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.)
   5. Week days, calc, Choices, (switch)
2. Loops demo
   1. 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. Matrix operations [x]
   1. Matrix arithmetic/algebra
   2. Covariance/correlation matrix
5. Statistics [x]
   1. Univariate
   2. Bivariate

**Unit 3**

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

**Unit 4**

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

**Unit 5**

Exception handling

1. Built-in exceptions
2. User defined exceptions