CHATRAPATHI SIVAJI TRI SATHAJAYANTHI (CSTS)

GOVERNMENT KALASALA, JANGAREDDIGUDEM,

ELURU DIST., A.P.

Department of Zoology

Title:

Blood Grouping

Objective:

The objective of implementing blood grouping as a best practice at CSTS Govt Degree College is to accurately determine the blood types of students. This information is critical for various medical scenarios, including emergencies, transfusions, and organ transplants. By fostering awareness about blood types, the college aims to contribute to a safer campus community and promote voluntary blood donation, instilling a sense of responsibility for personal health management among students.

Challenges:

Accuracy and Reliability: Ensuring that blood typing tests are accurate and reliable is a top priority to avoid medical complications.

<u>Availability of Reagents and Supplies</u>: Securing a steady supply of reagents and testing supplies, especially in resource-limited areas, requires careful logistical planning.

<u>Blood Type Discrepancies</u>: Handling rare or complex blood types may pose challenges, necessitating preparedness and consultation with experts.

Practice:

Blood grouping will be integrated into the curriculum, ensuring that students understand the importance of knowing their blood types. This initiative will contribute to a culture of responsible healthcare and emergency preparedness, making the campus community more

resilient. The college will also encourage voluntary blood donation, creating a positive impact on both individual well-being and societal health.

Evidence of Success:

The success of blood grouping will be measured by its ability to save lives through safe transfusions, reduced transfusion-related complications, and improved patient outcomes. Regular reviews will showcase the effectiveness of this best practice in enhancing compatibility and minimizing adverse reactions.

Problems Encountered and Resources Required:

The implementation of blood grouping may face challenges such as inadequate funding, a shortage of skilled technicians, and ensuring the safety of blood samples. To address these issues, the college will need to invest in quality training, modern testing equipment, and rigorous quality control measures. Collaboration with blood banks and ongoing education will be essential for the safe and effective implementation of blood grouping as a best practice.

Notes:

For successful adoption, CSTS Govt Degree College should prioritize investing in quality training for personnel, modern testing equipment, and stringent quality control measures. Collaboration with blood banks and continuous education will be vital to ensuring the safe and effective implementation of blood grouping as a best practice on campus.
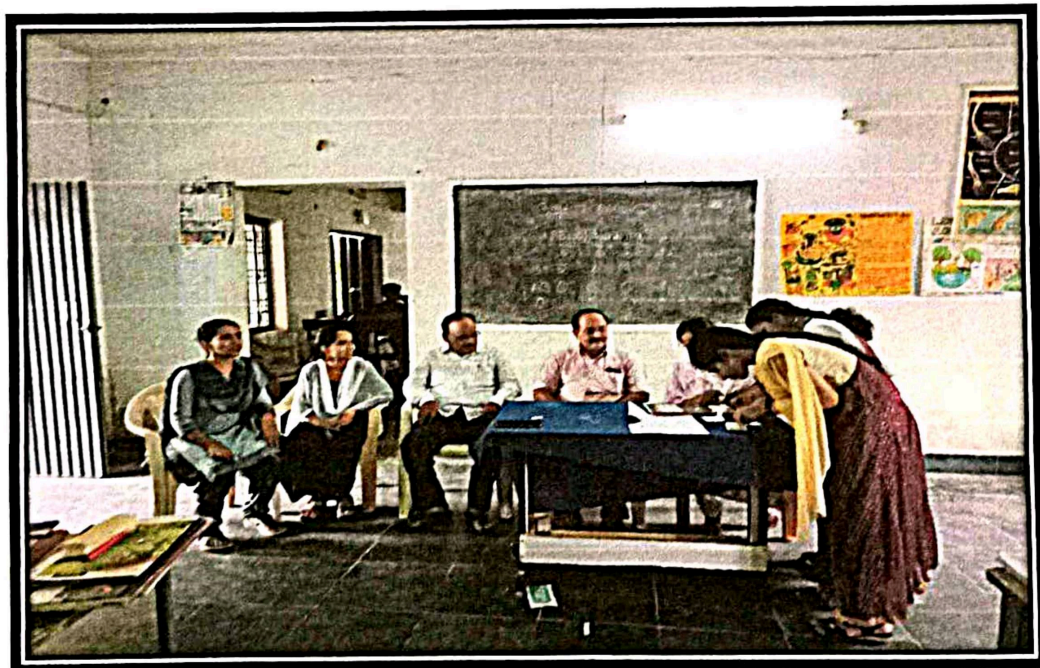
BLOOD GROUPING

Date: 17/02/2022

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Computer science Practicals

Dt : 06/07/2023

Topic: pallendrom program in Java program

Class: II BSC(MPCs) ,3rd semester

Aim

The aim of a palindrome program in Java is to determine whether a given input (usually a string or a number) reads the same backward as forward. This program can be used to understand basic programming concepts such as string manipulation, loops, conditionals, and user input handling. Additionally, it serves various educational and practical purposes:

Educational Objectives:

1.Understanding String Manipulation : Learn how to manipulate strings, reverse them, and compare them.

2. Conditionals and Logic : Apply logical conditions to check for equality between the original and reversed strings.

3. User Input Handling : Gain experience in reading and processing user input.

4. Algorithm Design : Develop an algorithm to solve a specific problem (checking for palindromes).

5. Problem-Solving Skills : Enhance problem-solving abilities by implementing a solution to a common problem.

Practical Applications:

1. Data Validation : Use palindrome checks in scenarios where symmetry or specific patterns are required.

2. Text Processing : Useful in various text processing applications, such as checking for palindromic sequences in DNA analysis.

3. Learning and Education : Serve as a basic exercise for beginners to practice and understand fundamental programming concepts.

4. Competitive Programming : Often used as a problem in coding competitions and interviews to assess a candidate's understanding of string operations and algorithm efficiency.

Example Scenarios:

1. Word Games : Checking if words or phrases are palindromes in word games or puzzles.

2. Data Patterns: Identifying symmetrical patterns in data, such as in scientific research or cryptography.

Overall, a palindrome program in Java provides a foundation for learning essential programming skills while also offering practical utility in various fields.

Objectives

1.Read Input: Prompt the user to input a string or number and handle the input appropriately.

2. Reverse Logic: Implement logic to reverse the input efficiently.

3. Comparison: Compare the original input with the reversed version to check for equality.

4. Result Display: Output whether the input is a palindrome or not based on the comparison.

5. Efficiency: Ensure the program runs efficiently with minimal time and space complexity.

Procedure

Here's a step-by-step procedure for writing a palindrome program in java :

Creating a palindrome program in Java involves writing code that checks if a given string or number reads the same backward as forward. Here is a simple procedure to create such a program in Java:

1. Input the String or Number : Accept the string or number from the user.

2. Reverse the String or Number : Reverse the input.

3. Compare the Original and Reversed String or Number : Check if the original input is equal to the reversed input.

4. Output the Result : Display whether the input is a palindrome or not.

Here is a sample Java program that demonstrates this procedure :

```java
import java.util.Scanner;
public class Palindrome {
    public static void main(String[] args) {
        // Step 1: Input the string or number
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter a string or number:");
        String original = scanner.nextLine();

        // Step 2: Reverse the string or number
        String reversed = new StringBuilder(original).reverse().toString();

        // Step 3: Compare the original and reversed string or number
        if (original.equals(reversed)) {
            // Step 4: Output the result
            System.out.println(original + " is a palindrome.");
        } else {
            // Step 4: Output the result
            System.out.println(original + " is not a palindrome.");
        }

        scanner.close();
    }
}
```

Explanation:

1. Input the String or Number :

   - We use `Scanner` to take input from the user.

   - `scanner.nextLine()` reads the input as a string.

2. Reverse the String or Number :

   - `new StringBuilder(original).reverse().toString()` reverses the input string.

   - `StringBuilder` is a mutable sequence of characters, and the `reverse()` method reverses its characters.

3. Compare the Original and Reversed String or Number :

   - The `equals()` method checks if the original string is equal to the reversed string.

4. Output the Result:

   - If they are equal, the input is a palindrome.

   - If not, the input is not a palindrome.

This program can handle both strings and numbers, as it treats the input as a string.

Outcomes

Creating a palindrome program in Java enables learners to master string manipulation, develop logical thinking, and understand basic input/output handling. Through this exercise, they gain proficiency in using conditional statements and the `StringBuilder` class. The program enhances debugging and testing skills by verifying various test cases and fosters an appreciation for algorithm efficiency. Practically, it serves as a foundational programming exercise applicable in text analysis, educational tools, interview preparation, and scientific research. Ultimately, it connects theoretical knowledge with real-world problem-solving, producing correct and user-friendly results that handle diverse inputs and edge cases.
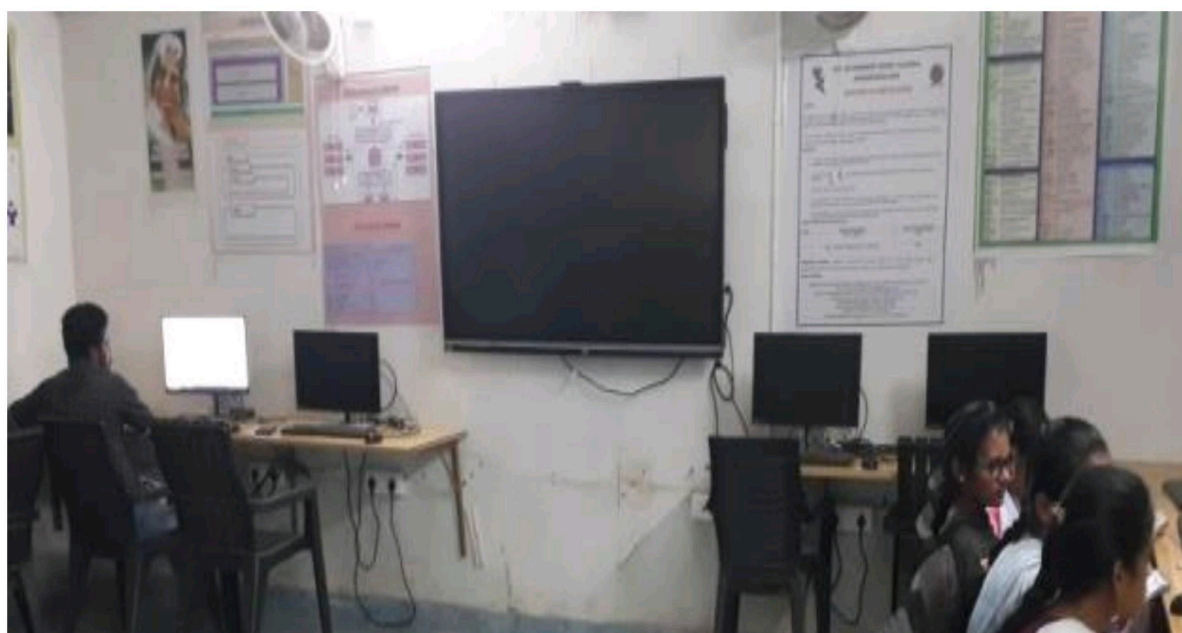
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Signature of the Lecturer

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BOTANY PTACTICALS

Topic: T.S of DRACENA STEM

Class: 3ʳᵈ semester

Aim

To study the anatomical features of a Dracaena stem through a transverse section.

Objectives

1. Observe tissue arrangement in the Dracaena stem.
2. Identify and differentiate cell types.
3. Understand structural adaptations.
4. Correlate anatomical features with stem functions.

Procedure

1. **Collect Material**: Obtain a Dracaena stem sample.
2. **Prepare Sample**: Cut a thin transverse section.
3. **Stain**: Use a staining solution (safranin and fast green).
4. **Mount**: Place the section on a slide with a cover slip.
5. **Examine**: Observe under a microscope from low to high magnification.
6. **Identify and Draw**: Identify tissues and draw a labeled diagram.

Outcomes

1. Identify and distinguish stem tissues.
2. Understand tissue arrangement and relationships.
3. Correlate anatomical features with functions.
4. Develop practical skills in sectioning, staining, and microscopic examination.
5. Document observations through drawings and photographs.

Name of the student   group

<u>III Bsc (BCH)</u>

1. B. Saanitha   —   III B.sc (BCH)
2. S. Satya Vani   ''
3. M. Keerthi   ''
4. V. paiyanka   ''
5. P. Sneeja   ''
6. S. Brahma Teja   ''
7. T. Praveen   ''
8. T. Anji Babu   ''
9. B. Durgaprasad.   ''
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23. K. Jayasri   III BSC [Bze]
24. R.o. Bharathi   III. BSC [B2C]
25. T. Gangabhavani   ''
26. M. Uday bhanu
27. Ch. glory   ''

Brief Report on Physics MinorPracticals

Aim &Objective:

To align with emerging and employment areas.

Learning outcomes:

On successful completion of this course student can able to understand how light propagates, phenomenon of light like Interference, Diffraction & Polarization.

Student can able to operate optical instruments like Spectrometer, Travelling Microscope, Polarimeter etc.,

Student can able to find the wavelength of light by using diffraction phenomenon.

Students can able to differentiate between minimum deviation and normal incidence while doing Prism experiment with Spectrometer

Students can able to measure Least Count for optical instruments

Instruments available in Laboratory:

Travelling Microscope, Spectrometer, Polarimeter, Lens, Prism, Laser light source, Retort Stand, Meter Scale etc.,

Photos:

Student Signatures:

Sl. No.	Group	Name of the Student	Signature
1.	B.Sc(Physics minor)	P Tulasi lakshmi	P. Tulasi lak
2.	B.sc (physics minor)	k. Roochika	k. Roochika.

3.	BSc (physics minor)	ch. chinni sai chandrika	Ch. chinni sai chandrika
4.	BSc (physics minor)	V. Renuka Naga Durga	V. Renuka
5.	BSc (physics minor)	P. Seandeep raju	P. Sandeep raju
6.	B SC (Physics Minor)	G. Abhi ram.	G. Abhiram.

Report: During practical students can involve themselves in participative learning i.e learning by doing to understand the phenomenon of light i.e diffraction, dispersion etc.,
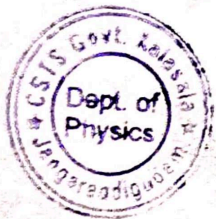
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CHEMISTRY PRACTICAL
TOPIC: ACID BASE TITRATION—HCL VS NAOH
CLASS : II BSc [MPC]—SEM-III
DATE—05-04-2023

Aim

To determine the concentration of hydrochloric acid (HCl) by performing an acid-base titration using a sodium hydroxide (NaOH) solution of known concentration.

Objective

1. To accurately find the concentration of an HCl solution.
2. To understand the process of titration and the principles of acid-base reactions.
3. To use indicators to identify the endpoint of the titration.

Procedure

1. **Preparation:**
   o Prepare the NaOH solution of known concentration. This will be your titrant.
   o Prepare the HCl solution whose concentration is to be determined. This will be your analyte.
   o Choose an appropriate indicator (phenolphthalein is commonly used).
2. **Setup:**
   o Rinse the burette with NaOH solution and fill it with the NaOH solution. Record the initial volume.
   o Rinse the pipette with the HCl solution and then use it to transfer a measured volume of HCl to a clean Erlenmeyer flask.
   o Add a few drops of phenolphthalein to the HCl solution in the flask.
3. **Titration:**
   o Slowly add the NaOH solution from the burette to the HCl solution while continuously swirling the flask to mix.
   o As the titration proceeds, the color of the solution will change due to the indicator. Phenolphthalein changes from colorless to pink as the solution becomes basic.

- Approach the endpoint slowly, adding the NaOH drop by drop until a persistent color change is observed.

4. **Completion:**
   - Once a persistent color change is noted (the pink color remains for 30 seconds), record the final volume of NaOH in the burette.
   - Calculate the volume of NaOH used in the titration by subtracting the initial volume from the final volume.

Outcome:

- **Determine HCl Concentration:** Accurate measurement of HCl concentration using NaOH titration.

- **Identify Endpoint:** Endpoint is marked by a color change due to the indicator.

- **Understand Reaction:** Demonstrates neutralization reaction between HCl and NaOH.

- **Practice Accuracy:** Develop precise measurement and lab skills.

- **Quantitative Analysis:** Calculate concentrations and interpret stoichiometric relationships.

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CHEMISTRY PRACTICAL
TOPIC: ACID BASE TITRATION—HCL VS Na2Co3
CLASS : II BSc [BZC]—SEM-IV
DATE-13-02-2023

Aim

To determine the concentration of hydrochloric acid (HCl) by titrating it with a sodium carbonate (Na_2CO_3) solution.

Objectives

1. **To prepare a sodium carbonate solution of known concentration.**
2. **To standardize the hydrochloric acid solution using the sodium carbonate solution.**
3. **To calculate the concentration of hydrochloric acid based on the titration results.**

Procedure

1. **Preparation of Sodium Carbonate Solution:**
   o Accurately weigh a known amount of sodium carbonate (Na_2CO_3) and dissolve it in distilled water to prepare a solution of known concentration. This will serve as the primary standard.
   o Mix thoroughly and transfer the solution to a standard flask, making up the volume to the mark with distilled water.
2. **Preparation for Titration:**
   o Rinse and fill a burette with the hydrochloric acid (HCl) solution whose concentration is to be determined.
   o Rinse a pipette with the sodium carbonate solution and use it to transfer a measured volume of the sodium carbonate solution into a conical flask.
3. **Addition of Indicator:**
   o Add a few drops of a suitable indicator (like methyl orange or phenolphthalein) to the sodium carbonate solution in the conical flask. Phenolphthalein is commonly used because it changes color at the end point of the titration involving Na_2CO_3 and HCl.

4. **Titration:**
   - ○ Slowly add the hydrochloric acid from the burette to the sodium carbonate solution while continuously swirling the conical flask to mix.
   - ○ Continue adding the acid until the color change indicates that the end point has been reached (for phenolphthalein, this is a color change from pink to colorless).
5. **Recording Data:**
   - ○ Note the volume of hydrochloric acid used to reach the end point.
   - ○ Repeat the titration process several times for accuracy and consistency, recording the volume of acid used each time.

➢ The outcome is the concentration of the hydrochloric acid (HCl) solution, determined by titration with sodium carbonate (Na_2CO_3) and calculated using the volume of HCl required to reach the endpoint.

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20	M. Pravalika	II B.SC [M.P.C]	M. Pravalika
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22	G. Sri harsha vardhin	II BSC B2C	G. Sri harsha vardh
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