Database: experiment, Table: experiments, Purpose: Dumping data

experimentId	experimentName	noOfSteps	aim	requiredApparatuss
1	Chemical Reaction	5	To study the reaction kinetics	Beakers, Bunsen burner, Thermometer
2	Electrical Circuit Analysis	8	To analyze circuit behavior	Multimeter, Breadboard, Resistors
3	Microbiology Culture	6	To cultivate microorganisms	Petri dishes, Agar, Incubator
4	Genetic Sequencing	10	To sequence DNA	PCR machine, DNA sequencer, Primers
5	Physics Pendulum Experiment	4	To study pendulum motion	String, Weight, Stopwatch
6	Acid-Base Titration	7	To determine concentration	Burette, Pipette, Indicator
7	Plant Growth Observation	3	To monitor plant growth	Pots, Soil, Watering can
8	Density Measurement	5	To measure density of substances	Graduated cylinder, Balance
9	Magnetic Field Mapping	6	To map magnetic field lines	Compass, Magnetic probes
10	Heat Transfer Experiment	7	To study heat conduction	Heat source, Thermocouples
11	Chemical Synthesis	4	To synthesize organic compounds	Round-bottom flask, Condenser
12	Solar Cell Efficiency	5	To measure solar cell efficiency	Solar simulator, Current-voltage meter
13	Reaction Rate Determination	6	To determine reaction rates	Reaction vessel, Spectrophotometer
14	Bacterial Staining	4	To stain bacteria for microscopy	Crystal violet, Safranin
15	Electroplating Process	6	To electroplate metal objects	Electrolyte, Power supply
16	Optical Fiber Communication	8	To transmit data using optical fibers	Optical transmitter, Receiver

Database: experiment, Table: experiment_steps, Purpose: Dumping data

exptId	description	stepNo	video
1	Measure and pour the reactants into the beaker	1	http://localhost/chemlab/Main.mp4
1	Heat the mixture using a Bunsen burner	2	http://localhost/chemlab/Main.mp4
1	Record the temperature every 30 seconds	3	http://localhost/chemlab/Main.mp4
1	Analyze the reaction products	4	http://localhost/chemlab/Main.mp4
1	Calculate the reaction rate	5	http://localhost/chemlab/Main.mp4
2	Design the circuit diagram	1	http://localhost/chemlab/Main.mp4
2	Connect components on the breadboard	2	http://localhost/chemlab/Main.mp4
2	Apply voltage and measure current	3	http://localhost/chemlab/Main.mp4
2	Record voltage and current values in a table	4	http://localhost/chemlab/Main.mp4
2	Calculate total resistance and power	5	http://localhost/chemlab/Main.mp4
2	Analyze circuit behavior using Ohms Law	6	http://localhost/chemlab/Main.mp4
2	Draw voltage and current waveforms	7	http://localhost/chemlab/Main.mp4
2	Summarize circuit analysis findings	8	http://localhost/chemlab/Main.mp4
3	Prepare the growth medium	1	http://localhost/chemlab/Main.mp4
3	Inoculate the microorganisms onto the agar	2	http://localhost/chemlab/Main.mp4
3	Incubate the Petri dishes at the appropriate temperature	3	http://localhost/chemlab/Main.mp4
3	Observe and document the colony growth	4	http://localhost/chemlab/Main.mp4
3	Perform Gram staining to determine cell type	5	http://localhost/chemlab/Main.mp4
3	Identify and classify the microorganisms	6	http://localhost/chemlab/Main.mp4
4	Extract DNA from the sample	1	http://localhost/chemlab/Main.mp4
4	Set up the PCR reaction with appropriate primers	2	http://localhost/chemlab/Main.mp4
4	Run the PCR cycles in a thermal cycler	3	http://localhost/chemlab/Main.mp4
4	Prepare the DNA sequencing reaction	4	http://localhost/chemlab/Main.mp4
4	Load the sample into the DNA sequencer	5	http://localhost/chemlab/Main.mp4
4	Analyze and interpret the DNA sequencing results	6	http://localhost/chemlab/Main.mp4
4	Generate a DNA sequence report	7	http://localhost/chemlab/Main.mp4
4	Perform sequence alignment and comparison	8	http://localhost/chemlab/Main.mp4
4	Identify genetic variations and mutations	9	http://localhost/chemlab/Main.mp4
4	Draw conclusions about the DNA sequence	10	http://localhost/chemlab/Main.mp4
5	Set up a pendulum with a string and weight	1	http://localhost/chemlab/Main.mp4
5	Release the pendulum from a fixed angle	2	http://localhost/chemlab/Main.mp4
5	Measure the time period of the pendulum	3	http://localhost/chemlab/Main.mp4
5	Repeat the measurements for different lengths	4	http://localhost/chemlab/Main.mp4
6	Prepare the standard solutions of acid and base	1	http://localhost/chemlab/Main.mp4
6	Fill the burette with one of the solutions	2	http://localhost/chemlab/Main.mp4
6	Add the solution gradually to the flask	3	http://localhost/chemlab/Main.mp4
6	Record the volume at the equivalence point	4	http://localhost/chemlab/Main.mp4
6	Calculate the concentration of the unknown solution	5	http://localhost/chemlab/Main.mp4
6	Repeat the titration for accuracy	6	http://localhost/chemlab/Main.mp4
7	Plant the seeds in the pots with soil	1	http://localhost/chemlab/Main.mp4
7	Water the plants regularly	2	http://localhost/chemlab/Main.mp4
7	Observe and record the plant growth	3	http://localhost/chemlab/Main.mp4
8	Measure the mass of the substance	1	http://localhost/chemlab/Main.mp4
8	Fill the graduated cylinder with a known volume of water	2	http://localhost/chemlab/Main.mp4
8	Carefully add the substance to the cylinder	3	http://localhost/chemlab/Main.mp4
8	Record the new water volume	4	http://localhost/chemlab/Main.mp4
8	Calculate the density using the mass and volume	5	http://localhost/chemlab/Main.mp4
9	Place the compass near the magnetic field source	1	http://localhost/chemlab/Main.mp4
9	Note the direction of the compass needle	2	http://localhost/chemlab/Main.mp4
9	Move the compass to different locations	3	http://localhost/chemlab/Main.mp4
9	Plot the magnetic field lines on a map	4	http://localhost/chemlab/Main.mp4
9	Use magnetic probes to measure the field strength	5	http://localhost/chemlab/Main.mp4
9	Analyze and interpret the magnetic field data	6	http://localhost/chemlab/Main.mp4
10	Prepare the heat source	1	http://localhost/chemlab/Main.mp4
10	Connect the thermocouples to the objects	2	http://localhost/chemlab/Main.mp4
10	Measure and record the initial temperatures	3	http://localhost/chemlab/Main.mp4
10	Apply heat and monitor the temperature changes	4	http://localhost/chemlab/Main.mp4
10	Record the final temperatures	5	http://localhost/chemlab/Main.mp4
10	Calculate the rate of heat transfer	6	http://localhost/chemlab/Main.mp4
10	Analyze the results and draw conclusions	7	http://localhost/chemlab/Main.mp4
11	Set up the round-bottom flask and condenser	1	http://localhost/chemlab/Main.mp4
11	Add the reactants and catalyst to the flask	2	http://localhost/chemlab/Main.mp4
11	Heat the mixture and monitor the reaction	3	http://localhost/chemlab/Main.mp4
11	Cool the reaction and extract the product	4	http://localhost/chemlab/Main.mp4
12	Set up the solar cell in a controlled environment	1	http://localhost/chemlab/Main.mp4
12	Measure and record the incident light intensity	2	http://localhost/chemlab/Main.mp4
12	Measure and record the current-voltage characteristics	3	http://localhost/chemlab/Main.mp4
12	Calculate the efficiency of the solar cell	4	http://localhost/chemlab/Main.mp4
12	Repeat the measurements for different conditions	5	http://localhost/chemlab/Main.mp4

Database: experiment, Table: experiment_steps, Purpose: Dumping data

exptId	description	stepNo	video
13	Prepare the reaction vessel and reagents	1	http://localhost/chemlab/Main.mp4
13	Initiate the reaction and start the timer	2	http://localhost/chemlab/Main.mp4
13	Measure the absorbance at regular intervals	3	http://localhost/chemlab/Main.mp4
13	Plot a graph of absorbance versus time	4	http://localhost/chemlab/Main.mp4
13	Determine the reaction rate from the graph	5	http://localhost/chemlab/Main.mp4
13	Analyze factors affecting the reaction rate	6	http://localhost/chemlab/Main.mp4
14	Prepare the bacterial smear on a slide	1	http://localhost/chemlab/Main.mp4
14	Stain the bacteria with crystal violet	2	http://localhost/chemlab/Main.mp4
14	Wash and decolorize the slide	3	http://localhost/chemlab/Main.mp4
14	Counterstain the bacteria with safranin	4	http://localhost/chemlab/Main.mp4
15	Prepare the electrolyte solution	1	http://localhost/chemlab/Main.mp4
15	Connect the object to be electroplated	2	http://localhost/chemlab/Main.mp4
15	Immerse the object and apply current	3	http://localhost/chemlab/Main.mp4
15	Monitor the electroplating process	4	http://localhost/chemlab/Main.mp4
16	Set up the optical transmitter	1	http://localhost/chemlab/Main.mp4
16	Connect the optical fibers	2	http://localhost/chemlab/Main.mp4
16	Transmit data through the fibers	3	http://localhost/chemlab/Main.mp4
16	Receive and decode the transmitted data	4	http://localhost/chemlab/Main.mp4
16	Analyze the data transmission quality	5	http://localhost/chemlab/Main.mp4
16	Optimize the system for better performance	6	http://localhost/chemlab/Main.mp4
16	Summarize the findings and conclusions	7	http://localhost/chemlab/Main.mp4

Database: experiment, Table: users, Purpose: Dumping data

userId	name	designation	password
LAB001	Meena Sundaram	Lab Assistant	lab123
LAB002	Suresh Raman	Junior Lab Assistant	lab456
LAB003	Priya Nair	Senior Lab Assistant	lab789
LAB004	Karthik Rajendran	Lab Technician	lab012
LAB005	Nithya Balaji	Lab Supervisor	lab345
STU001	Arjun Sharma	Student	student123
STU002	Divya Menon	Student	student456
STU003	Rahul Kapoor	Student	student789
STU004	Ananya Nair	Student	student012
STU005	Kiran Rajendran	Student	student345
TCH001	Rajesh Kumar	Professor	teacher123
TCH002	Deepika Sharma	Assistant Professor	teacher456
TCH003	Sanjay Verma	Lecturer	teacher789
TCH004	Sneha Rajan	Associate Professor	teacher012
TCH005	Aruna Menon	Senior Lecturer	teacher345