Centurion University
Shaping Lives... Empowering Communities...

SCHOOL OF ENGINEERING AND TECHNOLOGY

Record of Applied and Action Learning (Programming Practice)

SUBJECT NAME: RELATIONAL AND DISTRIBUTED DATABASES

SUBJECT CODE: CUCS1005

SEMESTER: 4th

Name: _____

Registration No: _____

Program Branch: B.TECH / CSE

Specification: _____

Academic Year: 2025-26

Campus: Paralakhemundi

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Certificate

This is to certify that Mr./Ms.....having Registration No. ..... of……..4th.....Semester, ...B.TECH..... Program, ... School, ...Paralakhemundi..... Campus has completed ..... number of experiments in .....Relational And Distributed Databases..... Applied and Action Learning Laboratory and fulfils the ….UG (B.Tech.)… Course requirements.

Signature of the HoD/Dean ***Signature of the Faculty***

Office Seal

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Sl. No.	Date	Name of the Experiment	Page No.	Remark	Faculty Signature

School: .....School of Engineering & Technology Campus: ..... Paralakhemundi……..

Academic Year: ...2025-26.... Subject Name: ……..RDD…..... Subject Code: .CUCS 1005....

Semester: ...4th .... Program: .....B.TECH..... Branch: .....CSE..... Specialization: .....

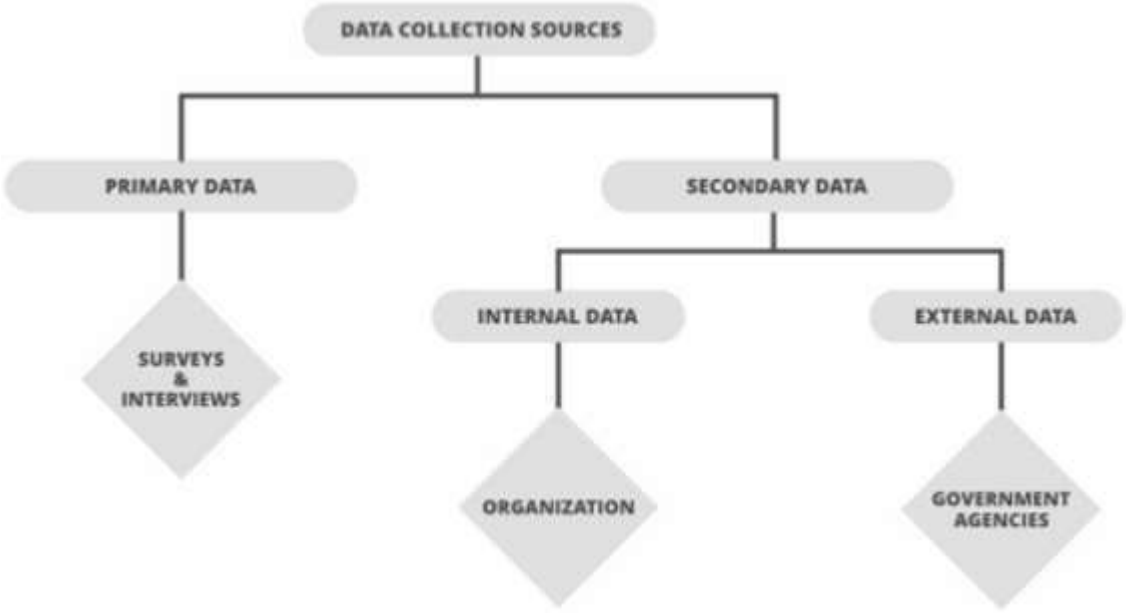
Date: .....

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment: Collect data from different data sources and identify the type of data source.

Coding Phase: Pseudo Code / Flow Chart / Algorithm



Theory:

Primary data:

The data which is Raw, original, and extracted directly from the official sources is known as primary data. This type of data is collected directly by performing techniques such as questionnaires, interviews, and surveys. The data collected must be according to the demand and requirements of the target audience on which analysis is performed otherwise it would be a burden in the data processing.

Few methods of collecting primary data:

1. Interview method:

The data collected during this process is through interviewing the target audience by a person called interviewer and the person who answers the interview is known as the interviewee. Some basic business or product related questions are asked and noted down in the form of notes, audio, or video and this data is stored for processing. These can be both structured and unstructured like personal interviews or formal interviews through telephone, face to face, email, etc.

2. Survey method:

The survey method is the process of research where a list of relevant questions are asked and answers are noted down in the form of text, audio, or video. The survey method can be obtained in both online and offline mode like through website forms and email. Then that survey answers are stored for analyzing

data. Examples are online surveys or surveys through social media polls.

3. Observation method:

The observation method is a method of data collection in which the researcher keenly observes the behavior and practices of the target audience using some data collecting tool and stores the observed data in the form of text, audio, video, or any raw formats. In this method, the data is collected directly by posting a few questions on the participants. For example, observing a group of customers and their behavior towards the products. The data obtained will be sent for processing.

4. Experimental method:

The experimental method is the process of collecting data through performing experiments, research, and investigation. The most frequently used experiment methods are CRD, RBD, LSD, FD.

- **CRD - Completely Randomized design** is a simple experimental design used in data analytics which is based on randomization and replication. It is mostly used for comparing the experiments.
- **RBD - Randomized Block Design** is an experimental design in which the experiment is divided into small units called blocks. Random experiments are performed on each of the blocks and results are drawn using a technique known as analysis of variance (ANOVA). RBD was originated from the agriculture sector.
- **LSD - Latin Square Design** is an experimental design that is similar to CRD and RBD blocks but contains rows and columns. It is an arrangement of NxN squares with an equal amount of rows and columns which contain letters that occurs only once in a row. Hence the differences can be easily found with fewer errors in the experiment. Sudoku puzzle is an example of a Latin square design.
- **FD - Factorial design** is an experimental design where each experiment has two factors each with possible values and on performing trail other combinational factors are derived.

Secondary data:

Secondary data is the data which has already been collected and reused again for some valid purpose. This type of data is previously recorded from primary data and it has two types of sources named internal source and external source.

1. Internal source:

These types of data can easily be found within the organization such as market record, a sales record, transactions, customer data, accounting resources, etc. The cost and time consumption is less in obtaining internal sources.

2. External source:

The data which can't be found at internal organizations and can be gained through external third party resources is external source data. The cost and time consumption is more because this contains a huge amount of data. Examples of external sources are Government publications, news publications, Registrar General of India, planning commission, international labor bureau, syndicate services, and other non-governmental publications.

PROCEDURE:

Step 1: Identify the purpose of data collection and select a topic or domain for which data must be collected.

Step 2: Search and collect data from different available sources such as websites, sensors, surveys, interviews, internal or external organizational sources.

Step 3: Record the source link, location, or reference details from where the data has been collected.

Step 4: Analyze the collected data and categorize each dataset as either Primary data or Secondary data based on its characteristics.

Step 5: Fill the observation table by entering details such as database name, data source link/format, and type of data (Primary/Secondary).

OBSERVATION

Sl. No	Name of the Database	Source Link	Data type
1.	Interpol database for crime	https://www.interpol.int/en/How-we-work/Databases	Secondary
2.	UCI	https://archive.ics.uci.edu/	Secondary
3.	NASA open data portal	https://data.nasa.gov/?utm_source=chatgpt.com	Secondary
4.	Openalex	https://openalex.org/	Secondary
5.	National canters for environmental information	https://www.ncei.noaa.gov/	Secondary
6.	PubChem	https://pubchem.ncbi.nlm.nih.gov/	Secondary
7.	Mitre Attack	https://attack.mitre.org/	Secondary
8.	food and agriculture organization of united nations	https://www.fao.org/statistics/en/	Secondary
9.	Drug Bank	https://go.drugbank.com/	Secondary
10.	ITU	https://www.itu.int/itu-d/sites/statistics/	Secondary

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/ Practical Simulation/ Programming	10		
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	**50**		

Signature of the Faculty :

Signature of the Student:

Name :

Regn. No. :

ASSESSMENT

Experiment	Full Mark	Marks Obtained
Experiment - 1	50	
Experiment - 2	50	
Experiment - 3	50	
Experiment - 4	50	
Experiment - 5	50	
Experiment - 6	50	
Experiment - 7	50	
Experiment - 8	50	
Experiment - 9	50	
Experiment - 10	50	
Experiment - 1	50	
Experiment - 12	50	
Experiment - 13	50	
Experiment - 14	50	
Experiment - 15	50	
Experiment - 16	50	
Experiment - 17	50	
Experiment - 18	50	
Experiment - 19	50	
Experiment - 20	50	
Average Total	**50**	

Date:_____ ***Signature of the Faculty***

** One sheet per learning record to be used*

COURSE OUTCOME ATTAINMENT

- **Expected Course Outcome:**
  (Refer to COs Statement in the Syllabus)

- **Course Outcome Attained:**
  - **Strongly Agree - 5** ☐
  - **Agree - 4** ☐
  - **Neutral - 3** ☐
  - **Disagree - 2** ☐
  - **Strongly Disagree - 1** ☐

- **Learning Gap (If any):**

Date: _____ ***Signature of the Student***

- **Suggestions / Recommendations:**
  (by the Course Faculty)

Date: _____ ***Signature of the Faculty***

*One sheet per learning record to be used

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CAMPUSES:

Paralakhemundi Campus
Village Alluri Nagar
P.O. – R Sitapur, Via- Uppalada
Paralakhemundi, Dist.- Gajapati
Odisha, India. PIN– 761211

Bhubaneswar Campus
Ramchandrapur
P.O. – Jatni, Bhubaneswar
Dist.- Khurda, Odisha,
India, PIN– 752050

Balangir Campus
Behind BSNL Office
IDCO land, Rajib Nagar
Dist.- Balangir, Odisha
India, PIN-767001

Rayagada Campus
IDCO Industrial Area
Pitamahal, Rayagada
Dist.-Rayagada, Odisha
India, PIN-765001

Balasore Campus
Gopalpur,
P.O.-Balasore
Dist.-Balasore, Odisha
India, PIN-756044

Chatrapur Campus
Ramchandrapur,
Kaliabali Chhak,
P.O-Chatrapur, Dist.-Ganjam
Odisha, India, PIN-761020