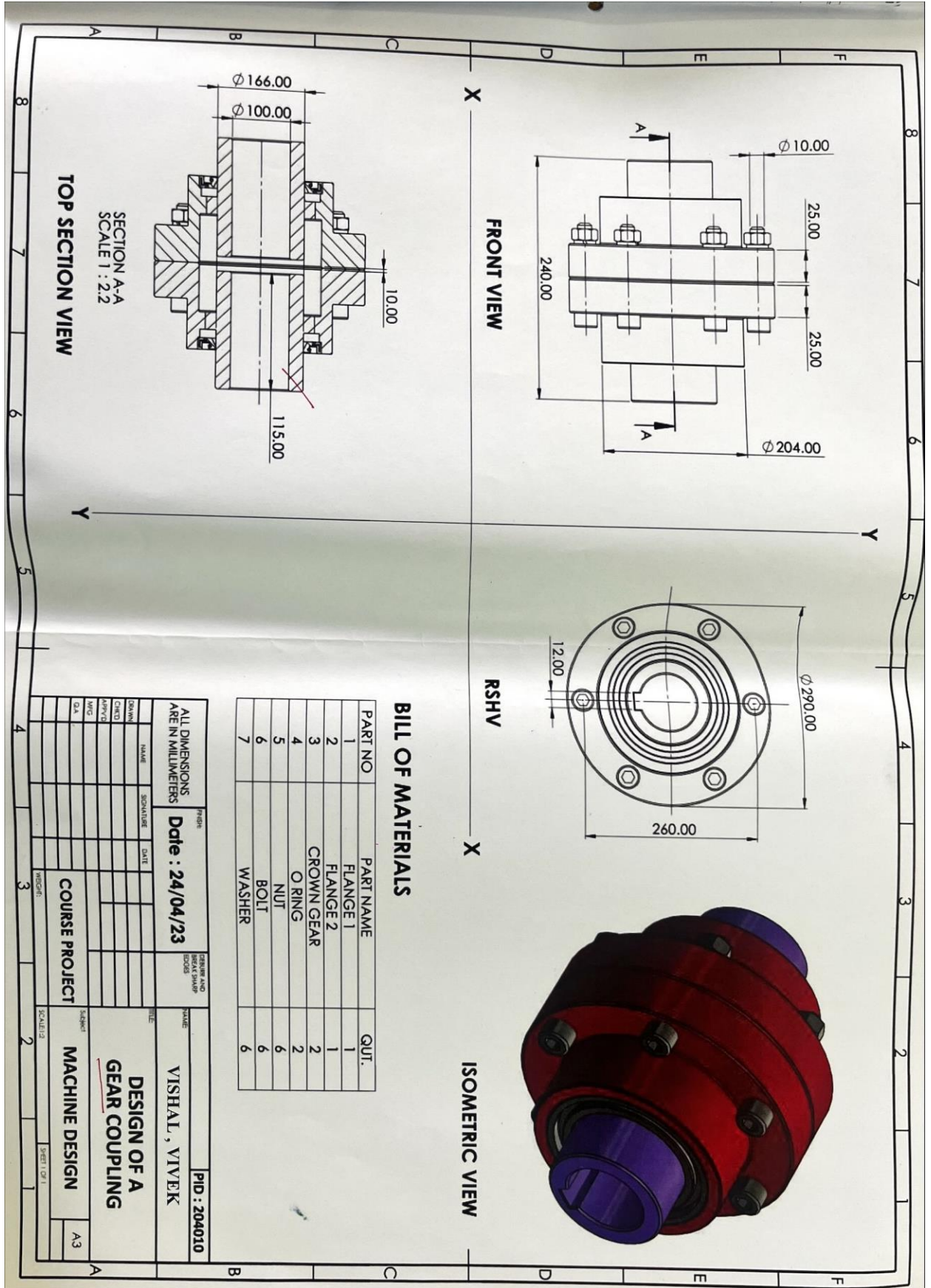 Min. Stress : **0.03105** MPa

As per the results obtained from the analysis of total deformation, it can be concluded that, the maximum stress is induced at the shaft connection surface of the flange bore and minimum stresses are induced at the outer surface of the flange.

- **Maximum Principle Stress :** Max. stress : **3084.6** MPa
  Min. Stress : **-678.64** MPa

Gear Coupling

Minimum Clearance required for aligning

TOP SECTION VIEW

SECTION A-A
SCALE 1 : 2.2

Ø 166.00
Ø 100.00
10.00
115.00

FRONT VIEW

Ø 10.00
25.00
240.00
25.00
Ø 204.00

RSHV

12.00
Ø 290.00
260.00

ISOMETRIC VIEW

BILL OF MATERIALS

PART NO	PART NAME	QUT.
1	FLANGE 1	1
2	FLANGE 2	1
3	CROWN GEAR	2
4	O RING	2
5	NUT	6
6	BOLT	6
7	WASHER	6

ALL DIMENSIONS
ARE IN MILLIMETERS

	NAME	SIGNATURE	DATE
DRAWN			
CHKD			
APPV'D			
MFG			
Q.A			

Date : 24/04/23

DEBURR AND
BREAK SHARP
EDGES

COURSE PROJECT

MACHINE DESIGN

NAME: VISHAL, VIVEK

TITLE: DESIGN OF A
GEAR COUPLING

PID : 2044010

A3

SHEET 1 OF 1