CPP

BBA BA I year

Lab exercises

**Unit 1**

1. Data types & operators
   1. Arithmetic calculations (sum, subtract, multiply, divide)
   2. Simple interest, compound interest
   3. Profit, cost calculations
   4. Breakeven point
   5. Wordcount [https://www.geeksforgeeks.org/count-words-in-a-given-string/; <https://www.sanfoundry.com/cpp-program-find-number-words-given-sentence/>; https://www.tutorialspoint.com/count-words-in-a-given-string-in-cplusplus]

**Unit 2**

1. If demo
   1. Maximum minimum number (from 2/3 numbers – if demo)
   2. Data transformations (gender, age, salary, etc.)
   3. Customer transactions (pharma credits - ordinary, premium)
   4. Rations (salary calc.)
2. Loops demo
   1. Choices, week days, calc
   2. Summary statistics (mean, sd using 1d arrays)
3. 2d, 3d arrays
   1. Measurement levels (gender)
   2. Data sets/matrices (3d)
   3. Summary/descriptive statistics (if + loops)
   4. Covariance/correlation matrix
4. Strings
   1. Counting characters, words, lines.
   2. Palindrome (length example)
   3. Data encoding (strings to numbers vice versa)
   4. lifo, fifo [iterator functions]
5. Statistics [functions]
   1. Univariate
   2. Bivariate

**Unit 3**

1. OOPs
   1. HRM (Employee)
   2. Marketing (Customers)
   3. Operations (Products)
   4. Finance (Banking)

**Unit 4**

Files & Streams

1. Data import & Export mechanisms for
   1. Data analytics

**Unit 5**

Exception handling

[https://www.geeksforgeeks.org/exception-handling-c/; https://www.tutorialspoint.com/cplusplus/cpp\_exceptions\_handling.htm ]

1. Built-in exceptions
2. User defined exceptions