

“Arithmetic / Formula / Comparsion Calculations (Operations) & Conversations”

This project is a part of Arithmetic / Formula / Comparsion Calculations (Operations) & Conversations with a limited functionality where following modules are performed

“ Features & Operations ”

Arithmetic Operations / Calculations

- a) Addition, subtraction, multiplication and division of numbers
- b) There could be multiple numbers upto the user wish for Arithmetic Operator

Conversion Operations / Calculations

- a) Centimetres into inches & Vice Versa
- b) Inches into meters & Vice Versa
- c) Foot into inches & Vice Versa
- d) Kilometres into meters & Vice Versa

- e) Celsius into Fahrenheit and vice versa

Formulas Operations / Calculations

- a) Average: the sum of all the values for a given field in all connected records, divided by the total number of connected records.
- b) Percentage: The number of item user want to enter
- c) Max: the highest value for a given field in all connected records.
- d) Min: the lowest value for a given field in all connected records.
- e) Number is Even or Odd
- f) Number is Prime or Consonant Number
- i) Integer is Postive or Negaitive Number
- j) Square, Cube, Fourth and Fifth-Power of a Number
- k) Find the Area of Triangle, Circle & Sphere
- l) Find the Speed, Distance and Time

Comparison Operations / Calculations

- a) Greater Than
- b) Less Than
- c) Both are Equal or Unequal

d) Greater Than Equal To

e) Less Than Equal To

Error Handling

a) At each level

b) If some information is not present in the database, it should display proper messages.

c) If a wrong input is entered or some mistake is being done by the user, the system, should assist the user to correct that mistake.

Required Artifacts:

1. Project Proposal

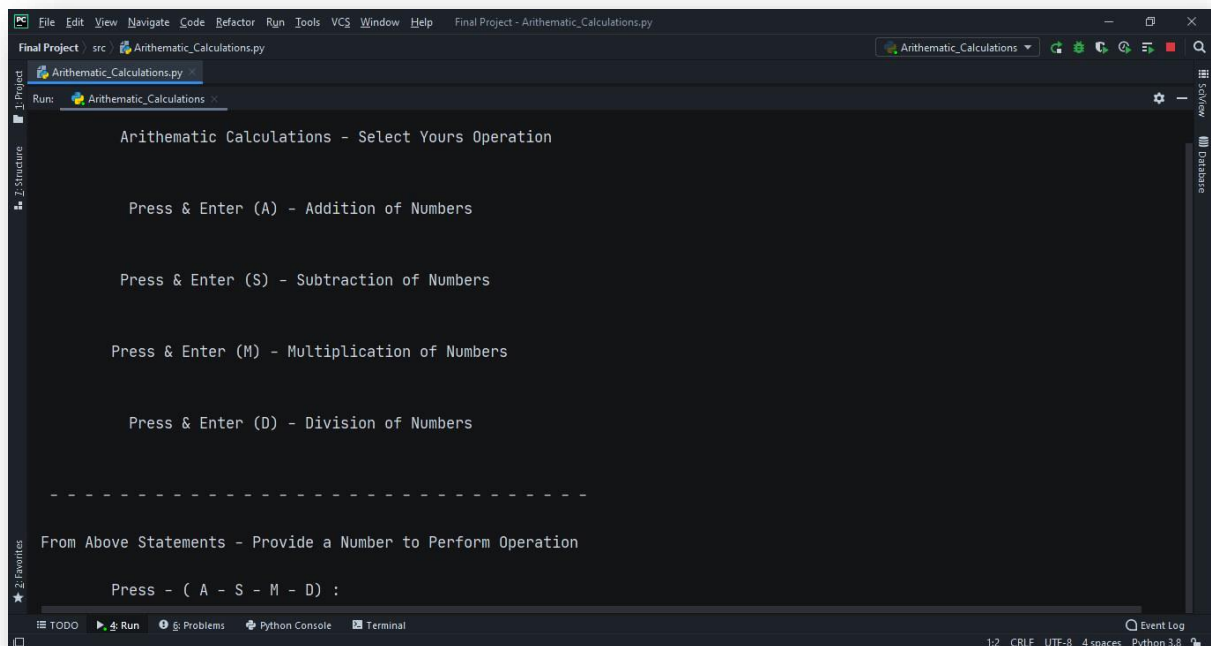
2. Project Report

3. Source code (Outputs)



“ REPORT (PROJECT PROGRAM & OUTPUT)”

*“Arithmetic Operations /
Calculations”
Program Output*



```
Arithmetic Calculations - Select Yours Operation

Press & Enter (A) - Addition of Numbers

Press & Enter (S) - Subtraction of Numbers

Press & Enter (M) - Multiplication of Numbers

Press & Enter (D) - Division of Numbers

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From Above Statements - Provide a Number to Perform Operation

Press - ( A - S - M - D ) :
```

The screenshot shows a Python IDE window titled 'Final Project - Arithmetic_Calculations.py'. The main editor area displays the output of a program. The output text is as follows:

```
Arithmetic Calculations - Select Yours Operation

Press & Enter (A) - Addition of Numbers

Press & Enter (S) - Subtraction of Numbers

Press & Enter (M) - Multiplication of Numbers

Press & Enter (D) - Division of Numbers

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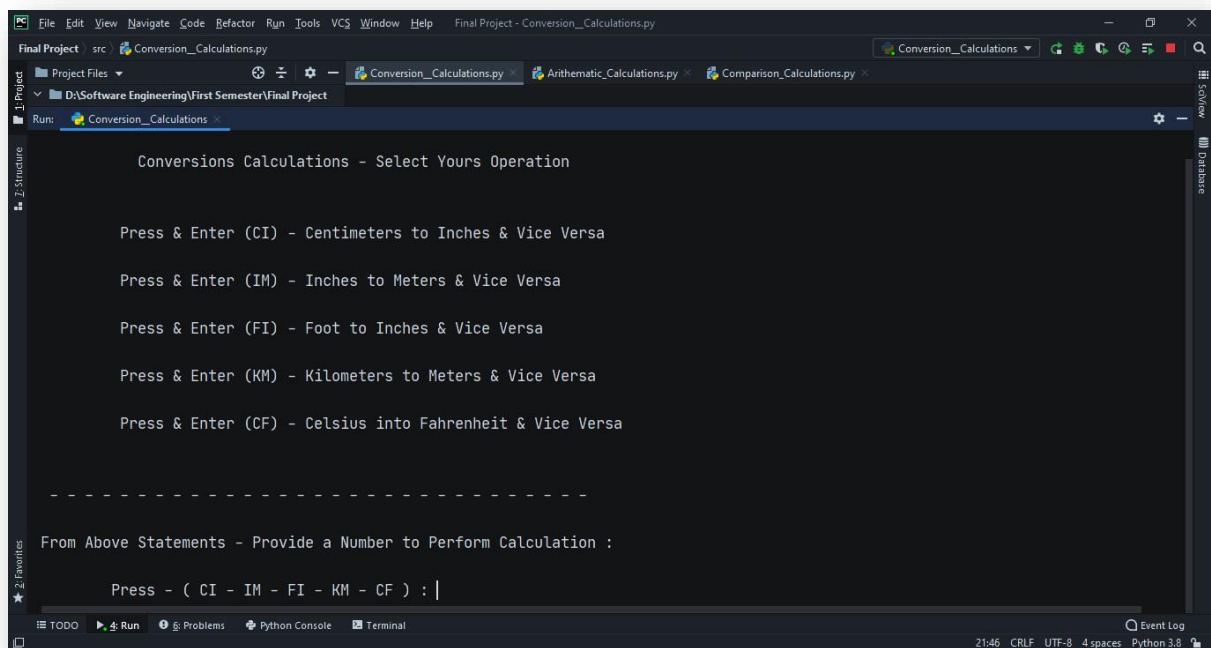
From Above Statements - Provide a Number to Perform Operation

Press - ( A - S - M - D ) :
```

The IDE interface includes a menu bar (File, Edit, View, Navigate, Code, Refactor, Run, Tools, VCS, Window, Help), a toolbar with icons for running and debugging, and a sidebar with 'Run' and 'Structure' tabs. The status bar at the bottom indicates '1:2 CRLF UTF-8 4 spaces Python 3.8'.

“Conversion Operations / Calculations”

Program Output



The screenshot shows a PyCharm IDE window titled "Final Project - Conversion_Calculations.py". The "Run" console displays the following output:

```
Conversions Calculations - Select Yours Operation

Press & Enter (CI) - Centimeters to Inches & Vice Versa

Press & Enter (IM) - Inches to Meters & Vice Versa

Press & Enter (FI) - Foot to Inches & Vice Versa

Press & Enter (KM) - Kilometers to Meters & Vice Versa

Press & Enter (CF) - Celsius into Fahrenheit & Vice Versa

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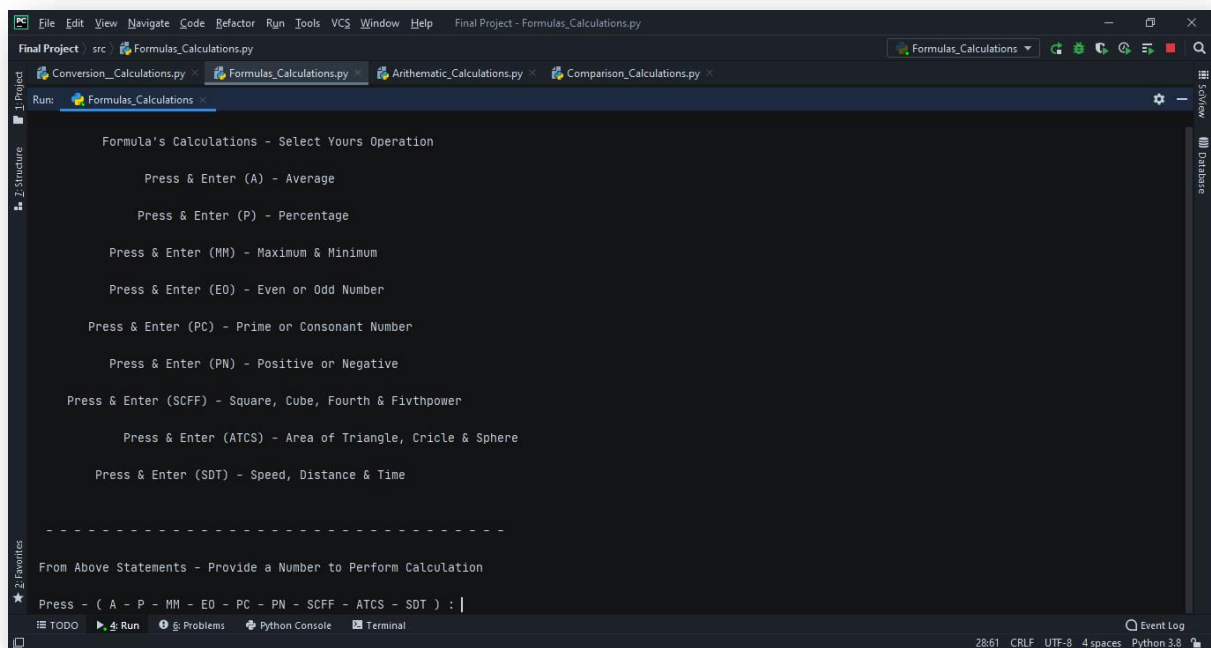
From Above Statements - Provide a Number to Perform Calculation :

Press - ( CI - IM - FI - KM - CF ) : |
```

The IDE interface includes a menu bar (File, Edit, View, Navigate, Code, Refactor, Run, Tools, VCS, Window, Help), a toolbar, a project explorer on the left showing the file structure, and a status bar at the bottom indicating the current file is "Conversion_Calculations.py" with 2146 characters, CRLF line endings, UTF-8 encoding, 4 spaces, and Python 3.8.

“Formulas Operations / Calculations”

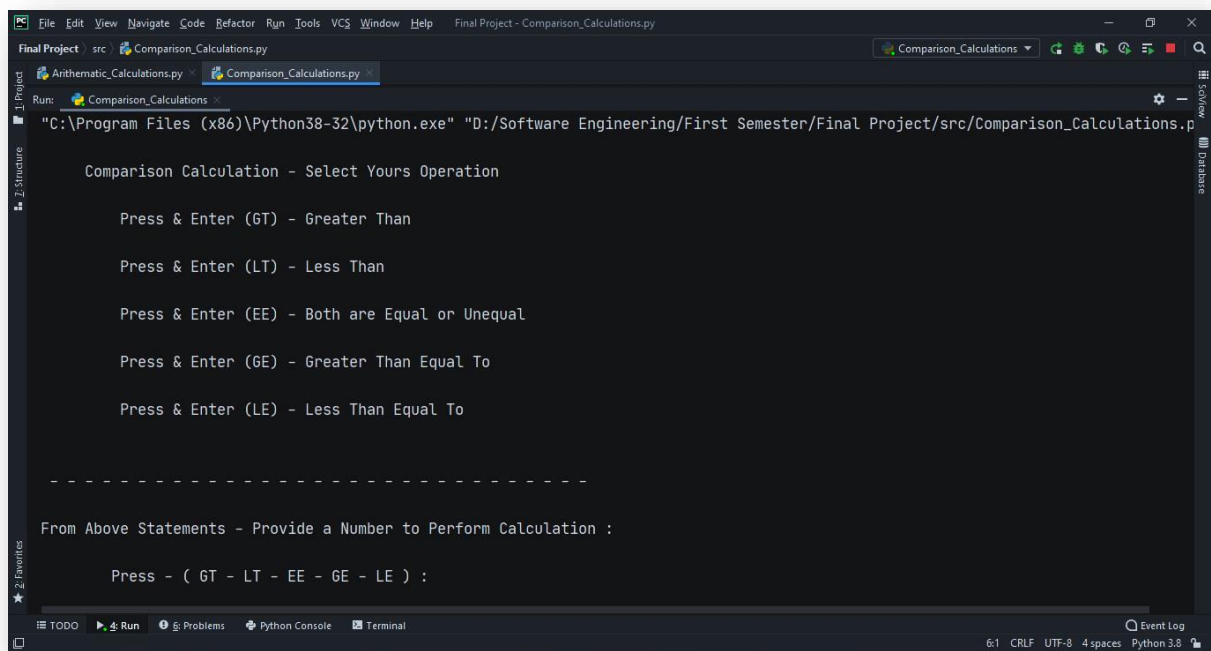
Program Output



```
File Edit View Navigate Code Refactor Run Tools VCS Window Help Final Project - Formulas_Calculations.py
Final Project src \ Formulas_Calculations.py Formulas_Calculations Conversion_Calculations.py Arithmetic_Calculations.py Comparison_Calculations.py
Run: Formulas_Calculations.py
Formula's Calculations - Select Yours Operation
    Press & Enter (A) - Average
    Press & Enter (P) - Percentage
    Press & Enter (MM) - Maximum & Minimum
    Press & Enter (EO) - Even or Odd Number
    Press & Enter (PC) - Prime or Consonant Number
    Press & Enter (PN) - Positive or Negative
    Press & Enter (SCFF) - Square, Cube, Fourth & Fifthpower
    Press & Enter (ATCS) - Area of Triangle, Cricle & Sphere
    Press & Enter (SDT) - Speed, Distance & Time
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From Above Statements - Provide a Number to Perform Calculation
Press - ( A - P - MM - EO - PC - PN - SCFF - ATCS - SDT ) : |
TODO Run Problems Python Console Terminal
28:61 CRLF UTF-8 4 spaces Python 3.8
```

“Formulas Operations / Calculations”

Program Output



The screenshot shows a Python IDE window titled "Final Project - Comparison_Calculations.py". The main editor displays the following text:

```
Comparison Calculation - Select Yours Operation

Press & Enter (GT) - Greater Than

Press & Enter (LT) - Less Than

Press & Enter (EE) - Both are Equal or Unequal

Press & Enter (GE) - Greater Than Equal To

Press & Enter (LE) - Less Than Equal To

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From Above Statements - Provide a Number to Perform Calculation :

Press - ( GT - LT - EE - GE - LE ) :
```

The IDE interface includes a menu bar (File, Edit, View, Navigate, Code, Refactor, Run, Tools, VCS, Window, Help), a toolbar with icons for running and debugging, and a sidebar with a file explorer showing "Final Project" and "src" folders. The bottom status bar indicates the file encoding as "6:1 CRLF UTF-8 4 spaces Python 3.8".

“ Project Syntax & Working ”

Project Syntax Included :

- Python Variables and Input
- Python Data Types
- Python Encyption (chr & ord)
- Python Strings
- Python Decision Constructs (If, If else, elif & Nested If)
- Python Looping (For, While & Nested Loop)
- Python Lists
- Python Functions (User Defined Function)

Project Working Included :

- We have solved the project by Using User-Defined Function.
- We allocated each function in a choice way. So, that user can decide the calculation. He / She wants to perform (Used Loop & Decision Constructs).
- We used a string function for the user. If He/ She input the Upper / Lower case input it will be friendly with both.
- If a user enters an incorrect input. It'll display a proper message "Invalid Output".

